

6-16-2022

A Future of Our Own Making: Technological Possibilities for Democracy

Garrett Pierman
Florida International University, gpier018@fiu.edu

Follow this and additional works at: <https://digitalcommons.fiu.edu/etd>



Part of the [Political Theory Commons](#)

Recommended Citation

Pierman, Garrett, "A Future of Our Own Making: Technological Possibilities for Democracy" (2022). *FIU Electronic Theses and Dissertations*. 5054.
<https://digitalcommons.fiu.edu/etd/5054>

This work is brought to you for free and open access by the University Graduate School at FIU Digital Commons. It has been accepted for inclusion in FIU Electronic Theses and Dissertations by an authorized administrator of FIU Digital Commons. For more information, please contact dcc@fiu.edu.

FLORIDA INTERNATIONAL UNIVERSITY

Miami, Florida

A FUTURE OF OUR OWN MAKING: TECHNOLOGICAL POSSIBILITIES FOR
DEMOCRACY

A dissertation submitted in partial fulfillment of

the requirements for the degree of

DOCTOR OF PHILOSOPHY

in

POLITICAL SCIENCE

by

Garrett Curtis Pierman

2022

To: Dean John F Stack
Steven J. Green School of International and Public Affairs.

This dissertation, written by Garrett Curtis Pierman and entitled A Future of Our Own Making: Technological Possibilities for Democracy, having been approved in respect to style and intellectual content, is referred to you for judgment.

We have read this dissertation and recommend that it be approved.

Whitney Bauman

Alexander Barder

Ronald Cox

Clement Fatovic, Major Professor

Date of Defense: June 16, 2022

The dissertation of Garrett Curtis Pierman is approved.

Dean John F. Stack
Steven J Green School of International and Public Affairs

Andrés G. Gil
Vice President for Research and Economic Development
and Dean of the University Graduate School

Florida International University, 2022

© Copyright 2022 by Garrett Curtis Pierman

All rights reserved.

DEDICATION

I dedicate this dissertation to my parents. Without your continuing patience and support, this work would have never come to fruition. The path to this point has been a long one, and I am grateful to have had a loving and supportive family to take that journey with me. Though there is only one author of a dissertation it is, truly, the work of a family.

ACKNOWLEDGMENTS

I wish to thank the members of the committee for their support, immense patience, and thoughtful feedback throughout the process of writing this work. Dr. Clement Fatovic was especially rigorous in the provision of insightful feedback that has sharpened the work considerably. The committee has been supportive of my ability to complete this degree, and to produce a timely and important work of political thought: that support has been very much appreciated.

I would also like to thank the Florida International University Graduate School for supporting me through the Dissertation Year Fellowship: the support and time to complete this work during the uncertain times of a global pandemic has made this work possible and has much improved its quality.

I must also thank my two closest friends, Ian and Nic, both of whom have been not only great sources of ideas and critical commentary over the years but also people who I can count on for welcome distractions from the rigors of writing.

Finally, I would like to thank my partner, Antonella. Building a relationship, beginning two careers, and finishing a dissertation in uncertain times is not an easy path, but, together, we can accomplish all of this and more.

ABSTRACT OF THE DISSERTATION

A FUTURE OF OUR OWN MAKING: TECHNOLOGICAL POSSIBILITIES FOR
DEMOCRACY

by

Garrett Curtis Pierman

Florida International University, 2022

Miami, Florida

Clement Fatovic, Major Professor

In the last two decades, the internet has become a site for political power to be gained, lost, and exercised. Despite some scholarly optimism about the potential for the communications technologies of the internet to empower citizens and improve the quality of democracy, recent years have seen an increase in violence, bigotry, and misinformation stemming from digital political practices.

To better understand digital power dynamics, this work seeks to develop a critical history of the internet informed by new materialism and Actor-Network Theory. In developing that critical history, I make the case that the contemporary internet is an actor-network that in its early development empowered the states, and, in its current form is feudalizing around corporate actors as a center of power, leaving internet users relatively disempowered from being able to participate in ideal democratic deliberation.

In this research, I challenge earlier thinking about the democratic potential of the internet and offer a mapping of digital power that suggests that the current internet is relatively hostile to empowered users' ability to participate in democratic discourse.

TABLE OF CONTENTS

CHAPTER	PAGE
Chapter One: Three Vignettes Concerning Digital Politics.....	1
First Vignette: Gamergate.....	2
Second Vignette: Pizzagate.....	8
Third Vignette: 2019-2020 Pro-Democracy Hong Kong Protests	15
Plan for The Work	20
 Chapter Two: Early Hopes for Digital Democracy as a Normative Benchmark for Contemporary Digital Politics.....	 26
Scholarly Optimism for Digital Democracy	29
(Un)critical Digital Publics	47
On Post/Transhumanism.....	58
From Optimism to Utopianism.....	64
Normative Framework for an Empowering Digital Politics.....	69
 Chapter Three: The Digital Actor-Network: Contestations and Feudalization	89
Developing a Materialist Understanding of Internet History.....	96
Actor-Network Theory as Critical Methodology	105
Defining the Internet.....	124
Early Networked Computing	125
ARPANET	133
Bringing The Net Home.....	138
On Computers, Highways, Stars, and the State.....	142
Conclusion.....	156
 Chapter Four: The Feudalized Internet: Corporate Hegemony on the Contemporary Internet.....	 165
Of Hermits and Con-Artists: Two Vignettes from the Early Internet	166
Beginning of Feudalization of Digital Spaces.....	171
Naming the Internet I: The World Wide Web.....	175
Naming the Internet II: Web 2.0.....	184
Dotcom Boom and Bust: Contestations in Digital Power Dynamics	194
The Dotcom Crash: The Beginnings of Feudalization	211
The Shift to 2.0 as Feudalization	217
Conclusion.....	223
 Chapter Five: Compressed Political Temporalities in a Feudalized Internet as a Threat to Peaceful Democratic Participation	 237
Speed as a Political Force	241
Consequences of Task Saturation.....	247
Digital Task Saturation	249
Integral Accidents.....	257

Thinking Politically Through Digital Task Saturation	278
The January 6 Uprising as an Integral Accident of Task-Saturated Politics.....	307
Conclusion	325
First Vignette Revisited: Gamergate	325
Second Vignette Revisited: Pizzagate	328
Third Vignette Revisited: Pro-Democracy Hong-Kong Protests	331
Major Takeaway Points from Chapters Two Through Five	333
Situation in Current Debate and Avenues for Future Work.....	337
VITA.....	347

Chapter One: Three Vignettes Concerning Digital Politics

Introduction

The first quarter of the twenty-first century has been a fascinating time to study politics. This, the century in which the global adoption of neoliberal capitalism was supposed to usher in an era of peace, prosperity, and abundance, has instead seen constant conflict, global recession, and rapidly accelerating inequality. These tensions are being reflected in our politics.

Coeval with the global neoliberal order of the Post-Cold War era, the internet has become the center of concerns and discussions of the issues mentioned above, as well as (conservatively) a few million others. It has also become the space in which contemporary life, political or otherwise, increasingly takes place. In attempting to render some coherence to digital power dynamics, this work forwards a critical understanding of what the internet is, how it works, and how digital power dynamics change users' behavior, sometimes to undemocratic ends

Because this is a work that focuses on the internet, it often crosses paths with some of the vilest of human behaviors. In studying the web, one runs into racism, sexism, and violence both threatened and committed. At such moments there is a temptation, both strong and understandable, to look away and move on to something else. Because this is a work of scholarship, however, there is an intellectual and ethical burden to tell the truth as plainly and fully as possible. Thus, when it serves an analytical purpose, I refer to and cite highly unpleasant examples to bring to light what is going on and offer some compelling theoretical explanations as to why such things happen on the web with such frequency and tenacity. If, as scholars, readers, and citizens, we can stomach the ugliness

and summon the courage to look it squarely in the eye, then, and only then, can it be understood and more adequately addressed. But it is also important to note that the web can also be a space of remarkable inclusion, solidarity, and empowerment. Those moments get some attention as well so that we can build a more thoughtful understanding of digital power dynamics so that we can steer them in a direction that better fulfills the democratic hopes that many scholars held for the internet.

First Vignette: Gamergate

I begin with an incident that demonstrates just how complex the relations of power present on the web can be, as well as the stakes involved for people. Different groups understand Gamergate, which began in 2014, in two vastly different ways.

According to a wide range of scholars, journalists, and gender rights activists like Anita Sarkeesian, Gamergate was a targeted campaign of harassment aimed at a game developer, Zoe Quinn, after she broke up with her boyfriend.¹ The recently estranged boyfriend decided to write a long, deeply sexist series of blog posts about Quinn, which found their way into several popular forums frequented by gamers, including Twitter and 4Chan. Among its other claims, the blog's posts leveled against Quinn the accusation that she had cheated on her boyfriend to advance her career.² This angered a seeming army of misogynist internet users.

Citing a major assault on their identity as gamers, and Quinn's supposed breaches of "ethics in gaming journalism," Quinn and those who would come to defend her,

¹ VanDerWerff, Emily Todd. 2014. "Gamergate: Here's why everybody in the video game world is fighting." Vox, October 14.

² Gjoni, Eron. 2014. "The Zoe Post." September 12. Accessed January 28, 2020. <https://thezoepost.wordpress.com/>.

Sarkeesian among them, were threatened with death, sexual violence, and all manner of other horrors, sometimes accompanied with personally identifiable information such as their home addresses.³ This doxing—the outing someone’s personal information online—made those threats of violence serious as a source of distress for the mental and physical well-being of the victims. In response, several of the targets of the misogynist horde either toned down their critiques of problematic elements of gaming culture, such as Sarkeesian, or temporarily suspended their careers in the industry and largely withdrew from public life, as was the case with Quinn.⁴

There is another take on Gamergate, as well. If we are to believe the version of events presented by Quinn’s ex-boyfriend in his blog, he is the victim in all of this. While trying his level best to hold together a strained relationship with a woman he loved, he came to find out that she had been cheating on him with a gaming journalist, it is presumed, to further her career. Moreover, he learned that Ms. Quinn had not done this with one individual, but five, leading the ex to pursue several courses of action. First, he broke up with Quinn. Next, he decided to publish a lengthy blog on the matter, seemingly to vent his frustrations and bring attention to Quinn’s supposed ethical breaches.⁵ Once that blog found some traction, the gaming community exploded in a fit of righteous indignation.

³ Dewey, Caitlin. 2014. "The Only Guide to Gamergate You Will Ever Need to Read." *The Washington Post*, October 14.

⁴ Sarkeesian, Anita, interview by Stephen Colbert. 2014. *The Colbert Report- Gamergate, Anita Sarkeesian* (October 30); Sarkeesian, Anita. 2020. *Feminist Frequency*. Accessed January 28, 2020. <https://feministfrequency.com/about/>.

⁵ Gjoni 2014.

What that gaming community, a group of outsiders, marginalized from normal social life, saw in Quinn was, according to an article defending her harassment, a symbol. Quinn represented a larger movement of “feminist bullies” that sought to dismantle gaming as it had been known for decades, and in so doing, make these ostracized men feel unwelcome even within their favorite hobby. Games did not need to be political, the community raged, and Quinn, her defenders, and those with similar beliefs were the ones who had brought politics to gaming. The gamers, especially the straight male ones, were the real victims, specifically of a progressive campaign against their masculine virtual space.⁶ The targeted campaign of harassment against Quinn and others, then, was a defensive action. Quinn was simply a proxy in a larger cultural struggle over one of the last safe bastions of masculinity. Besides, the defenders of the harassers argue, that none of the Gamergate targets were *actually* murdered, so it was mostly a lot of hot air, and the targets thus ought not to worry as much as they did publicly.⁷ The major consequence is that one gaming outlet did get some of its advertising pulled before eventually working out a deal to get those ads replaced.⁸

There are, to be sure, folks who genuinely believe both of these narratives. While the point here is to present the events to gain a broader understanding of how the web may empower or disempower people from participation in public life, it is clear which of the two narratives holds up to scrutiny. Quinn and Sarkeesian’s personal and professional lives, as well as their reputations, were both utterly upended. The former left the gaming

⁶ Yiannopoulos, Milo. 2014. "Feminist Bullies Tearing The Video Game Industry Apart." *Breitbart* , 1 September .

⁷ Ibid.

⁸ Read, Max. 2014. "How We Got Rolled by the Dishonest Fascists of Gamergate." *Gawker*, October 22.

industry for some time, her personal life and professional reputation effectively shattered by a several-year-long campaign of targeted harassment.⁹ The latter has still maintained her blog and YouTube channel, but with a markedly less critical tone than it had pre-Gamergate.¹⁰ Both now have to live with the knowledge that an unknown number of people want to cause them harm: the psychological damage of that situation in and of itself is difficult to overstate.

Making “gamer” culture a safe space for heteronormative, white masculinity, the supposed victory of the gamers, really meant the silencing of other people’s perspectives. As far as consequences go, gaming remains a male-dominated industry and, aside from conservative provocateur Milo Yiannopoulos eventually being fired from the right-wing outlet Breitbart in a separate incident, there seem to have been no careers or personal lives damaged much on the side of the gamers or their defenders.¹¹ If Gamergate was, as some seemed to think, a battle for a version of masculinity under siege from “feminist bullies,” the battle was decidedly one-sided.

In addition to the personal stakes of Gamergate for those involved, the incident is also instructive in terms of how certain parts of the web function socially. First, and most significantly, Gamergate makes it abundantly clear that people can and do use the digital tools at their disposal in deliberate attempts to silence or exclude others. The trolls and

⁹ Quinn, Zoe. 2017. *Crash Override*. New York: PublicAffairs.

¹⁰ Sarkeesian, Anita. 2020. *Feminist Frequency*. January 28. Accessed January 28, 2020. <https://feministfrequency.com/about/>.

¹¹ Bailey, Eric, Kazunori Miyata, and Tetsuhiko Yoshida. 2019. "Gender Composition of Teams and Studios in Video Game Development." *Games and Culture Online*.

Farhi, Paul. 2017. "Breitbart’s Milo Yiannopoulos resigns following outrage over his past comments about pedophilia." *The Washington Post*, February 21.

other malcontents excluded Sarkeesian and Quinn along gendered lines, aiming at disempowering women from participating on an equal footing in the gaming industry, which is reflective of earlier scholarship on gendered dynamics on the web.¹²

Following this, Gamergate demonstrated some of the tactics used to deliberately disempower others. In learning how to navigate and use forums used by gamers, and digital media outlets, Quinn's ex-boyfriend managed to link personal relationship issues into an all-out culture war. By using forums and their troll inhabitants, the "gamers" amplified their voices to an uncertain and terrifying degree. Due to the ephemerality of posts, as well as the anonymity of most of the participants in the incident, it is nearly impossible to make any authoritative claims about the actual size of the Gamergate crowd.

The ability of small and determined groups, in this case, a sexist one, to use digital communications platforms to amplify their voices may serve to normalize and popularize their radical and exclusionary views. In addition to ramping up the intimidation aimed at victims, this may also be a means by which groups can recruit like-minded members and find common ground with other groups: right-wing agitator Steve Bannon commented, "You can activate that army. They come in through Gamergate or whatever and then get turned onto politics and Trump."¹³ These tactics have been effectively recreated in other movements since.¹⁴

¹² Herring, Susan. 2005. "Gender and Power in On-Line Communication." In the Handbook of Language and Gender, by Janet Holmes and Miriam Meyerhoff, 202-228. Hoboken: Wiley and Sons, Inc.

¹³ Snider, Mike. 2017. "Steve Bannon Learned to Harness Troll Army from 'World of Warcraft'." USA Today, July 18.

¹⁴ Lees, Matt. 2016. "What Gamergate should have taught us about the 'alt right'." *The Guardian*, 1 December.

Gamergate also shows us how deeply economics is embedded into online discourse. The economic consequences for Quinn and Sarkeeisan are obvious. What is slightly less so, on the other hand, are the economics of digital journalism which run through the incident. While forum participation is free,¹⁵ journalism is quite clearly not. In telling the story of Gamergate here, I cite pieces from Gawker, Breitbart, and several other more common mainstream outlets. Gawker found itself caught up in the crossfire quite directly with one of its writers Tweeting that gamers should “bring back bullying” to make Gamergate trolls feel more welcome at Gawker than other sites,¹⁶ but all of these outlets share a common profit motive.

Outlets need readers. As with any sort of consumption under capitalism, engaged and repeated customers are about the best kind if one is aiming to make a profit. The readers of the articles who went on to participate in the relevant social media platforms became part of the incident themselves: this cast these users as both consumers of Gamergate news, and also producers of further controversy upon which to report. This relationship between the platforms, journalists, and users, fed a viscous, sexist cycle. Thus, we saw articles about Gamergate. And articles about the articles concerning Gamergate. We got reactions to those articles, too. And we got responses to the reactions and so on. In short, it had become, quickly, a cottage industry with a major economic incentive to keep the controversy, and the accompanying ad revenues, burning as hot as possible, for as long as possible. The primary ethic in gaming journalism, it seems, is profit no matter what the truth might be.

¹⁵ Assuming one already has internet access, which, I argue later, cannot be safely assumed.

¹⁶ Read 2014.

Gamergate became, at least in part, a commodity that these outlets could sell. The profitability of that product, the stories about stories, leads me to question whether these outlets are merely reporting the news, or seeking to help keep the news controversial enough to keep readers generating ad revenues.

For the analyses presented in this work, Gamergate can be fruitfully viewed as an episode in which the voices of some were silenced, others were amplified, and companies managed to profit on that silencing and amplification. It also demonstrates the role of users who both produce and consume content and data online to ends that disempower some people from being able to live their chosen lives in peace.

Second Vignette: Pizzagate

For the second vignette to introduce the complexity of online life and its political ramifications, I now turn to another “gate” story: Pizzagate. This episode takes some of the same general elements of Gamergate, such as the involvement of online forums and the eventual picking up by large media outlets and the participation of consumers of online information in politically relevant events. In the runup to the 2016 American presidential election, a hack of the email servers of the Democratic National Committee and their subsequent posting on the web, now itself known as the Wikileaks scandal, resulted in users having the opportunity to comb through the correspondence of then-presidential hopeful Hillary Clinton and many others within and connected to the Democratic Party.¹⁷

¹⁷ WikiLeaks. 2015. Hillary Clinton Email Archive. November 3. Accessed February 15, 2020. <https://wikileaks.org/clinton-emails/>.

Given that this leak consisted mostly of emails between people charged with organizing meetings and events, pizza was occasionally suggested as the provided food. A search for “pizza” in the WikiLeaks archive yields nineteen results in the period from September 2009 to late November 2011. Emails containing references to pizza, according to Pizzagate conspiracy believers such as performance artist and pundit Alex Jones,¹⁸ as well as an incoming White House Aide (and son of the National Security Advisor at the time) Michael Flynn Jr.,¹⁹ were clear evidence that Clinton, a former White House Chief of Staff,²⁰ and an ever-growing number of members of an alleged deep state, as well as the Democratic Party more broadly, media elites, and wealthy folks of various political leanings were, in fact, all in coordination. In coordination to do what, exactly?

The emails, some argue, are clear proof that all the aforementioned individuals and groups are members of a pedophile ring run out of the basement of a pizza parlor in Washington DC. From that basement, all manner of sexual crimes were committed and organized, as were no small number of satanic blood rituals meant to keep the deep state in power.²¹

There is no direct proof for any of these fantastical claims and gathering the correct evidence for the cult’s existence and rituals depends upon one’s ability to read

¹⁸ Beauchamp, Zack. 2016. "Alex Jones, Pizzagate Booster and America’s Most Famous Conspiracy Theorist, Explained." Vox, December 7. <https://www.vox.com/policy-and-politics/2016/10/28/13424848/alex-jones-infowars-prisonplanet>.

¹⁹ The BBC. 2016. "Trump Aide Michael Flynn Jnr Out After "Pizzagate" Tweets." BBC News, December 7. <https://www.bbc.com/news/world-us-canada-38231532>.

²⁰ I refer here to John Podesta.

²¹ Folkenflik, David, interview by Audie Cornish. 2016. Radio Conspiracy Theorist Claims Ear of Trump, Pushes Pizzagate Fictions (December 6).

between lines and properly connect dots. In this case, the breaking of the “discovery” of the satanic pedophile cult came from an anonymous, long since deleted, white supremacist Twitter account and then shared to Facebook, eventually finding its way to forums on 4chan.²² There was, for a time, a large Reddit community committed to this new investigation, now officially named Pizzagate by that community, further implicating Clinton and others with each passing hour, with an increasingly large pile of “evidence” available to those willing to connect the proper things in the right way.²³ Just after the 2016 presidential election, Reddit did ultimately ban that particular community, citing frequent violations of the content rules of the site, which forbids witch hunts against individuals, which was the core of the methodology of the Pizzagate conspiracy believers.²⁴

During this period, Alex Jones, a famous right-wing pundit and salesman of vitamins, began running and posting a series of stories on his website concerning Pizzagate, spanning over three years and running well into 2019.²⁵ A few fringe Twitter accounts, forums, and Alex Jones going on about something as bizarre as satanic pizza pedophiles would barely warrant writing about in the context of an academic work most of the time. In terms of digital power dynamics, Jones’ activities are worth mentioning in

²² Gillin, Joshua. 2016. "How Pizzagate Went from Fake News to a Real Problem for a DC Business." Politifact. December 5. Accessed 30 2020, January. <https://www.politifact.com/truth-o-meter/article/2016/dec/05/how-pizzagate-went-fake-news-real-problem-dc-busin/>.

²³ Reddit. 22. "#pizzagate." Reddit. November 2016. Accessed February 15, 2020. <https://web.archive.org/web/20161122093944/https://www.reddit.com/r/pizzagate/>.

²⁴ Ohlheiser, Abby. 2016. "Fearing Yet Another Witch Hunt, Reddit Bans Pizzagate." The Washington Post, November 24: <https://www.washingtonpost.com/news/the-intersect/wp/2016/11/23/fearing-yet-another-witch-hunt-reddit-bans-pizzagate/>.

²⁵ Jones, Alex. 2020. Infowars. February 15. Accessed February 15, 2020. <https://www.infowars.com/?s=pizzagate%20>.

two regards. First is their sheer reach: though his audience has likely shrunk considerably due to his being banned on several platforms, such as YouTube and Facebook, at one point, Jones' audience, both on his site, Infowars, numbered in the millions.²⁶ On his program, on December 4th, 2016, a true believer in the Pizzagate story went into the supposed epicenter of the cult, the Comet Ping Pong pizza shop, and began firing his rifle. Thankfully, no one was hurt, and he was quickly arrested. If you ask the shooter, he was there to rescue the children held by the cult and investigate the matter himself.²⁷ He only found pizza ovens and terrified staff. This act of violence is the second dimension along which I consider Infowars an important example: online conspiracies have led to offline violence.

During this period, Pizzagate maintained some prevalence even in official political circles. Now, with the 2016 election over, the Trump administration could go about the business of the American people, which now included nods to the Pizzagate conspiracy on social media platforms. That is exactly what then-National Security Advisor, Michael Flynn, and his son, both members of the same national security apparatus, did in their official capacity as civil officers of the United States government. It seems, that, for a moment, before the younger Flynn was fired and the elder resigned amidst several rather serious criminal charges, Pizzagate was the official opinion of the United States government in some small capacity.²⁸ A conspiracy had worked its way

²⁶Nicas, Jack. 2019. "Apple Removes App That Helps Hong Kong Protesters Track the Police." The New York Times, October 9: <https://www.nytimes.com/2019/10/09/technology/apple-hong-kong-app.html>.

²⁷ Gillen 2016.

²⁸ Carroll, Lauren. 2017. "Michael Flynn's Troubling Penchant for Conspiracy Theories." PolitiFact, February 14. Accessed January 31, 2020. <https://www.politifact.com/truth-o-meter/article/2017/feb/14/michael-flynn-troubling-penchant-conspiracy-theor/>.

into national security policymakers' public tweets, such as one in which the senior Flynn proclaimed that "U decide- NYPD Blows Whistle on New Hillary Emails: Money Laundering, Sex Crimes w Children, etc.... MUST READ!²⁹" Flynn tweeted this to a general refrain calling for Clinton to be imprisoned not for the satanic blood rituals, but for having sent several emails using non-governmental servers.

Eventually, the shooter from Comet Ping Pong was sentenced to several years in prison for his ill-planned rescue and reconnaissance mission. After the sentencing of the shooter, Alex Jones recanted his Pizzagate stories on March 24, 2017, claiming that it had all been mere performance art, and he was deeply sorry that his artistic commentary on the absurdity of postmodernity had been so badly misunderstood as to stir violence. This also provided him some much-needed legal protection in the matter.³⁰ It did not, however, cause Jones to stop running or hosting Pizzagate stories for several more years after his apology.

What broader lessons can Pizzagate teach us? One of the more interesting components of this episode is the social function of conspiracies. While most would concede the factual point that there is no literal cult in Comet Ping Pong, there is still something going on in terms of the building of digital communities. Within communities that interact on and through platforms such as 4chan, Reddit, Twitter, and others, the users lack some of the factors that have been, historically speaking, the ingredients for social cohesion. For example, a shared physical, and geographical space and personal

²⁹ BBC 2016.

³⁰ Doubek, James. 2017. "Conspiracy Theorist Alex Jones Apologizes for Promoting Pizzagate." NPR, March 26. Accessed January 31, 2020.

familiarity gained from recurring social contact with each other. Instead, these digital communities, to function, need some other means by which to build that sense of community. They have found just such a means in the Pizzagate conspiracy.

This conspiracy, in its online form, can be considered to be a shared body of discourse: a group of expressions, jokes, and a shared history of their use within a community. In learning how to read tea leaves and connect dots to ferret out the misdeeds of the supposed deep state, as Pizzagate believers began to do on Reddit and elsewhere, they came to form an online community in which they participated while also growing that shared sense of investigative enterprise. In this regard, the actual truthfulness, or lack thereof, of the conspiracy matters very little. The conspiracy functions as a social glue, whether or not it is true.³¹ When a member of the government, in this case, the father and son Flynn, signal that they, too, are members of a particular community, it may lend an air of legitimacy to that community. Pizzagate, then, served to empower and embolden an online community to form, and was at least part of its basis for continuance. In league with Flynn, the diggers were not just online conspiracy trolls, but working, in their view, to the same ends as the United States government as represented by some of its recently appointed members.³²

Like Gamergate, it is also important to mention here that there was a dollar to be made through Pizzagate. The performance artist known as Alex Jokes will happily interrupt his red-faced monologues to hawk hairline restoring systems, vitamins, and pre-

³¹ Swami, Viren, Martin Voracek, Stefan Steiger, Ulrich Tran, and Adrian Furnham. 2014. "Analytic thinking reduces belief in conspiracy theories." *Erschienen in Cognition* 572-585.

³² This can be seen in many of the posts at the previously cited #pizzagate subreddit.

packaged meals aimed at survivalists.³³ The relationship between hyper-involved internet users and the generation of profit, it seems, is a trend to keep an eye on as this study moves forward. Furthermore, the gendered dimensions of Pizzagate cannot be ignored. The conspiracy centered around the first female candidate to have a credible chance at winning the American presidency. The general gist of the conspiracy was that Clinton was the head of, and actively performing in, a cult that did all manner of unsavory, pagan rituals. This, I argue, deliberately evokes images of witchcraft. Such imagery, historians of the infamous Salem Trials have long-established, is part of a long history of discrediting or disempowering, sometimes to the point of death, women who defy norms.³⁴ Although the context and content here differ sharply from Gamergate, the general structure of the weaponizing of gender achieves the same effects, to keep a woman from participating publicly in her career of choice.³⁵

In terms of the consequences of Pizzagate, three come to mind. It would be difficult to claim, and even harder to prove, that the conspiracy threw the 2016 elections one way or another. I am, however, willing to argue here that the creation and spread of the conspiracy did change or galvanize the opinions of some voters. As Giovanna Invernizzi and Ahmed Mohamed find, voters who believe conspiracies generally distrust government institutions and might be likely to harbor undemocratic sentiments, but they

³³ Jones 2020.

³⁴ Sollee, Kristen. 2017. *Witches, Sluts, Feminists : Conjuring the Sex Positive*. Berkeley : Stone Bridge Press.

³⁵ Articles that depict Hillary Clinton as a witch, for instance, date back to at least the 1990s. See, for instance: Lim, Elvin. 2009. "Gendered Metaphors of Women in Power: the Case of Hillary Clinton as Madonna, Unruly Woman, Bitch and Witch." In *Politics, Gender, and Conceptual Metaphors*, edited by Kathleen Ahrens, 254-269. New York: Palgrave Macmillan.

are highly motivated and engaged.³⁶ Second, one man was arrested for taking things too far, in an incident that, given the circumstances, could have gone much worse. Finally, that arrest seems to have made the artist known as Alex Jones a little nervous in terms of potential legal accountability for spreading false information as news, as he made a public apology for his Pizzagate comments on the same day as the shooter's sentencing.³⁷ This tactic, of using legal declarations of apology, or of being a performance artist in character, has been used before. Mr. Jones himself used it in custody hearings, in an attempt to convince a judge that he was not, in fact, a conspiracy monger who sometimes advocates violence.³⁸ This third consequence is an excellent example of what has become known as the post-truth era. Jones made these declarations to shield himself from liability, which also makes it substantially harder to ascertain what Jones or his followers *actually* think and believe in, which I later problematize as far as the internet being hospitable to democratic practices.

Third Vignette: 2019-2020 Pro-Democracy Hong Kong Protests

For a third vignette, I turn to a recent protest movement in Hong Kong (HK), in which demonstrators, the police, and other actors made use of digital technologies to further or hinder the cause of democracy. Before the contemporary protest story can be told, however, a little historical contextualization is necessary.

³⁶ Invernizzi, Giovanna Maria, and Ahmed Ezzeldin Mohamed. 2020. "Trust Nobody: How Voters React to Conspiracy Theories." SSRN. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3507190.

³⁷ Doubek 2017

³⁸ Concha, Joe. 2017. "Alex Jones 'Playing a Character,' Says Lawyer." *The Hill*, April 4: <https://thehill.com/homenews/media/329071-alex-jones-playing-a-character-says-lawyer>.

In the contemporary period, HK has had a history that has placed it in a governmental situation that is both precarious and fairly unique. From 1843 to 1997 (with a break for the Second World War), HK had been a British colony. In the mid-1980s, the British and the People's Republic of China came to an agreement by which HK would remain a quasi-independent territory with a local government and a capitalist economy, but officially under Chinese rule. This became known as the One Country, Two Systems policy and has been in effect since the official handoff in June 1997.³⁹ This places HK in a precarious position: a democracy functioning under a one-party state. In recent decades, the People's Republic has embraced some practices common to other contemporary states, some of which are democracies, namely an increasingly capitalist economic structure. They are not, however, known for their fair, transparent, and ethical treatment of persons accused of crimes, as has been documented in a long history of human rights abuses within their prisons.⁴⁰

With that in mind, we come to the spark for the 2019-20 protests. The HK government, in particular, its executive, Carrie Lam, proposed a law that, if passed, would allow for the quick and smooth extradition of HK nationals to Chinese prisons. Understandably, this did not sit well with some Hongkongers, who saw such a law as a major defeat for democracy and the rule of law in HK. To attempt to forestall the passage of these laws throngs of demonstrators took to the streets beginning in June.⁴¹

³⁹ Tsang, Steve. 2003. *A Modern History of Hong Kong*. New York: Palgrave Macmillan.

⁴⁰ Wu, Wei, and Tom Vander Beken. 2018. "Understanding Criminal Punishment and Prisons in China." *The Prison Journal*. <https://doi.org/10.1177%2F0032885518811818>.

⁴¹ The BBC. 2019. "Hong Kong: Timeline of Extradition Protests." *BBC News*, September 4: <https://www.bbc.com/news/world-asia-china-49340717>.

Things escalated quickly: protesters gathered in the millions, demanding first that the proposed law be entirely thrown out of consideration.⁴² The protests were at this point peaceful, but police nonetheless responded with arrests and fire hoses. As the pace and scale of these protests ratcheted up through the summer and into fall, the hoses were replaced with even more arrests, rubber bullets, pepper spray, and, in a few incidents, live ammunition.⁴³ Even though HK is a relatively compact peninsula where the protests were contained largely to the governmental and financial districts of the city, arguably the largest police state on Earth had a difficult time containing the demonstrations. At one point, the airport was shut down; at another, a major university was the site of a siege.⁴⁴ All of this effectively bogged down the normal political and economic goings-on of the HK government for some time. How did these protesters manage to hang on for so long? Some of the tactics that were adopted by the protesters were decidedly analog. Umbrellas can be used to block tear gas canisters and water from hoses.⁴⁵ At one point, the protesters built and fielded a catapult.⁴⁶ Other tactics, however, were distinctly digital. Instead of in-person meetings, many of the major decisions of the protest movement were made through the chat and polling features of LIHKG, effectively the HK version of

⁴² Ibid.

⁴³ Ibid.

⁴⁴ 2020. <https://wikileaks.org/clinton-emails/>.

Wu, Jin , Rebecca Lai , and Alan Yuhas. 2019. "Six Months of Hong Kong Protests. How Did We Get Here?" *The New York Times* , November 18:
<https://www.nytimes.com/interactive/2019/world/asia/hong-kong-protests-arc.html>.

⁴⁵ Ibid.

⁴⁶ AFP News Agency . 2014. "Hong Kong Student Protesters Test DIY Catapult ." *Youtube* . November 2019. Accessed February 20 , 2020.
<https://www.youtube.com/watch?v=SLtz6im7ZiU&feature=youtu.be>.

Reddit.⁴⁷ Police activity was reported by, and to, protesters through a crowdsourced mapping app, which Apple did eventually ban.⁴⁸ Additionally, laser pointers became a popular tool to disable cameras and police drones.⁴⁹ It is clear, here, that the HK protests made good use of all of the tools available to the dissidents, including both old and new technologies in an attempt to disrupt anti-democratic processes.

The protests, then, were a meeting of the digital and the analog to forward democratic causes. The uses of these mixed methods were not, however, confined to the protesters. In the same period, from summer 2019 and into 2020, the police were using digital tools as well. The use of cameras and drones to identify and arrest protesters was common.⁵⁰ Similarly, it appears as though police began to collect information on protesters and other people friendly to the cause of democracy in HK.⁵¹ This information was that used to dox some protesters via a site called HKLeaks: the information was coming from the police, and was posted on a Russian domain.⁵² The contestation for spaces in the protests was both physical, and in the streets, but also digital. The protests of the 2019-20 period set out, first, to see the extradition law permanently removed from the HK legislative agenda. This happened by late July, yet the protests continued, seeking

⁴⁷ 2019. *Protest Tech Hong Kong*. Quarterly Publication, Washington DC: The Wilson Center .

⁴⁸ Nicas, Jack. 2019. "Apple Removes App That Helps Hong Kong Protesters Track the Police." *The New York Times* , October 9: <https://www.nytimes.com/2019/10/09/technology/apple-hong-kong-app.html>.

⁴⁹ 2019. *Protest Tech Hong Kong*.

⁵⁰ *Ibid.*

⁵¹ Deutsche Welle . n.d. "Hong Kong Protesters' Data Leaked by Russian Website." *DW News*, <https://www.dw.com/en/hong-kong-protesters-personal-data-leaked-by-russian-website/a-50515519>.

⁵² *Ibid.*

an expansion of democracy, greater separation from China, and electoral wins in the November 2019 elections.⁵³ These elections, for the neighborhood and local councils, were a landslide victory for pro-democracy politicians. In these elections, pro-democracy politicians took a majority in HK local government for the first time in the city-state.⁵⁴ The Coronavirus pandemic, which began in early 2020, put an end to public gatherings, which include protests.⁵⁵ It also, as I detail in the conclusion of this work, added a complicating dimension to the interplay between the state and protesters in HK.

In terms of the results of these protests, there appear to have been some major gains in terms of the pro-democracy movement. The story of democracy in HK, however, is far from a finished one and it will, I am sure, be one to watch in the months and years to come. These protests are highly informative to a broader theoretical study of the web in several regards. First, they make it clear that the tools of the web are not just tools for silencing and disempowerment and can, instead, be used to enable political participation to democratic ends. That the tactics used in HK, sometimes heralded as a “workshop” for democratic protests more broadly can be used to further democracy is not just a utopian prognostication, but is, at least for now, a reality. Additionally, the deliberate deployment of anonymity to subvert the HK police complicates that aspect of digital life. In both Pizzagate and Gamergate, anonymous users took the form of trolls out to ruin the lives of

⁵³ The BBC 2019.

⁵⁴ Kirby, Jen. 2019. "Pro-Democracy Candidates Dominate Hong Kong's Local Elections in a Rebuke to China." *Vox Media*, November 25: <https://www.vox.com/2019/11/25/20981691/hong-kong-district-council-elections-pro-democracy>.

⁵⁵ Marlow, Iain, and Natalie Lung. 2020. "Hong Kong Protesters, on Pause, See Virus Fueling Movement." *The Japan Times*, February 10.

women either in gaming or in politics. Now, on the other hand, the anonymous users were the protesters, using anonymity to gain some measure of security to enable and continue the protests. One of the organizers, who remains anonymous even in interviews, claims that it was a key protest methodology and credits digital anonymity with aiding the protestors' ability to organize over long periods without the Chinese or HK governments being able to identify and arrest central leadership.⁵⁶ Similarly, the use of digital and anonymous tools to structure the leadership led to decentralized planning of protests: this hydra-like structure meant that there was no central planning committee that met in person. This made the work of the police that much more difficult.⁵⁷ Additionally, this decentralization came with democratized decisions often made by poll or text groups, further enabling broad participation.⁵⁸ These protests embraced web-based technologies early, and have continued to use them in ways that, thanks to the global nature of the web, may well spread.⁵⁹

Plan for The Work

These three opening vignettes serve to give context for the rest of the work. Digital political life in the 21st century is a space in which power is grown, concentrated, and exercised. In some cases, as the HK protests demonstrate, people organize pro-

⁵⁶ Thorbecke, Catherine. 2019. "How Tech Has Fueled a 'Leaderless' Protest in Hong Kong ." *ABC News*, October 12: <https://abcnews.go.com/Technology/tech-fueled-leaderless-protest-hong-kong/story?id=66158665>.

⁵⁷ Ibid.

⁵⁸ Ibid.

⁵⁹ Boulianne, Shelley, Karolina Koc-Michalska, and Bruce Bimber. 2020. "Mobilizing Media: Comparing TV and Social Media." *Information, Communication, and Society* <https://doi.org/10.1080/1369118X.2020.1713847>.

democracy protests, making use of digital tools as a means of empowerment. With Gamergate, we see that the internet can also be home to those who seek to disempower others from participating in public, and professional life. In the case of Pizzagate, we see that misinformation and conspiracy theories can spread and take root, leading to, in some instances, political violence. This is not without its empowering aspects as well, as some stand to make substantial profits and electoral gains from digital environments that foster misinformation and occasionally foment anti-democratic political violence.

This work aims to develop a critical history of the internet and a diagnosis of the current state of digital power dynamics in the hopes of encouraging scholarship, policy, and activism that could shape our use of the internet such that it becomes a place that empowers people to engage in democratic political deliberation with one another. To these ends, the second chapter of this work outlines scholarly hopes for digital democracy, which I take as a normative benchmark by which we can then measure contemporary digital political dynamics. The third chapter makes the case for a mapping of digital power dynamics that deploys an adapted version of Bruno Latour's Actor-Network Theory that understands capitalism as a series of effects which alter the agency of actors within the digital landscape. The chapter also begins a critical history of the internet with the development of the ARPANET—this early phase of the internet, I argue, was one in which the state held most of the power on the web. As I develop in chapter four, the power of the state in the digital realm waned in the 1990s, when the state ceded much of its digital power to corporate actors, who, in the wake of the dotcom crash of 1999-2000, have feudalized much of digital life, enlarging the proportion of digital power held by corporate actors. Chapter five focuses on internet users.

Particularly, I make the case that a feudalized internet prescribes users as prosumers who have little time and over-extended cognitive resources with which to evaluate politically relevant information. These prosumers, operating under conditions of task saturation, are disempowered from faculties key to democratic political deliberation. In the conclusion, I revisit the opening vignettes from this chapter and offer my final diagnosis, that the feudalized internet empowers corporations, and that it leaves users disempowered from their ability to participate in democratic politics.

Bibliography

AFP News Agency. 2014. "Hong Kong Student Protesters Test DIY Catapult." *YouTube*. November 2019. Accessed February 20, 2020. <https://www.youtube.com/watch?v=SLtz6im7ZiU&feature=youtu.be>.

Bailey, Eric, Kazunori Miyata, and Tetsuhiko Yoshida. 2019. "Gender Composition of Teams and Studios in Video Game Development." *Games and Culture Online*.

Beauchamp, Zack. 2016. "Alex Jones, Pizzagate Booster and America's Most Famous Conspiracy Theories Explained." *Vox*, December 7. <https://www.vox.com/policy-and-politics/2016/10/28/13424848/alex-jones-infowars-prisonplanet>.

Boulianne, Shelley, Karolina Koc-Michalska, and Bruce Bimber. 2020. "Mobilizing Media: Comparing TV and Social Media." *Information, Communication, and Society* <https://doi.org/10.1080/1369118X.2020.1713847>.

Carroll, Lauren. 2017. "Michael Flynn's Troubling Penchange for Conspiracy Theories." *PolitiFact*, February 14. Accessed January 31, 2020. <https://www.politifact.com/truth-o-meter/article/2017/feb/14/michael-flynnns-troubling-penchant-conspiracy-thoer/>.

Concha, Joe. 2017. "Alex Jones 'Playing a Character,' Says Lawyer." *The Hill*, April 4: <https://thehill.com/homenews/media/329071-alex-jones-playing-a-character-says-lawyer>.

Deutsche Welle. n.d. "Hong Kong Protesters' Data Leaked by Russian Website." *DW News*, <https://www.dw.com/en/hong-kong-protesters-personal-data-leaked-by-russian-website/a-50515519>.

Dewey, Caitlin. 2014. "The Only Guide to Gamergate You Will Ever Need to Read." *The Washington Post*, October 14.

Doubek, James. 2017. "Conspiracy Theorist Alex Jones Apologizes for Promoting Pizzagate." *NPR*, March 26. Accessed January 31, 2020.

<https://www.npr.org/sections/thetwo-way/2017/03/26/521545788/conspiracy-theorist-alex-jones-apologizes-for-promoting-pizzagate>.

Farhi, Paul. 2017. "Breitbart's Milo Yiannopoulos resigns following outrage over his past comments about pedophilia." *The Washington Post*, February 21.

Folkenflik, David, interview by Audie Cornish. 2016. *Radio Conspiracy Theorist Claims Ear of Trump, Pushes Pizzagate Fictions* (December 6).

Gillin, Joshua. 2016. "How Pizzagate Went from Fake News to a Real Problem for a DC Business." *Politifact*. December 5. Accessed 30 2020, January.
<https://www.politifact.com/truth-o-meter/article/2016/dec/05/how-pizzagate-went-fake-news-real-problem-dc-busin/>.

Gjoni, Eron. 2014. "The Zoe Post." September 12. Accessed January 28, 2020.
<https://thezoepost.wordpress.com/>.

Herring, Susan. 2005. "Gender and Power in On-Line Communication." In *The Handbook of Language and Gender*, by Janet Holmes and Miriam Meyerhoff, 202-228. Hoboken: Wiley and Sons, Inc.

Invernizzi, Giovanna Maria, and Ahmed Ezzeldin Mohamed. 2020. "Trust Nobody: How Voters React to Conspiracy Theories." *SSRN*.
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3507190.

Jones, Alex. 2020. *Infowars*. February 15. Accessed February 15, 2020.
<https://www.infowars.com/?s=pizzagate%20>.

Kirby, Jen. 2019. "Pro-Democracy Candidates Dominate Hong Kong's Local Elections in a Rebuke to China." *Vox Media*, November 25:
<https://www.vox.com/2019/11/25/20981691/hong-kong-district-council-elections-pro-democracy>.

Lees, Matt. 2016. "What Gamergate should have taught us about the 'alt right'." *The Guardian*, 1 December.

Lim, Elvin. 2009. "Gendered Metaphors of Women in Power: the Case of Hillary Clinton as Madonna, Unruly Woman, Bitch and Witch." In *Politics, Gender, and Conceptual Metaphors*, edited by Kathleen Ahrens, 254-269. New York: Palgrave Macmillan.

Marlow, Iain, and Natalie Lung. 2020. "Hong Kong Protesters, on Pause, See Virus Fueling Movement." *The Japan Times*, February 10.

Nicas, Jack. 2019. "Apple Removes App That Helps Hong Kong Protesters Track the Police." *The New York Times*, October 9:
<https://www.nytimes.com/2019/10/09/technology/apple-hong-kong-app.html>.

—. 2019. "Alex Jones Said Bans Would Strengthen Him. He Was Wrong." *The New York Times*, September 4. <https://www.nytimes.com/2018/09/04/technology/alex-jones-infowars-bans-traffic.html>.

Ohlheiser, Abby. 2016. "Fearing Yet Another Witch Hunt, Reddit Bans Pizzagate." *The Washington Post*, November 24: <https://www.washingtonpost.com/news/the-intersect/wp/2016/11/23/fearing-yet-another-witch-hunt-reddit-bans-pizzagate/>.

2019. *Protest Tech Hong Kong*. Quarterly Publication, Washington DC: The Wilson Center.

Quinn, Zoe. 2017. *Crash Override*. New York: PublicAffairs.

Read, Max. 2014. "How We Got Rolled by the Dishonest Fascists of Gamergate." *Gawker*, October 22.

Reddit. 2020. "#PizzaGate." *Reddit*. November 2016. Accessed February 15, 2020. <https://web.archive.org/web/20161122093944/https://www.reddit.com/r/pizzagate/>.

Sarkeesian, Anita. 2020. *Feminist Frequency*. January 28. Accessed January 28, 2020. <https://feministfrequency.com/about/>.

Sarkeesian, Anita, interview by Stephen Colbert. 2014. *The Colbert Report- Gamergate-Anita Sarkeesian* (October 30).

Snider, Mike. 2017. "Steve Bannon Learned to Harness Troll Army from 'World of Warcraft'." *USA Today*, July 18. <https://www.usatoday.com/story/tech/talkingtech/2017/07/18/steve-bannon-learned-harness-troll-army-world-warcraft/489713001/>.

Sollée, Kristen. 2017. *Witches, Sluts, Feminists: Conjuring the Sex Positive*. Berkeley: Stone Bridge Press.

Swami, Viren, Martin Voracek, Stefan Steiger, Ulrich Tran, and Adrian Furnham. 2014. "Analytic thinking reduces belief in conspiracy theories." *Erschienen in Cognition* 572-585.

The BBC. 2019. "Hong Kong: Timeline of Extradition Protests." *BBC News*, September 4: <https://www.bbc.com/news/world-asia-china-49340717>.

—. 2016. "Trump Aide Michael Flynn Jr Out After "Pizzagate" Tweets." *BBC News*, December 7. <https://www.bbc.com/news/world-us-canada-38231532>.

Thorbecke, Catherine. 2019. "How Tech Has Fueled a 'Leaderless' Protest in Hong Kong." *ABC News*, October 12: <https://abcnews.go.com/Technology/tech-fueled-leaderless-protest-hong-kong/story?id=66158665>.

Tsang, Steve. 2003. *A Modern History of Hong Kong*. New York: Palgrave Macmillan.
VanDerWerff, Emily Todd. 2014. "Gamergate: Here's why everybody in the video game world is fighting." *Vox*, October 14.

WikiLeaks. 2015. *Hillary Clinton Email Archive*. November 3. Accessed February 15, 2020. <https://wikileaks.org/clinton-emails/>.

Wu, Jin, Rebecca Lai, and Alan Yuhas. 2019. "Six Months of Hong Kong Protests. How Did We Get Here?" *The New York Times*, November 18: <https://www.nytimes.com/interactive/2019/world/asia/hong-kong-protests-arc.html>.

Wu, Wei, and Tom Vander Beken. 2018. "Understanding Criminal Punishment and Prisons in China." *The Prison Journal*. <https://doi.org/10.1177%2F0032885518811818>.

Yiannopoulos, Milo. 2014. "Feminist Bullies Tearing the Video Game Industry Apart." *Breitbart*, 1 September.

Chapter Two: Early Hopes for Digital Democracy as a Normative Benchmark for Contemporary Digital Politics

Introduction

By the second decade of the 21st century, “digital democracy” appears in an uncertain state. People have taken to the internet to commit hate crimes, perpetrate gendered violence, verbally abuse one another, and, increasingly, foment the rise of fascism in places ranging from the Philippines, France, the United States, and Russia. The internet hosts actors who stoke sectarian violence, spread disinformation, and manipulate elections. This has led, in the past half-decade, to growing pessimism among scholars and members of the public about the possibility for the internet to encourage democratic behaviors. Some have begun to predict the degeneration of contemporary democracy as an exceptionally loud and persistent minority seems utterly determined to tear down democracy and, in its ashes, erect a space where hate, extremism, and fascism are the norm.⁶⁰

When the internet was still a new network, there was, in democratic theory as well as in other political thought concerned with both technology and democracy, a remarkable amount of optimism concerning the democratic potential of the internet and communications technology more broadly. In hindsight, this optimism seems to have missed the predictive mark. Even the more measured responses from democratic theory seem on the optimistic side considering the experiences of digital realities in the second

⁶⁰ Chomsky, Noam, interview by Richard Gizbert. 2018. Noam Chomsky's Manufacturing Consent revisited (December 22).

decade of the 21st century. Optimism surrounding digital democracy, however, is not without its value despite undemocratic outcomes from some recent events. With democracy as a system of government facing an endless series of crises in recent years, I argue that it is imperative to develop a normative goal towards which scholars can point to praxis intended to preserve and enhance democratic practices.⁶¹

Rather than writing off optimism as utopianism, I instead argue that the works that contained digital optimism, even if it is utopian, are analytically valuable to establish normative benchmarks by which to evaluate contemporary digital political life. Plato deploys similar logic in his assertion in *Republic* and elsewhere that learning what the ideal is can help guide our thinking and actions toward improvement.⁶² More recently, Slavoj Zizek offers his thinking on the value of optimism gained from even failed attempts at democratic empowerment of people in the Arab Spring, Occupy Wall Street, and similar movements:

...Instead of analyzing [events] as part of the continuum of past and present, we should bring in the perspective of the future, taking them as limited, distorted (sometimes even perverted) fragments of a utopian future that lies dormant in the present as its hidden potential.⁶³

While I am much more skeptical of Plato's insistence on perfection in his Forms, I keep his commitment to praxis while departing from his idealism, with the hope of beginning

⁶¹ Bohman, James. 2010. *Democracy Across Borders*. Cambridge: The MIT University Press. The concluding chapter contains an enlightening discussion about the scope of democratic politics in the 21st century.

⁶² Plato. 1993. *Republic*. Oxford: Oxford University Press. Line 369a.

⁶³ Zizek, Slavoj. 2012. *The Year of Dreaming Dangerously*. London: Verso.

to use ideals to inform future theory more clearly as well as engaged activism with an analytical eye similarly focused to Žižek's suggestion.

This chapter pursues two main objectives. First, I examine the hopes for digital democracy as democratic theorists, posthumanists, and transhumanists, among others, posited in the early days of the publicly available internet. This examination gives some broader intellectual context as I move forward in proceeding chapters as to whether the internet that currently exists lives up to early scholarly hopes for digital democratic practices. Second, I make the theoretical case that current technologies could serve as environments in which empowered digital publics thrive—if we use them in ways informed by deliberative democratic theory. The ability to come together digitally rather than physically alleviates many of the concerns from ancient⁶⁴ to contemporary⁶⁵ democratic theories around the necessity to be able to meet in person to be able to deliberate: this assumption, bound by technical limitations, led us to settle for the crutch of representative democracy and it can now, potentially, erode with the careful use of digital technologies. What digital deliberative democracy could do is, at least in part, solve the problem of scale that has haunted democratic theory and practice for 2,400 years.⁶⁶ Thanks to the ideal that access to the web is roughly equal,⁶⁷ the careful deployment of the communicative tools of the internet would also address some of the

⁶⁴ Aristotle. 1995. *Politics*. Oxford: Oxford University Press. Pgs. 260-263

⁶⁵ Habermas, Jürgen. 2006. "Political Communication in Media Society: Does Democracy Still Enjoy an Epistemic Dimension? The impact of Normative Theory on Empirical Research." *Communication Theory* 411-426.

⁶⁶ Roughly the length of time since Socrates' trial in Athens.

⁶⁷ I interrogate this ideal at length in subsequent chapters.

most difficult structural flaws with the framework of the nation-state: the border of any one state does not often neatly correspond to the subset of humanity that would be affected by a particular issue or decision. By harnessing digital tools, publics could potentially form, reform, and dissolve more fluidly than the rigid structure of the nation-state allows, providing many more people with the opportunity and relevant space in which to deliberate. This flexibility has the potential to be inclusive, egalitarian, and sensible in its inclusions and exclusions. To these ends, I conclude the chapter with an analysis of the work of Jürgen Habermas, making the case that a public achieving something like the ideal speech situation in terms of inclusion and the deployment of a discourse ethic is both theoretically possible and a useful normative benchmark by which to assess contemporary structures of digital power.

Scholarly Optimism for Digital Democracy

The hope that the internet would be a catalyst for an increase in people's participation in democratic discourse was not, in the period from the mid-1980s to the end of the millennium, a fanciful notion. By the year 2000, it looked as though liberal democracy was triumphant over its more totalitarian and authoritarian challengers. The Berlin Wall had fallen, the Soviet Union had collapsed, and even brutal dictatorships at least paid lip service to democracy by adding the term to their names.⁶⁸ Growing inequality, the rise of authoritarianism, climate change, and global economic meltdowns

⁶⁸ The Democratic Republic of the Congo has called itself such since 1997, even though by most measures it is an authoritarian state. Similar claims can be made about the Democratic People's Republic of Korea, and the Lao People's Democratic Republic.

The Central Intelligence Agency. 2020. "Congo, Democratic Republic of the ." *The World Factbook*. October 6. Accessed October 20, 2020. <https://www.cia.gov/library/publications/the-world-factbook/geos/cg.html>.

that would mark the next two decades had either not yet come to the fore, or were being ignored in light of the hopes for a neoliberal order full of economic promise through a relative relaxing of state intervention into economics in the United States.⁶⁹

That the internet became a scientific network useful for communication, commerce, and even public debate was something of a shock given its origins as a Cold War project.⁷⁰ Having not yet fully commercialized in the way that it has now, one can see why theorists writing before the year 2,000 were optimistic about the potential of the internet to serve democratic ends. There had been some small-scale, local experiments in using new email and telecommunications technologies to help citizens and groups communicate with local and state governments as well as to coordinate services and get information relevant to community members.⁷¹ With such early success in mind, it does make sense that some saw the internet as a means by which ordinary people would participate in democratic politics. At the very least, these new tools seemed to the theorists at the time a way to make good on some of the Jeffersonian ideals of nurturing civic virtue and a culture of participation by having people participate often, in local democracy. Instead of physical meetings in those local sub-divisions Jefferson called wards, the internet offers the possibility of coming together virtually. Where the internet

⁶⁹ Fukuyama, Francis. 2014. "At 'The End of History' Still Stands Democracy." *The Wall Street Journal*, June 6: <https://www.wsj.com/articles/at-the-end-of-history-still-stands-democracy-1402080661>.

⁷⁰ Moschovitis, Christos, Hillary Poole, Tami Schuyler, and Theresa Senft. 1999. *History of the Internet: A Chronology, 1843 to the Present*. Santa Barbara: ABC-CLIO. A more critical history of the web comprises the next chapter.

⁷¹ Becker, Ted, and Christa Daryl Slaton. 2000. *The Future of Teledemocracy*. Westport: Prager.

posed a major innovation over previous ways of doing things was in the fact that has always been a multidirectional rather than a one- or two-way information pipeline.⁷²

Additionally, the internet served as an idealized repository of information maintained by governments and accessed by citizens.⁷³ This would have two extremely positive effects on the quality of democratic discourse. First, it would have contributed to the establishment of a shared universe of facts that John Rawls finds to be central to the success of a person's entry into reasonable deliberation. As he puts it:

...the parties in the original position are assumed to know the general facts about human society. Since this knowledge enters into the premises of their deliberations, their choice of principles is relative to these facts. What is essential, of course, is that these premises be true and sufficiently general... Indeed, one cannot avoid assumptions about general facts any more than one can do without a conception of the good on the basis of which the parties rank alternatives.⁷⁴

To establish a Rawlsian original position, then, a commonly accessible source of facts would be a prerequisite to citizens' formulation of political principles. The internet could be used to collect and disseminate such facts, if, and only if, the state could be the trusted custodian of basic factual information. Second, assuming for a moment that positivist political science is correct on the matter, easily accessible information would lead to

⁷² Becker and Slaton 2000. See Conclusion in particular.

⁷³ Margretts, Helen. 2012. "The Internet and Democracy." In *The Oxford Handbook of Internet Studies*, edited by William H Dutton. Oxford: Oxford University Press.
Dutton, William H. 2009. "The Fifth Estate Emerging Through the Network of Networks." *Prometheus* 27 (1): 1-15.

⁷⁴ Rawls, John. 2005. *A Theory of Justice*. Cambridge: Harvard University Press. Pgs. 158-160.

voters who better understand the issues, are more likely to vote, become activists or organizers, and generally participate more actively and effectively in the political system.⁷⁵ Even without a radical destabilization of the Western Liberal Democratic model of government, these uses of technology could certainly improve the quality of democracy if implemented carefully. For Sylvain Firer-Blaess and Christian Fuchs, for instance, Wikipedia and similarly crowd-driven, non-corporate-owned digital platforms contain strong elements of deliberative and participatory democracy that serve as proofs of the empowering potential of the internet from within a Western, liberal, and capitalist context.

Pre-internet, people spent their time in the political unit in which they physically found themselves. Without moving to a different city, region, or nation, one had little to no meaningful or deliberative recourse to geographically distant political units. For instance, Canadians have not been given a say in the American generation of pollution which causes acid rain in Canada: this leaves Canadians out of the discussion when well-meaning laws are passed in the US.⁷⁶ With the internet, however, it would become increasingly possible to participate and communicate beyond the physical boundaries of pre-internet democracy: publics could be formed online from the hyper-local right up to the global, assuming the will to do so was present along with the infrastructure.⁷⁷ This would serve, foundationally, to question the role of the nation-state and its sub-

⁷⁵ Claassen, Ryan. 2007. "Floating Voters and Floating Activists: Political Change and Information." *Political Research Quarterly* 124-134.

⁷⁶ Hopkin, Michael. 2005. "Acid rain still hurting Canada." *Nature*.
<https://www.nature.com/articles/news050808-10>.

⁷⁷ Becker and Slaton 2000, Pg. 211.

governments, as well as the assumptions that led to the choice of representative liberal democracy over other types of democratic governance: the increased technical capability for deliberation could lead to a shift to a form of democracy more focused on and run by citizens rather than by states or other currently formalized political units of government, though it is a relatively understudied area of political theory.⁷⁸

To question and potentially destabilize representative democracy to the end of replacing it with some other, more participatory model, would not be a matter of course with the mere presence of the internet: that technological determinism strays from the utopian into the downright absurd. To facilitate a shift to deliberative democracy would mean that, at the very least, an internet would have to develop that allowed for and actively facilitated a growing and inclusive group of citizens to be able to access a shared body of information and then meaningfully debate political issues upon which they had meaningful agenda-setting powers as well as a real say in the outcome of those debates, with policy outcomes to follow. Access would have to be easy and cheap, given the barriers to access along the lines of socioeconomic class that already exist in our non-digital politics.⁷⁹ This internet, then, would need to be part library, part agora, and part social welfare system. Some early experiments in Hawaii, Alaska, and other places led Ted Becker and Christa Slayton to conclude that people are more than willing to formulate agendas and act upon them politically if the resources to do so are made convenient to use: experiments in mailing ballots, allowing voting by phone, and

⁷⁸ Dahlberg, Lincoln. 2001. "Democracy via Cyberspace: Mapping the Rhetoric and Practices of Three Prominent Camps." *New Media and Society*.
https://journals.sagepub.com/doi/abs/10.1177/14614440122226038?casa_token=QT4wuiuLsGZsAAAAA:NASmY7_PPjUGWz2vZCwrR0gudMMjStGFDpam9KE3ISclqgd4HDBYpucGQHF2hBFBfsRt2Ij5uhjxNA.

⁷⁹ Leighley, Jan, and Jonathan Nagler. 2013. *Who Votes Now?* Oxford: Oxford University Press.

electronic town halls saw, in the most positive cases, a three-fold increase in voter participation in elections.⁸⁰ Looking to the future (as of the year 2000), Becker and Slayton hoped that:

...the future of the 21st-century New Democratic Voting Paradigm voting-from-the-home will be neither mail-voting nor telephone-voting. It will be courtesy of the Internet- especially after the Web becomes interfaced with home television. This will be commonplace in the early 21st century. So, when citizens can switch off their TV sets and be zoomed into cyberspace, they will have the instantaneous capacity to vote online just by pushing buttons on their handset.⁸¹

Two other important factors led to the general optimism in the democratic theory of the 1980s to the early 2000s in terms of their analyses of technology. The first historical development that gave this optimism a leg on which to stand was the decline in cost and size of computers that began in earnest in the 1980s. For the first time, computers were in the home offices and on the kitchen tables of middle- and working-class people: this means that the hopes of the likes of Becker and Slayton were, at least materially, within the realm of possibility.⁸²

One work that intelligently links that concern for the quality of democracy in the closing decades of the 20th century to the potential of technology to relieve the pressure on some of those issues is Benjamin Barber's *Strong Democracy*. In it, he argues that at a fundamental level, the rising tide of neoliberalism has made some critical mistakes that

⁸⁰ Becker and Slayton 2000, see chapter seven in particular.

⁸¹ Ibid, 182.

⁸² Comen, Evan. 2018. "Check out how much a computer cost then." USA Today, October 3: Online.

may well lead to an undemocratic outcome.⁸³ With the neoliberal insistence that market economics ought to be the center of life for citizens, and that a small, representative government is the proper form of political life for the 21st century, deliberation between citizens begins to wane. A Barber explains:

When the public yields its basic governing functions to representatives, it has begun a process of alienation that in the end taints the very idea of public goods and common ground. This alienation in turn trivializes democracy, transforming what should be ongoing deliberative participation in governance into a cynical preoccupation with media-hyped elections... In a word, then, privatization, alienation, and the abuse of civic deliberation are actually easier in a representative democracy than in a strong participatory democracy.⁸⁴

This process of “privatization, alienation, and the abuse of civic deliberation,” has led to the development of a politics centered around “Man,” an economic being that would rather not participate in politics and all, and does so only out of necessity to maintain his life of production and consumption.⁸⁵ What we have done, echoing the sentiments of Hannah Arendt and earlier concerns of Tocqueville,⁸⁶ is create lives that are nearly totally focused on economic activities, leaving little time for the development of individual or group political lives. This atomistic Man interacts with the world primarily through a homogenous cycle of production and consumption, generating what Barber, now in the

⁸³ Barber, Benjamin. 2003. *Strong Democracy*. Berkeley: University of California Press.

⁸⁴ *Ibid*, xiii-xiv.

⁸⁵ Adorno, Theodor. 1991. *The Culture Industry*. New York: Routledge.

⁸⁶ Tocqueville, Alexis De. 2003. *Democracy in America*. London: Penguin. Pgs. 64-65.

vein of Theodor Adorno's analyses, terms Mass Man. Mass Man simply wants to work, does not consider the conditions of his work to be terribly political, and may occasionally participate in electoral politics by voting. While there is the potential for the communicative capabilities of the internet as a basis for deliberation between people, which is cause for some cautious optimism, the fact is that the internet exists will not, ipso facto, guarantee that Mass Man will have the will to deliberate.⁸⁷

Instead, Barber suggests that people will participate more in democratic politics if that politics can be done from home. The practice of mail voting or electronic voting was already possible at the time and was certainly one way to leverage existing technology to patch up representative democracy. Another suggestion, one borne out in the experiences documented by Becker and Slayton, was to borrow the model of radio talk shows and apply it to televised town halls.⁸⁸ In this way, citizens could begin to learn that they are, in fact, political animals capable of participating meaningfully in the political process. The key is to use technology to make it apparent that politics is not something that happens elsewhere, for other people to do in august marble buildings but is, instead, something that we the people can do from the home office or the kitchen table. The optimism of Barber is not a naïve one but is optimism from someone thinking about tools and tactics to fight neoliberal political malaise by empowering people to participate in politics themselves.

For some, for instance, Francis Fukuyama, the end of the Cold War meant an end to history in the Marxist sense. That is, an end to major systematic changes in types of

⁸⁷ Barber 2003, Pgs. xiv-xv.

⁸⁸ Becker and Slayton 2000. This is what they refer to as Electronic Town Halls, or ECTs.

government or revolutions would be less common going forward, and small refinements in policy would be the way of the political future. If we had not reached the plateau of human social and political teleology with the end of the Cold War and the fall of the Soviet Union, then, at the very least, the slope to that plateau from here on out would be a gradual one.⁸⁹ For others, the lead-up to the new millennium was not quite so great: the growing threats to the economic, environmental, and political order did not much resemble the kinder, gentler neoliberal world that had been promised in the final days of the Cold War.⁹⁰ Instead, as Larry Bartels puts it in his critique of the role of money in American politics:

These disparities in representation are especially troubling because they suggest the potential for a debilitating feedback cycle linking the economic and political realms: increasing economic inequality may produce increasing inequality in political responsiveness, which in turn produces public policies that are increasingly detrimental to the interests of poor citizens, which in turn produces even greater economic inequality and so on. If that is the case, shifts in the income distribution triggered by technological change, demographic shifts, or global economic development may in time become augmented, entrenched, and immutable.⁹¹

While neoliberalism as an ideology would, in the estimation of Bartels and Barber, be unlikely to bring about direct or deliberative democratic practices for most citizens, the

⁸⁹ Fukuyama, Francis. 2006. *The End of History and the Last Man*. London: Free Press.

⁹⁰ Bush, George Herbert Walker. 1989. "Inaugural Address of George Bush." The Avalon Project. January 20. Accessed July 13, 2021. https://avalon.law.yale.edu/20th_century/bush.asp.

⁹¹ Bartels, Larry. 2008. *Unequal Democracy*. Princeton: Princeton University Press.

technological developments that were already in motion signaled that more political change could come along lines that empowered people to communicate with one another to the ends of political participation rather than settling for representative, neoliberal democracy as the end of history.⁹²

That democracy could coexist productively with the development of new technologies well predates the digital revolution of recent decades. We have been using technological means, albeit analog ones, to vote by mail since at least 1775 in North America⁹³ and have been able to call our representatives to ask them questions, get information, make our voices heard, or ask for constituent services for decades. Combining technology and democracy in the modern, liberal world is not new. The promising experiences in teledemocracy from the 1960s on proved the further point that even pre-internet telecommunications devices could, indeed, foster greater participation in not only voting, but more participatory democratic practices. Two cases of this were in Hawaii and Alaska, both of which experimented with early computer systems to broadcast local government meetings to their geographically disparate community members or to serve as portals through which citizens could contact officials and get information as well as provide opportunities for citizens to deliberate with one another from afar.⁹⁴ The optimism of those writing democratic theory at the time, then, was not

⁹² Janowski, Nicholas, and Martine Van Selm. 2000. "The Promise and Practice of Public Debate in Cyberspace." In *Digital Democracy*, by Jan Van Dijk and Kenneth Hacker, 184- 208. London: SAGE .

⁹³ Waxman, Olivia. 2020. "Voting by Mail Dates Back to America's Earliest Years. Here's How It's Changed Over the Years." *TIME*, September 28: <https://time.com/5892357/voting-by-mail-history/>.

⁹⁴ Becker and Slayton 2000.

based on fantasy but on a small scale and promising successes in using technology to empower people to participate in their democracies.

The smallness of these successful experiments in teledemocracy and early digital democracy should not temper that optimism. If anything, smallness is one of the very reasons for optimism. In developing democracies in which the people would actively participate, thinkers since Aristotle share concerns that participation will be less likely as the size of the population increases.⁹⁵ This is more than a truism of theoretical dogma handed down like some ancient code of a philosophical order, it is a simple recognition of a practical political fact. It is easier to work with and enculturate small numbers of people into a certain practice than it is to remake an entire political system all at once.⁹⁶ If digital democracy is to be done, it may be done best at small scales where people have the chance to develop deliberative norms and skills.

The smallness of scale in the successes of digital democracy brings to mind some of the better thinking of Thomas Jefferson on the development and sustaining of democracy in America. For Jefferson, one of the ways to encourage democracy in this new, large nation was to develop a robust system of wards in which nearly anyone could go and participate in governance in a meaningful way without needing to have first become part of an oligarchical ruling class. These small units, which he calls “elementary republics,” would teach people to love democracy, and participate in it. To this end, he hopes that:

⁹⁵ Aristotle. 1995. *Politics*. Oxford: Oxford University Press. Pg. 240.

⁹⁶ *Ibid*, 260-263.

there shall not be a man in the state who will not be a member of one of its councils, great or small, he will let the heart be torn out of his body sooner than his power be wrested from him by a Caesar or a Bonaparte.⁹⁷

Jefferson's hopes for the survival of American democratic institutions lay squarely on citizens, as he offers in an 1820 letter to William Charles Jarvis:

I know no safe depository of the ultimate powers of the society, but the people themselves: and if we think them not enlightened enough to exercise their control with a wholesome discretion, the remedy is, not to take it from them, but to inform their discretion by education. This is the true corrective of abuses of constitutional power.⁹⁸

To preserve a democratic form of government, then, Jefferson hopes for a body of citizens who are enculturated in political participation as a regular part of life and make thoughtful political decisions. This notion of an informed and participatory populace is an excellent base for deliberative democracy in ideal terms, and Jefferson goes further, in stating that one of the central foundations of the continuance of American democracy is “the diffusion of information and arraignment of all abuses at the bar of the public reason.”⁹⁹

⁹⁷ Jefferson, Thomas. 1816. "Thomas Jefferson to Joseph C. Cabell, 2 February 1816." The National Archives. February 16. Accessed July 13, 2021. <https://founders.archives.gov/documents/Jefferson/03-09-02-0286>.

⁹⁸ Jefferson, Thomas. 1820. "From Thomas Jefferson to William Charles Jarvis, 28 September 1820." The National Archives. September 28. Accessed July 13, 2021. <https://founders.archives.gov/documents/Jefferson/98-01-02-1540>.

⁹⁹ Jefferson, Thomas. 1801. "First Inaugural Address." The Avalon Project. March 4. Accessed July 13, 2021. https://avalon.law.yale.edu/19th_century/jefinau1.asp.

Taken together, Jefferson's view of citizens as an educated and informed group of people who govern in wards and form the foundation for continued democracy lead me to conclude that there is something of analytical value here that buttresses Barber's insistence that institutions should provide people with the tools to participate in politics at levels that are close to home. Jefferson's thinking gives a guide to the fostering of deliberation regardless of time and technology. Using the internet, it may well be possible for that informational diffusion can become part of everyday political life, as can the public airing of differences between citizens committed to peaceful discourse. In this sense, these teledemocratic experiments could represent a contemporary parallel to the ward system. If we want digital democracy, it is not enough, though it is necessary, to have a networked system of computers that stretches the whole of the earth. Just as necessary will be having people willing and capable of participating in democratic deliberation. In terms of Bruno Latour's actor-network theory, the nonhuman elements of a given network are vital to the functioning of a given actor-network.¹⁰⁰ The desire to engage with one another in deliberation is a necessary but not sufficient element to create deliberation.

There must also be a means by which we can communicate with one another. A person by herself with no way to contact others is not a demos: it is only when she can act on those desires to deliberate that it becomes possible to speak a demos into being. That action must, logically, be possible through some means. To be able to deliberate, one must be able to communicate with others. Before telecommunications, instantaneous deliberation had to occur in person. For much of the last two millennia, this has also

¹⁰⁰ Latour, Bruno. 2005. *Reassembling the Social*. Oxford: Oxford University Press.

meant that participating directly in political deliberation has been the privilege of those who could afford to spend their days deliberating rather than working.¹⁰¹

In earlier democratic theory, much of the smallness of democracy had the effect of making it an elite-driven model, whether in Aristotle's time or Jefferson's: the material barriers for entry into public life, as Hannah Arendt so well elucidates in *The Human Condition*, made it such that the demos in practice nearly always consisted of the economically dominant class, who had the material self-sufficiency¹⁰² that allowed the time to participate in thoughtful political deliberation. If in making use of digital technologies, we can not only reduce those material costs to entry but also bolster the educational requirements so important to theorists ranging from Jefferson to Barber and Rawls, then digital deliberative democracy can be a more inclusive endeavor than liberal democracy as it exists currently.

William Connolly, like Barber, finds that neoliberal, representative democracy is an increasingly poor fit for how people understand political issues that affect them, noting that issues such as climate justice "exceed" the boundaries of the state.¹⁰³ Reacting to challenges that have exceeded its geography, the state is aggressively retrenching into nationalism¹⁰⁴ to reframe problems at the level of the state. This has yet to resolve the

¹⁰¹ Arendt, Hannah. 1998. *The Human Condition*. Chicago: The University of Chicago Press. Pgs. 175-180.

¹⁰² Within the context of the household, in which, the citizen who was a member of the demos depended on the labor of slaves, in the ancient world.

¹⁰³ Connolly, William. 2004. *The Ethos of Pluralization*. Minneapolis: The University of Minnesota Press. Pg. 155.

¹⁰⁴ *Ibid*,135.

problem of statelessness of persons¹⁰⁵ and has left us, the citizens, experiencing late-stage capitalism in ways that feel fundamentally placeless as the state becomes less well fit for a more globalized world.¹⁰⁶ To better fit the needs of people and issues that exist beyond the territorial nation-state, Connolly suggests that we begin creating a politics with contestable foundations; the ability to organically (re)form publics beyond those determined by the state will allow people meaningfully engage with and empower one another in political units other than those based in national territories.¹⁰⁷ Speaking directly to the need to develop democratic practices beyond the state, he writes:

To refuse to develop political allegiances and identifications with this global time as a time would be to fail to elevate democratic sensibilities and spaces of action to the levels reached by other components of late modern life... To define timely global and regional issues is to identify with others living in this time through political engagements that cross the boundaries of states. It is to recognize—and to legitimize the recognition—that today's democratic politics flow below, though, and above the level of the state.¹⁰⁸

Connolly, then, thinks that the representative nation-state lacks the tools that late-modern political life demands, and encourages us to use means beyond and outside of the state to develop a more convivial politics. In the context of this work, I suggest that we find optimism in digital communications technologies' ability to empower people to

¹⁰⁵ Ibid, 44.

¹⁰⁶ Ibid, 15.

¹⁰⁷ Ibid,150-155.

¹⁰⁸ Ibid,160.

participate in democratic discourses if only we take Connolly's assertion that we recognize peoples' legitimacy to enact/undertake democracy digitally beyond the state.

Taking a similar stance to Connolly, James Bohman finds, in *Democracy Across Borders*, that representative democracies have become ill-equipped to address the needs of people who see themselves as members of communities that exist beyond the border of the state.¹⁰⁹ Where Bohman wants us to tread carefully, despite the limitations of the state, is in making any rosy predictions that robust digital publics will form any time soon. Instead, he finds that digital publics are currently weak,¹¹⁰ but could strengthen through a careful establishment of practices of interactivity, responsibility, and membership that prioritizes not only participation but also accountability.¹¹¹ He is cautiously optimistic that the internet can be used, if we are careful to avoid the pitfalls of becoming a "distracted public,"¹¹² to create a "distributed public" that, like the EU, can begin to address matters that exist beyond the borders of states while engaging interested and affected persons through substantive deliberation.¹¹³ This optimism is somewhat tempered, though, as he understands that such publics or sets of publics can only be created by citizens who choose to engage through digital technologies in ways that foster deliberation.¹¹⁴ Making use of the internet to do so, Bohman finds, is likely to erode the

¹⁰⁹Bohman, James. 2010. *Democracy Across Borders*. Cambridge: The MIT University Press. Pg. 19.

¹¹⁰ Ibid,82-83.

¹¹¹ Ibid, 72, 80.

¹¹² Ibid, 15.

¹¹³ Ibid, 62, 82.

¹¹⁴ Ibid, 37-38.

monopoly on political spaces currently held by the state: because he does not envision that the state will be able to control the internet, he finds it more likely that discourses distinct from the state's current representational scheme may flourish online.¹¹⁵

While Philip Pettit is more skeptical than Bohman and Connolly of the possibility of deliberative democracy,¹¹⁶ Pettit's conception of freedom is compatible with a notion of digital democracy that prizes free expression while seeking to prevent people from abusing and disempowering one another. In his formulation, freedom is non-domination: one must be free to act without being subject to another's will, regardless of whether that will is imposed.¹¹⁷ Actors do not always clearly impose domination on one another; structural actors can impose domination on actors as well.¹¹⁸ To illustrate, a brief example is useful.

Under liberal democracies, free and fair elections are one of, if not the, most important institutions by which citizens can exercise their freedoms. If, on election day, an armed militia member barred you from entering your polling place, it would be clear that you were unfree due to the actions of another human being. If you were wheelchair-bound and unable to access the building because it had stairs but no ramp, you would be just as unfree in terms of voting as you were in the situation with the vigilante because you had still not voted. The difference is that in one a human being prevented the casting of a ballot, in the other the very structure of the building would impede access to the

¹¹⁵ Ibid, 82-83.

¹¹⁶ Pettit, Philip. 2012. *On The People's Terms*. Cambridge: Cambridge University Press. Pg. 194.

¹¹⁷ Ibid, 43.

¹¹⁸ Ibid, 141.

franchise. However, the result is the same. Thus, for Pettit, it is not enough to be free of immediate interference by a physically present other person; we must also do what we can to remove material and structural fetters to choice, as well.¹¹⁹ Further, he finds that our choices should also be free from deliberate manipulations of information,¹²⁰ such that people have the opportunity, and actual ability, to engage with one another in a space in which they have equal influence.¹²¹ Such a level of freedom cannot be assumed to be a natural condition, and it stands to reason, Pettit finds, that citizens would, and should, be willing to use the institutions and resources of the state to maintain and encourage freedom in material as well as legal terms.¹²²

From his principle of non-domination, Pettit demands that material access to political institutions and non-manipulated information be available to all citizens. These principles, in intent, ensure the freedom and participation of citizens: the principles also serve as a foundation for ideal norms for digital democracy. Expanding the example of the polling place, what if a political unit held its elections digitally? Again, we ought to expand citizens' access to voting even if that means using the resources of the state to do so. For the same reason that we accept adding ramps to buildings, we should also support providing access to digital voting to all citizens. To meet the requirement of freedom from deliberately manipulated information that Pettit insists upon, nonpartisan, true

¹¹⁹ Ibid, 50,69.

¹²⁰ Ibid, 55.

¹²¹ Ibid, 169.

¹²² Ibid, 69, 133.

information on candidates and ballot issues should also be both legally and materially available to all.

(Un)critical Digital Publics

With that in mind, in advancing a theory of digital democracy, we must be careful what we wish for. If we are not careful in our thinking now, we may unwittingly design or participate in systems that cause distinctly undemocratic outcomes for ourselves or future generations. In our desire for more information, features, and interactivity in our technologies, we must also be cautious of the ability of nondemocratic actors to make use of those things to disempower us rather than to give us the tools to empower ourselves and each other. Attempts to create empowering publics, Habermas finds in *Structural Transformation of the Public Sphere*, have led, in the cases he examines, to results that did not live up to the deliberative ideals of those who sought to create spaces for the free sharing of political ideas. For the German thinker, the creation of bourgeois salons out of the ideals for rational discourse put forward in Enlightenment thinking was an attempt to make real the ideals for a politics that had deliberation at the heart of its design. That there never was a complete restructuring of politics around the bourgeois ideals of liberty, equality, and brotherhood was, as both Habermas and Adorno note, one of the key failings of the Enlightenment as a political project.¹²³ Where the project did have some success, Habermas notes, was in the small-scale democratic spaces created by the salons themselves: publics, in his argument, worked at least in part because they were plural and small. A national public sphere never fully formed in France or, for that matter, anywhere

¹²³ Adorno, Max Horkheimer and Theodore. 2002. *Dialectic of Enlightenment*. Stanford: Stanford University Press.

else. Bourgeois ideals of deliberation as a fundamental set of norms upon which to build a democracy seemed to work best in the microcosm of the salons.¹²⁴ This lesson may well be important in tempering our hopes for digital democracy as well.

When people enter into deliberative spaces with private interests such as profit in mind, Habermas argues in *The Structural Transformation of the Public Sphere*, those private matters intrude into public discourse, occupying increasingly more of that discourse and leading to a politics in which instrumental, individual ends supersede the communicative goals of deliberation in an ideal speech situation. Thus, we have created a situation in which we have no public at all, but rather a re-feudalized politics in which discourse among true equals is a rare commodity indeed: the emergence of instrumental, bourgeois politics focused on economic gain foreclosed the possibility of a truly democratic public in the way that Habermas would have hoped for in an ideal world.¹²⁵ Although the total reconfiguration of political and economic life did not come to its democratic fruition, there is something of value here.¹²⁶ More generally, the lesson from the formation of bourgeois publics is that we must be cautious of unintended consequences. The universality of the public that these newly formulated bourgeois public spheres mandated also made room for the re-feudalization of the public by the state.¹²⁷

¹²⁴ Habermas 1991, 31-43.

¹²⁵ Ibid, see especially part VI.

¹²⁶ Habermas, Jurgen. 1991. *The Structural Transformation of the Public Sphere*. Cambridge: The MIT Press.

There are two major blind spots in thinking about digital democracy that have left room for a feudalization of digital politics. The first stems from a lack of conceptual clarity from the late 1990s to the early 2000s on what the internet would become. This uncertainty would lead in the case of some thinkers to the assumption that the internet would be all things to all people. In Adam Roger's and Barbara Krantowitz's piece, "The Birth of a Digital Nation,"¹²⁸ the authors claim that we should rejoice that with the adoption and widespread use of the web, we have arrived at a political moment in which a great many folks would participate in their ideal form of political discourse. Liberals would be happy that there would be spaces in which they could include everyone who wanted to participate. Conservatives would be pleased that they could have spaces in which they could exclude anyone they pleased. Libertarians would be over the moon with joy that there would be no state to impose rules about hate speech or moderate behavior to prevent abuses. That is, assuming we would be content to remain in our little spaces for this and that, there would be no adverse effect on political behavior offline.¹²⁹ As I examine more closely in the subsequent chapters, this was quite far from the reality of digital politics and reflects blindness to the political context of the creation of the internet as we have it now.

Second, there is the faulty assumption of goodness some have made in the newness of the internet. Jeff Jarvis, in his book-length love letter to the tech industry, makes the case that privacy is overrated. Increase personal publicness, led by tech

¹²⁹ Rogers, Adam, and Barbara Krantowitz. 1994. "The Birth of a Digital Nation." *Newsweek*, August 8: 56-59.

companies, will make human interactions more empowering. In discussing one of the cofounders of Twitter, Evan Williams, Jarvis claims that:

Williams hasn't made tools to make content so much as he has made tools to create conversations. That, in turn, creates publics. He and Twitter are looking for more ways to help users find the right people and gather around an idea, a joke, a location, an event. Twitter is a serendipity machine.¹³⁰

Thanks to the web, in Jarvis' estimation, we will be able to come together in ways that foster human connection and make us more understanding of one another. In an assertion that would likely trouble both Orwell and Arendt, Jarvis finds that democracy works best if we can learn to live with much less privacy than we did before the rise of social media in the context of Western Liberal democracies. While people will surely come to regret some things we post and see online,¹³¹ as Jarvis claims, we will learn to be kind to each other and will likely be good stewards of our own and each other's private information.¹³² In a section devoted to the critique of Jürgen Habermas' assertion that the internet has seen the rise of mass publics rather than a proliferation of reading publics, Jarvis offers that:

Most tellingly, he [Habermas] laments the migration of the mass to "isolated issue publics." Yet isn't that dispersal of interests happening because people can now

¹³⁰ Jarvis, Jeff. 2011. *Public Parts*. New York: Simon and Schuster. Pg. 144.

¹³¹ Ibid, 53-55.

¹³² Ibid, 131-135.

address what matters to them rather than what editors, politicians, or academics think should matter to them?¹³³

This statement, considering the previous quote as well, is contradictory. While Jarvis spends much of the book discussing the boon of publicness through platforms designed, or maintained, by a small group of people—the employees and programmers on Twitter, Facebook, Google, etc., he also takes issue with a perceived elitism in Habermas.

Looking for an answer to the question as to what makes the curated user experiences one will find on Twitter preferable to, say, the editorial judgment of an academic journal, Jarvis offers some commentary in a chapter he entitles “The Radically Public Company.” In it, he offers his hopes for companies that will foster a sort of publicness that makes people feel empowered and connected, asking in bold typeface that a company should, among other things, “eliminate advertising,” “reveal and explain everything it does with customer information,” and “open its books.”¹³⁴ Jarvis does admit that no company does or is likely to do this,¹³⁵ but his choice of major interview subjects adds to the apparent contradiction between Jarvis’ hopes and the realities of 21st-century digital platforms. Jarvis’ faith in the good that big data can do stretches the plausibility of his normative claims: the interview conducted with Mark Zuckerberg, a central figure in the book,¹³⁶ occurred several years before the Harvard dropout’s company harvested the data of

¹³³ Ibid, 76.

¹³⁴ Ibid, 163-166.

¹³⁵ Ibid, 166.

¹³⁶ There are over a dozen references to Zuckerberg in the index of the book.

millions of people, later to be sold.¹³⁷ The work as a whole is an example of contemporary thinking that tries to take the capitalist, neoliberal¹³⁸ vision of the internet and cast it as a means by which people can and will find empowerment to communicate and deliberate with one another.

What Jarvis fails to see is that in the near-total collapse of the private life he describes as well as the commodification of the data generated in the process, anything resembling the private realm as we know it would end. By ceding observation of private life to corporate actors, we may have exploited the incompleteness of the development of equal citizens under liberal democracy and developed a notion under which actors and institutions disempower citizens in certain circumstances. Jarvis' assumption that the current deployment of the internet is fundamentally good for democracy is both uncritical of the potential ills that could come from corporations' gaining greater control over private life and dangerous in terms of establishing critical discourses about the internet.

As an incomplete utopian project, western liberal democracy has never quite lived up to its potential. As C.B. Macpherson develops his eloquent eulogy to liberalism, a few fundamental failings of liberal democracy have set us up to face serious problems in the present. Perhaps most pressing, the idea of an egalitarian demos in which no one citizen could dominate or subordinate, never came to pass.¹³⁹ What happened instead was a

¹³⁷ Zialcita, Paolo. 2019. "Facebook Pays \$643,000 Fine for Role in Cambridge Analytica Scandal." NPR. October 30. Accessed July 14, 2021. <https://www.npr.org/2019/10/30/774749376/facebook-pays-643-000-fine-for-role-in-cambridge-analytica-scandal>.

¹³⁸ Jarvis himself argues against regulation of the internet on Pg. 210-211.

¹³⁹ Macpherson, CB. 1977. *The Life and Times of Liberal Democracy*. Oxford: Oxford University Press.

replacement of the older feudal order with a new oligarchy of the holders of capital.¹⁴⁰ This, Macpherson and Arendt agree upon, has made it that an egalitarian public sphere could never really emerge and has gotten much less egalitarian as capital further concentrates in the hands of the few. While couched in the language of Jeremy Bentham and John Stuart Mill as a means to forward a politics that would lead to the greatest human equality and chances for self-fulfillment, it has become clear that the material independence that was required for rational, equal democracy to live up to its promises of the expansion of the franchise are simply unlikely to occur under the current political framework.¹⁴¹ While Western Liberal Democracies have a legal conception of the citizen as free and equal, the material dependence of the vast majority of these liberal citizens on their employers or spouses for wages that allow them to fund their continued existence as producers and consumers keep the realization of liberal citizenship, free of domination and subordination, at arm's length.

Despite the lack of remedy to the hierarchies of class, race, and gender liberal democracy has existed in the United States for over two centuries, offering an expansion of the legal franchise rather than systematic change to how most of the supposed demos spent their time: working and being materially dependent on the owners of capital. This meant that the economic freedom and practical equality necessary for the formation of a truly democratic public never came to pass. This, Habermas notes as a major theme in *The Structural Transformation of the Public Sphere*, was a key cause of the re-

¹⁴⁰ Habermas 1991.

¹⁴¹ Arendt, Hannah. 1998. *The Human Condition*. Chicago: The University of Chicago Press.

feudalization of politics that has served to recreate old hierarchies under new economic and political norms. What this means in terms of Macpherson is that liberalism has not fundamentally lived up to its promise and, from its conception, has empowered small, wealthy interests over most people.

We needed an egalitarian and open public in which people could participate as equals. Instead, we got a society in which the vast majority are materially, and thus politically, dependent on a small minority whose political influence counts due to the influence of their wealth rather than the strength of their ideas. This is especially true, Macpherson notes, with the increasing inequality that was so apparent even at the height of the Western victory in the Cold War that the future of western liberal democracy began to appear uncertain. The question remains: what sorts of change should we expect for the future? Further, given that history is not a teleology, what kinds of change would we like to make? Given the fact that the past influences but does not determine the future completely, the more optimistic elements of our thinking, now, may steer the future in a direction that we prefer to the current trajectory of ailing western liberal democracies. At the very least, we may begin to make use of some of the technological innovations of recent decades toward more democratic ends. As thinkers as diverse as Jefferson, Macpherson and Habermas find, democracy requires a lot of its citizens for them to become more than legally free persons and instead form a participatory, democratic public. To help make this happen in our present time, I assert here that we must borrow from the old pedagogical and activist adage and meet the people where they are if we hope for them to learn the skills of participatory models of democracy beyond the middling liberalism with which we have been living for some time. That liberalism, while

claiming in words, that all men would realize their fundamental equality and insist on direct democracy, limited the franchise based on property qualifications. That limitation was, looking back with the guidance of critical theory such as that presented in Marx and the thinkers who followed in his wake including Habermas, clearly a reification of existing wealth and property relations. For our purposes here, it is useful to keep in mind some of the theoretical lessons from that restriction of publics to a smaller scale.

From the ancient Greeks through the American founding, there was a concern that a democratic public could not be established on a massive scale and that, at some point, too large a scale would lead to a poorer quality of democracy—or none at all.¹⁴² Many of those critiques, vitally, were based on elitist notions of who ought to participate in the democratic enterprise, but the general critique of scale in democracies is not limited to bourgeois politics or ancient classism. It includes even those on the left, for instance, Adorno. It is possible, I argue, to retain that general logic in critiquing mass politics while stripping some of those critiques of their old racist, sexist, and classist trappings.¹⁴³ Much of the early optimism for the potential of the internet to empower a participatory democratic public is not only overly optimistic in the abilities of the internet to empower those who have access to it, but also in its claims of access in the first place. For us,

¹⁴² Aristotle 1995, pgs. 161-165.

Adams, John. 1787. "Federalist No. 10." *The New York Packet*, November 23:
https://avalon.law.yale.edu/18th_century/fed10.asp.

Montesquieu, Charles De. 1994. *The Spirit of the Laws*. Cambridge : Cambridge University Press.

¹⁴³ Adorno, Theodor. 1991. *The Culture Industry*. New York: Routledge . For instance, Adorno's critique of jazz, I argue, severely underestimates the cultural value of the genre, of the bebop that was evolving around the time he was writing *The Culture Industry* in the mid-1940s.

living in the 2020s, the web is more or less, as its name claims, worldwide¹⁴⁴ if one is willing to ignore, for the moment, the inequality of access that I turn to later in this work.

For many writing in the early days of the web, digital democracy might function best and most durably at small scales. As an early exploration into interactive politics, independent presidential candidate Ross Perot's televised town halls in the early 1990s showed that people were willing to, at the very least, engage with political issues in real-time if they had the technological means and time to do so.¹⁴⁵ This is not the kind of earth-shattering political revolution that will transform a representative democracy with low turnout into a perfect deliberative democracy.¹⁴⁶ It is, however, a way to get a citizen to begin taking a more active role in their own political lives directly from their living room: this reconsideration by individuals of their ability to participate in their democracies, Benjamin Barber notes, is key to developing stronger democratic practices for participation in the future.

This smallness in early digital democratic participation is encouraging for a few reasons. For one, it keeps with the compelling case Jefferson presented in his ward system; it is easier and much more feasible to get someone to participate in politics that is close to her home and accessible than to expect any given citizen to take it upon

¹⁴⁴ The World Bank estimates that in 2020, about 60% of the world's population was using the internet.

The World Bank. 2022. "Individuals Using the Internet (% of Population)." The World Bank. Accessed May 12, 2022. <https://data.worldbank.org/indicator/IT.NET.USER.ZS>.

¹⁴⁵ Schwartz, Evan. 1994. "Direct Democracy: Are You Ready for the Democracy Channel." *Wires*, January 1. <https://www.wired.com/1994/01/e-dem/>.

¹⁴⁶ Doty, Pamela, and Robert Zussman. 1975. "Electronic 'Town Meetings': Two Experiments in Participatory Technology." *IEEE Transactions on Communications* 1126-1133.

themselves to begin engaging in something like a national public.¹⁴⁷ It is, effectively, a restatement of one of the key pedagogical principles that guides most effective teaching: start small and build to larger, more complex scales. Applying this principle of smallness as a place from which to build guided the early experiences in Hawaii and Alaska in building the norms of participation in digital politics along with the capabilities of the state to respond to the needs and wants of the people by building their digital infrastructures.¹⁴⁸ As empirical studies of governments' digital capabilities have shown, there is a positive feedback loop: these governments, if funded and engaged with the people, are willing and able to expand the opportunities for citizens to engage with one another, acquire information, and ultimately to gain more responsive governance over time.¹⁴⁹

That the web would foster a greater sense of smallness in democratic politics seems, at first, to be counterintuitive. But it is not unprecedented within international relations theory, where James Rosenau develops, in *Distant Proximities*, the idea that, when faced with globalism, some will find themselves looking inward to their local communities as opposed to out into a larger world to participate. There is some room for optimism in this, though Rosenau himself errs on the side of caution on the matter. When people look inwards towards their local communities, it can be a reaction to the sheer

¹⁴⁷ Jefferson 1816.

¹⁴⁸ Becker and Slayton 2000.

¹⁴⁹ Elberse, Anita, Matthew Hale, and William Dutton. 2000. "Guiding Voters Through the Net: the Democrat Network in a California Primary Election." In *Digital Democracy*, by Jan Van Dijk and Kenneth Hacker, 130-148. London: SAGE.

scale of the global world in which we find ourselves, and this is a response that makes sense on the individual and local levels. What impact can one citizen expect to have on national policy, let alone global governance? That same citizen might feel much more empowered to act, for example, if they can stand up in a digital town hall meeting and bring up something as simple as getting a pothole fixed down her street. In looking inward to our local communities, facilitated by digital technologies, citizens may find themselves more motivated to act: these actions, if done on a small scale, may lead to real, meaningful impacts.¹⁵⁰ It is not a deliberative revolution, but it is a small step towards a more deliberative democracy.

On Post/Transhumanism

Becker, Slayton, and Barber, writing at the dawn of the internet age, did not expect the advent of the internet to change the world overnight. Instead, they hoped that ordinary people, making use of these new technologies, would begin to deliberate, organize, and engage politically from their living rooms and dining tables. If democracy could meet people where they were, then the people might take steps to participate in democracy more often than they do currently. Of course, not all those writing with optimism about emerging technologies do so with thinking aimed at small-scale improvements in democratic practice using new tools to enable, inform, and elevate citizens to the ends of democratic deliberation. Some are willing to think much bigger and in bolder terms. Where the thinkers I have so far cited sought to augment or repair the institutions and failings of liberal democracy to empower liberal citizens to better

¹⁵⁰ Rosenau, James. 2003. *Distant Proximities*. Princeton: Princeton University Press.

engage with politics, others, namely transhumanists and posthumanists see the modification or evolution of the liberal subject as an avenue forward in political development.

For transhumanists and posthumanists, the technologies that we are developing now have been and will continue to reshape human beings. Through the addition of technology into the lives and bodies of people, transhumanists and posthumanists agree, that those people can empower themselves to the ends that they choose or, at the very least, change the subjectivities that people experience. To pose a well-accepted definition of transhumanism, I offer the one provided by Humanity+, a nonprofit representing a network of several thousand self-identified transhumanists, which states that transhumanism is:

(1) The intellectual and cultural movement that affirms the possibility and desirability of fundamentally improving the human condition through applied reason, especially by developing and making widely available technologies to eliminate aging and to greatly enhance human intellectual, physical, and psychological capacities.

(2) The study of the ramifications, promises, and potential dangers of technologies that will enable us to overcome fundamental human limitations, and the related study of the ethical matters involved in developing and using such technologies.¹⁵¹

¹⁵¹ Humanity+. 2021. "Transhumanist FAQ." Humanity+. Accessed July 21, 2021. <https://humanityplus.org/transhumanism/transhumanist-faq/>.

Summarizing Transhumanist thought risks serious violence to their thinking considering the diversity among their members as artists,¹⁵² academics,¹⁵³ and CEOs such as Elon Musk.¹⁵⁴ But there is one, and only one, fundamental assertion that relates them to one another. Transhumanists believe that people empower themselves through technologies and that doing so consciously is a potential avenue for continued empowerment in the present and future.

Among their frequent hopes are for a few kinds of immortality, including through the modification of the bodies that we already have and by uploading our minds to computer systems.¹⁵⁵ At the far end of their thinking is the “singularity,” a point at which there will be no meaningful distinction between human and machine as we seek and attain a new form or mode of human existence that would lead to an expansion of human capabilities and empowerment far beyond what we are currently capable of: this is, in science fiction author Vernor Vinge’s estimation, inevitable whether good or bad from the perspective of ourselves as current homo sapiens.¹⁵⁶

¹⁵² Haines, Agi. n.d. Agi Haines. Accessed July 21, 2021. <https://www.agihaines.com/home>. Many of Haines’ pieces are transhumanist in their leanings, and her talks, which are on her site, indicate her transhumanism.

¹⁵³ Max More is one such academic. For instance, cited here is his piece of the history of transhumanist thinking. More, Max. 2013. “The Philosophy of Transhumanism.” In *The Transhumanist Reader*, by Max More and Natasha Vita-More, 3-18. Chichester: Wiley-Blackwell.

¹⁵⁴ Musk, Elon, interview by Mohammed Al Gerawi. 2017. Mohammad Al Gerawi in a conversation with Elon Musk during WGS17 (February 15). https://www.youtube.com/watch?v=rCoFKUJ_8Yo. The most relevant comments begin at the 25-minute mark.

¹⁵⁵ Various, “Transhumanist Declaration” in More, Max, and Natasha Vita-More. 2013. *The Transhumanist Reader*. Oxford: Wiley-Blackwell. Pg. 55 It is also a central theme of the *Black Mirror* episode entitled “San Junipero.”

¹⁵⁶ Vinge, Vernor. 1993. “The Coming Technological Singularity: How to Survive in the Post-Human Era.” VISION-21 Symposium. Cleveland: NASA. <https://edoras.sdsu.edu/~vinge/misc/singularity.html>.

Intellectually, the transhumanists are aware of their roots in the Enlightenment, often claiming such in their work, as More puts it in the opening chapter of a volume on Transhumanist thought of which he is an editor:

Transhumanism continues to champion the core of the Enlightenment ideas and ideals—rationality and the scientific method, individual rights, and the possibility and desirability of progress, the overcoming of superstition and authoritarianism, and the search for new forms of governance—while revising and refining them in the light of new knowledge.¹⁵⁷

The major elements that they borrow from the Enlightenment include Locke's notion of bodily autonomy and John Stuart Mills' hedonism.¹⁵⁸ Since many Transhumanists are of the cyborg variety, much of their technological agenda centers around enhancements that we should, they argue, make to our bodies. Their logic is that, since our bodies are ours, no state should have control over what we do to them. Transhumanists assert that using these technologies has done more human good than harm, thus we not only can but must innovate as much as we can to alleviate human suffering through the development and use of advanced technologies.¹⁵⁹

Posthumanists take the thinking posited by transhumanists, and take it to the next level, aiming at what they view to be new directions in agency and experience. The attraction to posthumanist thought that seeks to place subjectivity into environments built

¹⁵⁷ More, Max. 2013. "The Philosophy of Transhumanism." In *The Transhumanist Reader*, by Max More and Natasha Vita-More, 3-18. Chichester: Wiley-Blackwell. Pg. 10.

¹⁵⁸ Ibid.

¹⁵⁹ More, Max, and Natasha Vita-More. 2013. *The Transhumanist Reader*. Oxford: Wiley-Blackwell. In particular, see Robert Freitas' entry in part III as well as part v.

by subjects stems partly from, Adam Greenfield notes, the desire to escape from or augment life experiences that people find unsatisfactory. This goes beyond modifying the body to displacing it as much as possible for people to inhabit spaces that they prefer to their immediate physical presence. As Greenfield puts it:

Nor is the body by any means the only domain that the would-be posthuman subject may wish to transcend via augmentation. Subject as it is to the corrosive forces of entropy and time, forcing those occupying it to contend with the inconvenient demands of others, the built environment is another. Especially given current levels of investment in physical infrastructure in the United States, there is a very real risk that those who are able to do so will prefer to retreat behind a wall of mediation to the difficult work of being fully present in public. At its zenith, this tendency implies both a dereliction of public space, and an almost total abandonment of a shared public realm.¹⁶⁰

Here, Greenfield shares the concern broached by the transhumanists, and, further, the posthumanists that I have surveyed here. For both camps, people should use technology to either augment or replace the body or to transform the world with technological alternatives. In some senses, the post- and trans-humanists are self-aware that their project is a spiritual successor to the Enlightenment. What they seem to have missed are the very things that Horkheimer, Adorno, and Arendt addressed so well in their critiques of the Enlightenment before the age of the internet. Ideally, a trans- or post-human subject would be able to engage with the world as they saw fit, less fettered than before by their biologies and the geographic situation of their bodies. This subject

¹⁶⁰ Greenfield, Adam. 2018. *Radical Technologies: The Design of Everyday Life*. London: Verso. Pg. 84.

could, I suppose, choose to deliberate with other subjects to the end of making decisions democratically. If the same Mass Man that resulted from the Enlightenment has at his disposal the tools to use... “large-scale data analysis, algorithmic analysis, machine learning techniques, automation and robotics” to the ends of “the production of an experience I call the posthuman everyday,”¹⁶¹ that new everyday experience is likely to be one springing from the mind of Mass Man¹⁶² rather than a citizen hoping to participate in deliberative democracy. The risk, though, is the one Greenfield points out: that same subject may well retreat from the public entirely.

In constructing the trans- or post-human subject using technologies, the danger is that this subject may find the public simply unnecessary and disconnect from it entirely to pursue other ends. This would spell the end, at least for that subject, of democratic participation and deliberation entirely. The issue persists at a larger scale: technologies do not roll out globally at once, nor can we assume that any one technology is universally available or equitably distributed.¹⁶³ As the technological capability to spend more and more of one’s time online in the displacement of physical publics becomes possible, it is highly likely that this will occur along inegalitarian lines. This opens the possibility for these technologies to be means by which those with the means to afford them check out of politics, making the public increasingly a space for those who cannot afford to construct digital realities in which to live. For transhumanists and posthumanists, the path to more empowering technologies appears to be the modification of the person such that

¹⁶¹ Ibid, Pg. 185.

¹⁶² The “posthuman everyday,” if governed by Mass Man’s thinking, may lead in the direction of continuous production and consumption, which, for instance, the film *The Matrix* takes up at length.

¹⁶³ This is still true of access to electricity, let alone the internet: I take this up in Chapter Four.

each person will have more capabilities to do as they please. Through the application of technologies, empowerment could occur along post- and trans-humanist lines, but doing so requires, as their thinking demonstrates, technologies that do not yet exist on a wide scale.

From Optimism to Utopianism

The thinking of self-described transhumanists depends on technologies that we do not currently have. It is not yet possible, for example, to leave the public behind for a virtual world of one's own making. But the optimism that runs through transhumanist thought also includes work that is less dependent on the invention of technologies that are, for the time being, the stuff of science fiction. One such example is Richard Florida's *The Rise of the Creative Class*. The work, penned originally in 2002 and revised a decade later, provides a more than rosy take on how the web and other technologies have impacted economic and political life over the past two decades. For Florida, what we have witnessed in those decades is the birth and rise of a new socioeconomic class, which he terms the creative class. This new class relates to the economy and the world around them in a way that is only possible with the rise of the internet. This new class demands work that is challenging and fulfilling, and they live in urban centers. Rejecting suburban homes with commutes to unfulfilling jobs in drab office parks, they want to contribute to a greater good beyond themselves in ways that are meaningful to them, and they have the skills to do so.¹⁶⁴ Because they work making good use of digital technologies, Florida argues, the creative class empowers itself to provide meaningful and relatively comfortable lives for its membership. While this argument is an optimistic consideration

¹⁶⁴ Florida, Richard. 2012. *The Rise of the Creative Class*. New York: Basic Books.

of the generation usually referred to as millennials, that empowering optimism does not hold up to the historical realities many in that generation face.

Just before the publication of the first edition of the work, the .com bubble burst, putting out of work many of the creatives that he holds in such high regard.¹⁶⁵ Before the second edition, many more of us lost jobs that never came back during the Great Recession.¹⁶⁶ Many of us remain in cities because we cannot afford homes, especially in rural communities far from employment opportunities.¹⁶⁷

The selective and rosy picture that Florida imagines for the creative class holds only if we are willing to ignore anything bad that has happened economically in the past twenty or so years. Thanks to the same web that made that creative class possible, many of their future-proof careers have moved to what are effectively digital sweatshops in less developed parts of the world. If we are to remain optimistic about the ways technology can enable democracy, we cannot do so by simply ignoring bad outcomes and must instead work towards a praxis that positively affects the real world. The optimism of transhumanism and thinking of Florida as an exemplar of technologically optimistic thinking that lacks critical consideration of power dynamics in the historical growth of the internet. Additionally, transhumanism ignores the role of class, race, and gender as

¹⁶⁵ Panko, Raymond. 2008. "IT Employment Prospects: Beyond the Dotcom Bubble." *European Journal of Information Systems* 182-197.

¹⁶⁶ Cunningham, Evan. 2018. *Great Recession, Great Recovery? Trends From the Current Population Survey*. Economic Report, Washington DC: US Bureau of Labor Statistics.

¹⁶⁷ Fry, Richard. 2017. "5 Facts About Millennial Households." *Pew Research Center*. September 6. Accessed October 22, 2020. <https://www.pewresearch.org/fact-tank/2017/09/06/5-facts-about-millennial-households/>.

they have related to (dis)empowerment in the development of technology more broadly. As thinkers optimistic about technology's ability to empower individuals, transhumanists, posthumanists, and thinkers like Florida ignore broader power dynamics, which I address in the subsequent chapters of this work.

For instance, as Zakiyyah Iman Jackson develops in *Becoming Human*, the historical experience of blackness is one that is laden with technologies of disempowerment. Using the example of healthcare, Jackson outlines the experiences of women of color in the eighteenth and nineteenth centuries, finding that women of color were abused as sites of experimentation for white men seeking to develop new treatments.¹⁶⁸ In the present, access and outcomes in healthcare are themselves racialized, with the experience of blackness being one that is, in Jackson's analysis, embedded within disempowering maltreatment through medical technologies.¹⁶⁹ This observation brings me to a germane critique of transhumanism in terms of its possibility for disempowerment. If one reads the development of medical technologies such as surgical procedures, imaging devices, etc. as a transhumanist act by which people attempt to change their lives through technologies, then the historical truths which Jackson outlines make it clear that the empowerment through life-saving technologies has happened along racialized lines. To reap the benefits of transhumanism, I argue, one must first fall under a given social hierarchy's definition of a full human being. Given the tenacity of sexism, classism, and racism in the contemporary moment, I am skeptical of transhumanism as a

¹⁶⁸ Jackson, Zakiyyah Iman. 2020. *Becoming Human*. New York: New York University Press. See Chapter Four in particular, in which she outlines that, in the United States, black folks are less likely to have their pain taken seriously, and their ailments treated, than their white counterparts. Further, there is a long history of black folks being experimented upon without their consent in the United States.

¹⁶⁹ *Ibid*, 195-6.

means forward to a more democratic future: if the next several centuries of technology develop along racial, gender, and class lines in the same way that Jackson observes, then I would expect the racialization and disempowerment of people to continue through the technical means that are currently in use and development.

Posthumanism seeks to explore the possibilities for agency beyond homo sapiens (for instance, in artificial intelligence not directly controlled by a human, or in cases of minds that have been uploaded to a computer). In its current state, David Roden finds posthumanism shares much with transhumanism (which seeks to augment or change homo sapiens, not necessarily consider new forms of agents) Both see the development of agency as held back by anthropocentrism as well as our limited conception of morality and ethics as human subjects that are, for example, bound to communicate languages.¹⁷⁰ Instead, Roden suggests that posthumanism may open new avenues for scholarship and modes of living, but those ways of scholarship and life are not likely to be done by homo sapiens, but something else entirely. As he puts it:

If, as I claim, the posthuman difference is not one between kinds but emerges diachronically between individuals, we cannot specify its nature *a priori* but only *a posteriori*- after the emergence of posthumans.¹⁷¹

This theoretical position, that the beings that will live after us must make their way in terms of thinking and living contains immense possibilities for the future, including empowering ones but takes as its metaphysical foundation the existence of

¹⁷⁰ Roden, David. 2015. *Posthuman Life*. London: Routledge. This is the argument of the book, and he presents his issues with language on Pgs. 81-82.

¹⁷¹ Ibid, 105.

subjects who, by definition, are not human and do not yet exist. Human beings will bear some of the responsibility for the creation of posthumans, whatever and whoever they may be,¹⁷² but we are not posthuman yet. As Roden concludes his book:

I think this spirit of speculative engineering best exemplifies an ethical posthuman becoming—not the comic or dreadful arrest in the face of something that cannot be grasped.¹⁷³

As a general statement of possible posthuman ethics, Roden’s conclusion attempts to rein in the possibility of unfettered utopianism, while maintaining that, because human beings are part of the assemblages that will, eventually, create posthuman subjects, those human beings will likely have some influence on what those posthumans will be, do, and think.¹⁷⁴ In this regard, a critical posthumanism will necessarily involve careful considerations about how we, homo sapiens, interact with one another in terms of our technologically-mediated relations of power.

Bringing transhumanism and posthumanism to bear more directly on the context of this project—establishing early hopes for democratically empowering uses of digital technologies and comparing them with the historical realities of digital life—both bodies of thought leave something to be desired in terms of giving a clear set of criteria upon which we should judge past, present, and future uses of technologies to empower or disempower actors. From the transhumanists, the general optimism that humans have, can, and will continue to develop their capabilities and improve their lives through

¹⁷² Ibid, 151.

¹⁷³ Ibid, 192.

¹⁷⁴ Ibid, See. Ch 6.

technology is, from a bird's eye view, promising in terms of potential democratic empowerment. For example, one could imagine voting via neural implant after using the same to access large quantities of information about issues and candidates with a mere thought. But transhumanism does not foreclose some of the more disempowering possibilities of such enhancements. What is to stop, for example, the ultra-wealthy from using technologies to use the proposed mind-upload technologies to abuse others as slaves for violent and erotic desires,¹⁷⁵ or to control the flow of information into neural links via paid subscription services? Posthumanism, if done along the lines Roden proposes, promises to be a fascinating field of ethical and philosophical studies in the coming decades as the digital age progresses, but, since it insists on centering on a subject that does not yet exist, it is parallel, but not directly connected, to the course of this work. Here, I seek instead to examine ways that homo sapiens, rather than posthuman subjects of the future, have and may relate to one another through digital technologies in ways that represent power-laden relationships of empowerment and disempowerment between sets of actors. To establish a solid framework for normative analysis of current digital power dynamics, cognizant of early optimism for digital democracy, it is necessary not only to evaluate hopes for digital democracy but to develop, as I do in the rest of this chapter, a clear understanding of what a public ought to be to empower its participants politically.

Normative Framework for an Empowering Digital Politics

The first, and arguably most prolific theorist of the concept of a modern deliberate democratic public is Jürgen Habermas. His work, *The Structural Transformation of the*

¹⁷⁵ This is a central premise of *Altered Carbon*, Richard Morgan's novel turned television series.

Public Sphere, provides a thoughtful account of the historical emergence of a public sphere. Here, I turn to Habermas not only for his rigor but because his thinking on deliberative democracy is normatively inspirational for much of the optimistic thought which I engaged thus far in this chapter. For Habermas, a public sphere is first and foremost a common space consisting of members that are equals.¹⁷⁶ Habermas' conceptions of equality, which Lincoln Dahlberg notes as important to contemporary understandings of what makes a democracy strong, are both formal and discursive.¹⁷⁷ As Dahlberg puts it:

Participants undertaking rational discourse do not simply assume formal inclusion: that all relevant positions are *in principle* included. They also presuppose discursive equality: that all affected by the claims under consideration are equally *able* to participate. Even when inclusion is formalized, informal restrictions may hinder participation, restrictions that result from social and cultural inequalities. Inclusion may be limited by inequalities within discourse, where some dominate discourse and others struggle to get their voices heard. It may also be limited by inequalities from outside of discourse, such as when a certain level of material wealth or education is required to take part in proceedings. This in turn presupposes those social inequalities of all types (based on money, skills, status, etc.) do not impact upon participation; and because

¹⁷⁶ Habermas 1991, pgs. 23-30.

¹⁷⁷ Dahlberg, Lincoln. 2005. "The Habermasian Public Sphere: A specification of the Idealized Conditions of Democratic Communication." *Studies in Social and Political Thought* 1-18.

discourse cannot be insulated from socio-economic disparities, substantive social equality is also ideally presupposed.¹⁷⁸

To become empowered to participate in a public that satisfies the conditions that Dahlberg finds in Habermas' works, then, requires only a lack of legal fetters to an individual's participation, but that the person has the actual ability to participate. This participation, in the public spheres that emerged in Habermas' account of the eighteenth century, focused on the empowerment of the bourgeois class, as the emergence of this public may be conceived above all as the sphere of private people come together as a public; they soon claimed the public sphere against the public authorities themselves, to engage them in a debate over the general rules governing relations in the basically privatized but publicly relevant sphere of commodity exchange and social labor.¹⁷⁹

In Habermas' account, the purpose of the emergent bourgeois public spheres was to facilitate the members of that public to engage in discussions over the rules for their common lives, and they came to that discussion as not only formal equals but equals in the sense that they had the necessary skills and material security to make participation possible. There is a second vital observation that helps make the case for the possibility of a democratic public. In the above-cited conception of a public, Habermas does not locate it in any one physical space. Bourgeois publics were instead located in society, "against the public authorities themselves." These publics, then, were located not physically, but structurally: it was that the people in the salons met to deliberate to communicative ends that mattered to Habermas, not their physical location. This

¹⁷⁸ Ibid, 9.

¹⁷⁹ Habermas 1991, Pg., 25.

becomes vital in the subsequent chapters, where I develop an understanding of the internet as being an actor-network that is laden with relationships of power between actors: what Habermas saw in bourgeois publics, which became refeudalized, was a relationship not only of geography but, more importantly, of power.

In Habermas' work, the ideal speech situation outlines his ideals for empowered deliberation. Aiming to develop discourse ethics in which people who are not experts in philosophy can come together and deliberate when "...the disruption of routines leads us to reflect momentarily in an attempt to reassure ourselves of our well-founded expectations,"¹⁸⁰ Habermas proposes four foundational requirements for deliberation:

- (a) inclusivity: no one who could make a relevant contribution may be prevented from participating;
- (b) equal distribution of communicative freedoms: everyone has an equal opportunity to make contributions;
- (c) truthfulness: the participants must mean what they say; and
- (d) absence of contingent external constraints or constraints inherent to the structure of communication: the yes/no positions of participants on criticizable validity claims should be motivated only by the power of cogent reasons to convince.¹⁸¹

These conditions, I claim, serve as a normative foundation for deliberative democracy as it could exist on the internet. In an interview, Habermas indicates that there are substantial challenges to the ideal speech situation:

¹⁸⁰ Habermas, Jürgen. 2008. *Between Naturalism and Religion*. Cambridge: Polity Press. Pg. 82.

¹⁸¹ *Ibid.*

Although this *reciprocal perspective-taking*, which is necessary in order to consider a conflict from the moral point of view, has a purely cognitive function, the *willingness* even to engage in this strenuous operation across wide cultural distances is the real obstacle.¹⁸²

Internet users could, in practice, make use of the internet to fulfill each of Habermas' requirements. Digital town halls in which everyone could participate and reserve speaking time could satisfy the first two requirements. The last two requirements, on the other hand, are more difficult to achieve as they depend on the dispositions and attitudes of persons and other sets of actors to act truthfully and without wanting to coerce other participants. The internet as we know it now, I develop in the following chapters, fails Habermas' requirements on all four counts. Specifically, I make the case in chapter five that truth is elusive in digital political discourse, which keeps the contemporary web shy of Habermas' third requirement. In terms of the fourth requirement, chapters three and four develop, I argue that a feudalized internet, in practice, gives corporate actors the ability to constrain the words and deeds of other actors. Developing a critical account as to how the development of the internet has failed to achieve Habermas' standards is a central theme of this work: using Habermas' deliberative requirements as a normative benchmark not only allows for a critique of the current structures of power on the internet but can guide thinking and activism towards making the internet more hospitable to empowered, democratic deliberation.

¹⁸² Habermas, Jurgen. 2018. "Interview with Jurgen Habermas." In *The Oxford Handbook of Deliberative Democracy*, edited by Andre Bachtinger, John Dryzek, Jane Mansbridge and Mark Warren, 880-881. Oxford: Oxford University Press.

I use feudalization as the term to describe patterns in digital power dynamics that I map in this work because those patterns, in my view, exhibit several characteristics that recall earlier forms of feudalism. First and foremost, in much the same way that feudal lords owned the land upon which serfs worked, corporations own the digital platforms that users encounter when making use of the contemporary internet. This ownership structure relates corporations and internet users, as I develop in the coming chapters, in a relationship that recalls feudal economic structures. Since internet users often engage with the internet from private spaces (home, example), and use these platforms to have “private” conversations,¹⁸³ the contemporary internet, and its corporate owners, encroach into the private lives of users in similar ways to a feudal lord’s encroachment into the private lives of those working the land. Additionally, feudal serfs worked the land for free: serfs paid the lord in a share of the crops. This same relationship recurs in many contemporary digital platforms in which the user does not pay the owners of the platform in capital, but in data.

In using feudalism, then, I bring a mapping of the contemporary internet in conversation with Habermas’ normative project. If a re-feudalization of European political life foreclosed the possibility of deliberative publics from forming several centuries ago, my concern here is that an already feudalized internet may be a space that is relatively inhospitable to the development of deliberative democratic publics. Mapping that inhospitality, in the broader normative context for this work, is key to not only understanding the power dynamics present on the contemporary internet, but also to

¹⁸³ Though, as I develop later, the data generated by all user engagement in these platforms is not kept to the users themselves, putting notions of privacy at risk.

reshaping the internet in the future, hopefully in ways that make it a network in which deliberative democracy can begin to flourish.

Each of Habermas' requirements for ideal speech serve as normative guideposts towards which an internet that empowers users to participate in democratic deliberation should strive. Requiring inclusivity is well within the normative thinking of the optimists I survey in this chapter: the ability to include people from their homes, and across national borders, means that, ideally, digital democracy can be more inclusive than past forms of democracy. The second requirement, for equality of opportunity to contribute, also fits well with an ideal conception of democratic politics. In the same way that adding a ramp to a polling place makes it more possible for people with disabilities to vote, broader internet access would make it easier for people to participate in digital democracy as informed, empowered citizens. Ideally, with broader access to the internet not only to vote and deliberate, but to learn, empowered digital citizens would come to meet Habermas' third requirement, and make use of the internet to make claims that they authentically believe to be based on truth. If citizens speak truth to one another through digital means, then, those same citizens should be free to convince one another of the validity of claims based on the reasons provided, rather than by the inherent structures of the platforms that they use to communicate with one another. The ideal speech situation, I find, is compatible with digital tools, if, and only if, all four of Habermas' requirements are met in both the structures of the platforms and the normative elements held by individual participants in digital political discourse. Much of the rest of this work details that the former, in my analysis, is far from the case, and it is making the latter more difficult to achieve.

In light of the ideal speech situation as a normative benchmark to which public spheres ought to aspire, bourgeois public spheres were an incomplete success which eventually refeudalized into mass publics, wherein the ideal terms for deliberation devolved into instrumental concerns over the performance of the welfare states which emerged in that refeudalization, the groundwork for which was laid by the fact that the ideal speech situation, in which instrumental communication could be excluded from a reading public's discourse, never fully materialized.¹⁸⁴ Nonetheless, those hoping for more participatory democracy in the future can hold Habermas' requirements for a participatory, deliberative public as foundations for creating empowering digital democratic norms, rules, and practices. Put differently, digital tools can help satisfy the requirements of an empowered, democratic public.

Before applying the ideal speech situation as a normative benchmark by which to measure digital political structures, norms, and practices, it is worthwhile to better understand the power-laden economic relationships that were of concern to Habermas. For the German thinker, economic power dynamics play a crucial role in laying the foundation of publics in which the empowered participants engaged one another as equals, which is key to satisfying Habermas' fourth requirement to establish an ideal speech situation. Lincoln Dahlberg asserts that, for Habermas, discourse requires that "argumentation that constitutes the public sphere of citizen interaction is free from the influence of state and corporate interests."¹⁸⁵ To Habermas, this inclusion of individual,

¹⁸⁴ Habermas 1991, Part V.

¹⁸⁵ Dahlberg, Lincoln. 2004. "The Habermasian Public Sphere: A specification of the Idealized Conditions of Democratic Communications." *Studies in Social and Political Thought*. Pg. 9.

instrumental economic concerns in political discourse is fatal to the construction of a public sphere where discourse can flourish. If our spaces of discourse, he argues, are also spaces of commercial interest, then the door has been left open for the public to become a market rather than a space for the development and sharing of ideas and norms that will benefit all.¹⁸⁶ The public, then, must be a space that is deliberately set aside from capitalist commercial interests: the presupposition of any interests other than those sincerely held by the people who come to form the public restrict the autonomy of the public sphere and influence the outcomes of public debate unduly.¹⁸⁷ So, publics must be spaces where equals come to deliberate, free from the immediate fetter of economic concerns: any fetter on the ability of a participant who stands to be affected by the outcome of a given public discourse stands to immediately threaten the fourth requirement Habermas sets for in an ideal speech situation. The equality in the bourgeois public sphere was not, it is important to note, equality of wealth or property, though the members of these reading publics had both wealth and property. To create a public in communicative discourse held center stage, members of the bourgeois public found it necessary to exclude several categories of activity from the public, both of which will pose issues to the creation of a digital public.¹⁸⁸

The first, which Habermas sorts into the private sphere, is commerce. Commerce, especially capitalist commerce, tends, the German thinker notes, to reify hierarchies and domination in public spheres. The addition of capitalist economic concerns into public

¹⁸⁶ Ibid, Parts V and VI.

¹⁸⁷ Ibid, 9-10.

¹⁸⁸ Habermas 1991, Parts I-III.

discourses introduces a logic that treats people as potential sources of profit: this instrumental view of others makes public discourse that is in line with the ideal speech situation highly improbable, as it makes equality, truth-telling, and inclusion all subject to the profit motive. Axel Honneth finds that, in *Knowledge in Human Interests*, Habermas separates the "...practical and moral rationalization potential of communicative acts from the technical rationalization potential bound up with the manipulative processing of nature."¹⁸⁹

Acts meant to ensure material and economic survival through the "manipulative processing of nature," in Honneth's analysis of Habermas, presuppose an outcome, and are measured in terms of success towards that outcome: a product can be more or less efficient, profitable, etc. and thus is more or less effective at fulfilling an individuals' material wants and needs.¹⁹⁰ Larger systems of work, for Habermas, are organized versions of this same instrumentality and presupposed ends.¹⁹¹ Public, communicative action, on the other hand, abandons those presupposed, instrumental ends and instead holds at its core the goal of understanding one's moral positions and claims, as well as those of others.¹⁹² For Habermas, then, for a discourse to be public, it has to be free of economic hierarchies between individuals at least within that specific discursive space: the instrumental logic of capitalism that seeks production must be checked at the door to allow for the deliberative ideal that seeks a mutual understanding among its membership.

¹⁸⁹ Honneth, Axel. 1982. "Work and Instrumental Action." *New German Critique* 50.

¹⁹⁰ *Ibid*, 51.

¹⁹¹ *Ibid*.

¹⁹² *Ibid*, 53-4.

This decenters family life to what Habermas terms the intimate sphere, which maintains the instrumental production of the citizen as its center but without the direct political significance of feudal lineages.¹⁹³

The foreclosure of both the private and the intimate, in effect, produced the new citizen, who would be equal to his peers in public by a mutually shared norm of nondomination. The exclusion of the private and the intimate from the salon was not an attempt to ignore or level those hierarchies of race or class, but to instead deliberately create a space in which those hierarchies were superseded by a desire for communicative rather than instrumental political deliberation. Instead, the salon, as a public in the Habermasian sense, excluded instrumental considerations of economics to search, at least ideally, for mutual understanding and contestation for the rules and norms of shared lives together. Publics that focused on discourse, as Habermas found them in pre-revolutionary France, depended on the deliberate exclusion of economic life and intimate, family affairs as a reaction to the public personas of the feudal ruling class. If, as was the hope in the salons, we are to aim for a space where participants judge ideas on their merits rather than the identities of the speakers, the internet will have to live up to the same standards that Habermas finds necessary to achieve the ideal speech situation. Thus, I conclude the chapter with a re-formulation of Habermas' requirements for the digital age:

- (a) inclusivity: no one who could make a relevant contribution may be prevented from participating in online discussions;
- (b) equal distribution of communicative freedoms: everyone has an equal opportunity to make contributions and has access to the internet;

¹⁹³ Ibid.

- (c) truthfulness: the participants must mean what they say; and
- (d) absence of contingent external constraints or constraints inherent to the structure of communication: the yes/no positions of participants on criticizable validity claims should be motivated only by the power of cogent reasons to convince.¹⁹⁴

The changes I propose to Habermas' requirements are not large, nor are they substantive. This speaks to the overall normative program forwarded by Habermas, which seeks to use the ideal speech situation as a means by which we can not only evaluate historical and existing practices of deliberation but can seek to improve those in the future to ends that empower participants to relate to one another as members of communities that seek mutual understanding and cooperative forms of life. Additionally, many of the digital optimists that I outline in the early segments of the chapter, too, hope for developments and deployments of digital technologies that represent incremental changes from existing democratic practices rather than major departures, though there are notable exceptions, which occasionally suffer from the grandiosity of their claims. Taking the proposals of Habermas in context with those who found room for optimism in the earlier decades of scholarship on digital democratic empowerment, I argue that there is some reason to believe that the internet could very well become a public that would at least attempt to satisfy Habermas' requirements substantively. I take Habermas' thought in a similar vein to Colin Koopman's treatment of Habermas in *How We Became Our Data*.¹⁹⁵ Habermas

¹⁹⁵ Koopman, Colin. 2019. *How We Became Our Data*. Chicago: University of Chicago Press. The concluding chapter offers an insightful analysis of Habermas, in which Koopman also proposes using Habermas as a normative ideal and problematizes the power-laden processes by which data and information are processed and deployed.

offers a normative ideal for people to come together and deliberate given a shared field of information and a publicly accessible space in which to deliberate, but does not, as this work intends to do, map the power-laden relationships that affect the agency of users as they exist in digital platforms that are owned by corporations.

In this chapter, I began with an exploration of political thought which held optimism for the democratic potential of the internet in the early days of that network. Doing so reveals that much of that optimism held surrounding the web's empowering potential centered around the new communications technology's ability to allow people to get information and deliberate from wherever they found themselves. This opens the opportunity for people to engage in democratic politics beyond the structures of voting within the framework of a nation-state and allows them to participate in digital townhalls and other small-scale political formations that bear some resemblance to Jefferson's ward system in their educational function. Keeping that in mind, more optimistic groups, and thinkers, such as posthumanists and transhumanists, hope for a remaking of people into either a new evolutionary step or a modified homo sapiens who will be better able to empower themselves.

I suggest that the more moderate optimists, who do not depend on a reconfiguration of homo sapiens into a new or modified political species, serve as a normative benchmark by which I measure current digital practices and structures in the coming chapters. A Habermasian ideal speech situation applied to the internet as a normative benchmark provides the opportunity, at the end of this work, for reflection that goes beyond the descriptive work that is possible with an analysis that uses an adapted ANT that is informed by materialist histories of corporations. While much of the work

here is, indeed, descriptive, the overall normative project of improving the chances for and quality of democracy also demands engagement with normative frameworks that Habermas provides.

To develop such a benchmark for political empowerment of people to be able to participate freely in democratic deliberation, I evaluate some of Habermas' thinking and find that his requirements for deliberative publics, especially the ideal speech situation, apply to the internet as foundations for digital publics. In the next chapter, I take up a critical history of the internet to ascertain whether digital publics along the lines of the normative benchmarks I establish here have flourished thus far on the internet.

Bibliography

Adams, John. 1787. "Federalist No. 10." *The New York Packet*, November 23: https://avalon.law.yale.edu/18th_century/fed10.asp.

Adorno, Max Horkheimer and Theodore. 2002. *Dialectic of Enlightenment*. Stanford: Stanford University Press.

Adorno, Theodor. 1991. *The Culture Industry*. New York: Routledge.

Arendt, Hannah. 1998. *The Human Condition*. Chicago: The University of Chicago Press.

Aristotle. 1995. *Politics*. Oxford: Oxford University Press.

Arthur, Richard. 1999. "On Thought Experiments as A Priori Science." *International Studies in the Philosophy of Science* 215-229.

Ayed, Ahmad Ben. 2017. "A Conceptual Secure Blockchain-Based Electronic Voting System." *International Journal of Network Security and Its Applications* https://d1wqtxts1xzle7.cloudfront.net/62402711/Blockchain_Voting_System20200318-112191-yzyxvw.pdf?1584541241=&response-content-disposition=inline%3B+filename%3DA_CONCEPTUAL_SECURE_BLOCKCHAIN_BASSED_ELE.pdf&Expires=1605385052&Signature=F~Cl9vK-iJIqYFNE0i7ff.

Barber, Benjamin. 2003. *Strong Democracy*. Berkeley: University of California Press.

Bartels, Larry. 2008. *Unequal Democracy*. Princeton: Princeton University Press.

- Becker, Ted, and Christa Daryl Slaton. 2000. *The Future of Teledemocracy*. Westport: Praeger.
- Beisbart, Claus. 2012. "How Can Computer Simulations Produce New Knowledge." *European Journal of Philosophy of Science* 395-434.
- Best Delegate. 2020. "Virtual Model United Nations Conferences." *Best Delegate*. Accessed November 14, 2020. <https://learnmodelun.com/pages/virtual-model-united-nations-conferences-vmunc>.
- Bohman, James. 2010. *Democracy Across Borders*. Cambridge: The MIT University Press.
- Brendel, Elke. 2004. "Intuition Pumps and the Proper Use of Thought Experiments." *Dialectica* 89-108.
- Brooks, DHM. 1994. "The Method of Thought Experiment." *Metaphilosophy* 71-83.
- Bunzl, Martin. 1996. "The Logic of Thought Experiments." *Synthese* 227-240.
- Bush, George Herbert Walker. 1989. "Inaugural Address of George Bush." *The Avalon Project*. January 20. Accessed July 13, 2021. https://avalon.law.yale.edu/20th_century/bush.asp.
- Chomsky, Noam, interview by Richard Gizbert. 2018. *Noam Chomsky's Manufacturing Consent revisited* (December 22).
- Claassen, Ryan. 2007. "Floating Voters and Floating Activists: Political Change and Information." *Political Research Quarterly* 124-134.
- Comen, Evan. 2018. "Check out how much a computer cost them." *USA Today*, October 3: Online.
- Connolly, William. 2004. *The Ethos of Pluralization*. Minneapolis: The University of Minnesota Press.
- Cunningham, Evan. 2018. *Great Recession, Great Recovery? Trends From the Current Population Survey*. Economic Report, Washington DC: US Bureau of Labor Statistics.
- Panko, Raymond. 2008. "IT Employment Prospects: Beyond the Dotcom Bubble." *European Journal of Information Systems* 182-197.
- Dahlberg, Lincoln. 2001. "Democracy via Cyberspace: Mapping the Rhetorics and Practices of Three Prominent Camps." *New Media and Society*. https://journals.sagepub.com/doi/abs/10.1177/14614440122226038?casa_token=QT4wuiLsGZsAAAAA:NasmY7_PPjUGWz2vZCwrR0gudMMjStGFDpam9KE3ISclqgd4HDB

YpucGQHF2hBFBfsRt2Ij5uhjxNA.

Dahlberg, Lincoln. 2004. "The Habermasian Public Sphere: A specification of the Idealized Conditions of Democratic Communications." *Studies in Social and Political Thought*.

Dahlberg, Lincoln. 2005. "The Habermasian Public Sphere: A specification of the Idealized Conditions of Democratic Communication." *Studies in Social and Political Thought* 1-18.

Dahlberg, Lincoln. 2001. "Democracy via cyberspace." *New Media and Society* 3 (2): 157-177.

Doty, Pamela, and Robert Zussman. 1975. "Electronic 'Town Meetings': Two Experiments in Participatory Technology." *IEEE Transactions on Communications* 1126-1133.

Douglas, David. 2015. "Towards a Just and Fair Internet: Applying Rawls' Principles of Justice to Internet Regulations." *Ethics of Information Technology* 57-64.

Dutton, William H. 2009. "The Fifth Estate Emerging Through the Network of Networks." *Prometheus* 27 (1): 1-15.

Elberse, Anita, Matthew Hale, and William Dutton. 2000. "Guiding Voters Through the Net: The Democracy Network in a California Primary Election." In *Digital Democracy*, by Jan Van Dijk and Kenneth Hacker, 130-148. London: SAGE.

Florida, Richard. 2012. *The Rise of the Creative Class*. New York: Basic Books.

Forer-Blaess, Sylvian, and Christian Fuchs. 2014. "Wikipedia: An InfoCommunist Manifesto." *Television and New Media* 15 (2): 87-103.

Fry, Richard. 2017. "5 Facts About Millennial Households." *Pew Research Center*. September 6. Accessed October 22, 2020. <https://www.pewresearch.org/fact-tank/2017/09/06/5-facts-about-millennial-households/>.

Fukuyama, Francis. 2006. *The End of History and the Last Man*. London: Free Press.
—. 2014. "At 'The End of History' Still Stands Democracy." *The Wall Street Journal*, June 6: <https://www.wsj.com/articles/at-the-end-of-history-still-stands-democracy-1402080661>.

Gerlach, Jan, and Urs Gasser. 2009. *Three Case Studies from Switzerland: Research Publication*, Boston: Berkman Center.

Greenfield, Adam. 2018. *Radical Technologies: The Design of Everyday Life*. London: Verso.

- Habermas, Jurgen. 2008. *Between Naturalism and Religion*. Cambridge: Polity Press.
- Habermas, Jurgen. 2018. "Interview with Jurgen Habermas." In *The Oxford Handbook of Deliberative Democracy*, edited by Andre Bachtinger, John Dryzek, Jane Mansbridge and Mark Warren, 880-881. Oxford: Oxford University Press.
- Habermas, Jurgen. 2006. "Political Communication in Media Society: Does Democracy Still Enjoy an Epistemic Dimension? The impact of Normative Theory on Empirical Research." *Communication Theory* 411-426.
- . 1991. *The Structural Transformation of the Public Sphere*. Cambridge: The MIT Press.
- Haines, Agi. n.d. *Agi Haines*. Accessed July 21, 2021. <https://www.agihaines.com/home>.
- Honneth, Axel. 1982. "Work and Instrumental Action." *New German Critique* 50.
- Hopkin, Michael. 2005. "Acid rain still hurting Canada." *Nature*. <https://www.nature.com/articles/news050808-10>.
- Humanity+. 2021. "Transhumanist FAQ." *Humanity+*. Accessed July 21, 2021. <https://humanityplus.org/transhumanism/transhumanist-faq/>.
- Jackson, Zakiyyah Iman. 2020. *Becoming Human*. New York: New York University Press.
- Janowski, Nicholas, and Martine Van Selm. 2000. "The Promise and Practice of Public Debate in Cyberspace." In *Digital Democracy*, by Jan Van Dijk and Kenneth Hacker, 184- 208. London: SAGE.
- Jarvis, Jeff. 2011. *Public Parts*. New York: Simon and Schuster.
- Jefferson, Thomas. 1801. "First Inaugural Address." *The Avalon Project*. March 4. Accessed July 13, 2021. https://avalon.law.yale.edu/19th_century/jefinau1.asp.
- . 1820. "From Thomas Jefferson to William Charles Jarvis, 28 September 1820." *The National Archives*. September 28. Accessed July 13, 2021. <https://founders.archives.gov/documents/Jefferson/98-01-02-1540>.
- . 1816. "Thomas Jefferson to Joseph C. Cabell, 2 February 1816." *The National Archives*. February 16. Accessed July 13, 2021. <https://founders.archives.gov/documents/Jefferson/03-09-02-0286>.
- Jefferson, Thomas. 1816. "Thomas Jefferson to Joseph Cabell." Monticello, February 2. <http://www.let.rug.nl/usa/presidents/thomas-jefferson/letters-of-thomas-jefferson/jef1241.php>.

- Kemmerer, EW. 1911. "The United States Postal Savings Bank." *Political Science Quarterly* 462-499.
- Khazan, Olga. 2020. "America's Terrible Internet Is Making Quarantine Worse." *The Atlantic*, August 17: <https://www.theatlantic.com/technology/archive/2020/08/virtual-learning-when-you-dont-have-internet/615322/>.
- Koopman, Colin. 2019. *How We Became Our Data*. Chicago: University of Chicago Press.
- Leighley, Jan, and Jonathan Nagler. 2013. *Who Votes Now?* Oxford: Oxford University Press.
- Locke, John. 1980. *Second Treatise of Government*. Indianapolis: Hackett.
- MacPherson, CB. 1977. *The Life and Times of Liberal Democracy*. Oxford: Oxford University Press.
- Margretts, Helen. 2012. "The Internet and Democracy." In *The Oxford Handbook of Internet Studies*, edited by William H Dutton. Oxford: Oxford University Press.
- Massanari, Adrienne. 2015. *Participatory Culture, Community, and Play*. New York: Peter Lang.
- Montesquieu, Charles De. 1994. *The Spirit of the Laws*. Cambridge : Cambridge University Press.
- More, Max. 2013. "The Philosophy of Transhumanism." In *The Transhumanist Reader*, by Max More and Natasha Vita-More, 3-18. Chichester: Wiley-Blackwell.
- . n.d. "The Philosophy of Transhumanism." *Humanity+*. Accessed July 21, 2021. <https://humanityplus.org/transhumanism/philosophy-of-transhumanism/>.
- More, Max, and Natasha Vita-More. 2013. *The Transhumanist Reader*. Oxford: Wiley-Blackwell.
- Moschovitis, Christos, Hillary Poole, Tami Schuyler, and Theresa Senft. 1999. *History of the Internet: A Chronology, 1843 to the Present*. Santa Barbara: ABC-CLIO.
- Musk, Elon, interview by Mohammed Al Gerawi. 2017. *Mohammad Al Gergawi in a conversation with Elon Musk during WGS17* (February 15). https://www.youtube.com/watch?v=rCoFKUJ_8Yo.
- National Conference of State Legislatures. 2020. "Initiative and Referendum States." *National Conference of State Legislatures*. Accessed November 14, 2020. <https://www.ncsl.org/research/elections-and-campaigns/chart-of-the-initiative-states.aspx>.

- Oregon Secretary of State. n.d. *Oregon Vote-by-Mail*. Governmental Report, Salem: Oregon Secretary of State. <https://sos.oregon.gov/elections/Documents/statistics/vote-by-mail-timeline.pdf>.
- Panko, Raymond. 2008. "IT Employment Prospects: Beyond the Dotcom Bubble." *European Journal of Information Systems* 182-197.
- Papacharissi, Zizi. 2015. *Affective Publics*. Oxford: Oxford University Press.
- Petit, Philip. 2012. *On the People's Terms*. Cambridge: Cambridge University Press.
- Plato. 1993. *Republic*. Oxford: Oxford University Press.
- Rawls, John. 2005. *A Theory of Justice*. Cambridge: Harvard University Press.
- . 2005. *Political Liberalism*. New York: Columbia University Press.
- . 1999. *The Law of Peoples*. Cambridge: Harvard University Press.
- Roden, David. 2015. *Posthuman Life*. London: Routledge.
- Rogers, Adam, and Barbara Kantrowitz. 1994. "The Birth of a Digital nation." *Newsweek*, August 8: 56-59.
- Rosenau, James. 2003. *Distant Proximities*. Princeton: Princeton University Press.
- Schaul, Kevin, Kate Rabinowitz, and Ted Mellnik. 2020. "2020 Turnout Is the Highest in Over a Century." *The Washington Post*, November 5: <https://www.washingtonpost.com/graphics/2020/elections/voter-turnout/>.
- Schmitt-Beck, Rudiger, and Christian Mackendrot. 2010. "Social Networks and Mass Media as Mobilizers and Demobilizers: A Study of Turnout at a German Local Election." *Electoral Studies* 392-404.
- Schwartz, Evan. 1994. "Direct Democracy: Are You Ready for the Democracy Channel." *Wires*, January 1. <https://www.wired.com/1994/01/e-dem/>.
- Starks, Tim. 2019. "The Cost of Replacing Paperless Voting Machines." *Politico*, August 15: <https://www.politico.com/newsletters/morning-cybersecurity/2019/08/15/the-cost-of-replacing-paperless-voting-machines-718152>.
- The Central Intelligence Agency. 2020. "Congo, Democratic Republic of the." *The World Factbook*. October 6. Accessed October 20, 2020. <https://www.cia.gov/library/publications/the-world-factbook/geos/cg.html>.

The World Bank. 2022. "Individuals Using the Internet (% of Population)." *The World Bank*. Accessed May 12, 2022. <https://data.worldbank.org/indicator/IT.NET.USER.ZS>.

Tocqueville, Alexis De. 2003. *Democracy in America*. London: Penguin.

US Department of Defense. 2020. "DOD Releases Fiscal Year 2021 Budget Proposal." *US Department of Defense*. February 10. Accessed November 13, 2020. <https://www.defense.gov/Newsroom/Releases/Release/Article/2079489/dod-releases-fiscal-year-2021-budget-proposal/>.

Vinge, Vernor. 1993. "The Coming Technological Singularity: How to Survive in the Post-Human Era." *VISION-21 Symposium*. Cleveland: NASA. <https://edoras.sdsu.edu/~vinge/misc/singularity.html>.

Waxman, Olivia. 2020. "Voting by Mail Dates Back to America's Earliest Years. Here's How It's Changed Over the Years." *TIME*, September 28: <https://time.com/5892357/voting-by-mail-history/>.

Zialcita, Paolo. 2019. "Facebook Pays \$643,000 Fine for Role in Cambridge Analytica Scandal." *NPR*. October 30. Accessed July 14, 2021. <https://www.npr.org/2019/10/30/774749376/facebook-pays-643-000-fine-for-role-in-cambridge-analytica-scandal>.

Zizek, Slavoj. 2012. *The Year of Dreaming Dangerously*. London: Verso.

Chapter Three: The Digital Actor-Network: Contestations and Feudalization

Introduction

In one of the inaugural novels in the cyberpunk genre, *Neuromancer*, the interplay between the materiality of the body and the seemingly nonmaterial world of the web is on full display. The body of the protagonist is the site of much of the struggle of the novel: his kidnappers modify his body without his consent to make him a more capable hacker when it comes time to enter the web. This bodily modification continues in his nearly continuous struggle to ruin his nervous system and dull his emotions with any and every chemical he can ingest. The character feels the most at home, perhaps, when his consciousness temporarily enters a visual representation of the internet to ply his trade of digital theft. Even then, the body is present: the uploaded consciousness still resides in the human body, and all-digital recreations, even, must exist in some physical host much like a flash drive in function and are, at best, macabre caricatures of people who once lived human lives.¹⁹⁶

Similarly, in *The Matrix*, we follow the protagonist Neo as he encounters, brutally, the interaction between the material and the immaterial. In the opening act, Neo, (again, after consuming mind-altering drugs, a common theme in both cyberpunk fiction and our digital reality in the transhumanists),¹⁹⁷ finds himself, for the first time, in his real, physical body without the mediation of the digital simulation. He comes to the awful

¹⁹⁶ Gibson, William. 1988. *Neuromancer*. New York: Ace.

¹⁹⁷ Aydin, Ciano. 2017. "The Posthuman as Hollow Idol: A Nietzschean Critique of Human Enhancement." *Journal of Medicine and Philosophy* 304-327.

realization in that moment that he, like everyone else he has ever known, is a battery used to provide power for Lovecraftian robots. Until this moment, Neo had been convinced that he was a free human being, acting in his body under the control of his own will. Instead, once other people unplug him from the simulation for the first time, he confronts the reality that this was a lie. His material body had been, for his entire life, held prisoner by robots for its energy, which powered his captors. These robots had tricked Neo into thinking that he was living in New York in the 1990s, though he was still free to ask questions and make decisions within the illusion. Neo had been, in both his material and immaterial being, disempowered from action as a free person through the development and deployment of advanced technologies.

The shared themes in these two works as exemplars of some of the best fiction concerning the development and implementation of an internet are clear: in a corporate digital world, the internet will exploit both mind and body to maintain a system of power. In *Neuromancer*, the abuses perpetrated through technology were to maintain corporate profit and state power. *The Matrix*'s protagonist's body was the lifeblood of a system of robotic domination. Both of those works, *Neuromancer* in 1988 and *The Matrix* in 1999, reflect work from the early days of the internet, and we can see some of the concerns for the future of the web both in the art itself, as well as the commentary surrounding it. When Gibson released *Neuromancer*, the internet did not yet exist commercially: ARPANET was still off-limits for commercial use. Yet, Gibson assumed in his novel that the implementation of the internet would reinforce the power that nation-states and corporations already have under capitalism while simultaneously commodifying the bodies and mental energies of people.

In *Neuromancer*, corporate and state hierarchies were both nearly total and indistinguishable from one another from the perspective of the protagonist. Whether a corporation, a nation-state, or a crime syndicate kidnapped the protagonist was of secondary concern when compared to the need to have a fatal body modification, implanted during said kidnapping, removed as quickly as possible. Gibson's overarching concern that digital technologies would disempower people from making free choices was on full display in the protagonist's being coopted into an online heist to have his normal life restored. To survive the system offered in *Neuromancer*, kidnappers disempower the protagonist from pursuing his ends and force him to obey their commands.

In *The Matrix*, released a decade later, just before the dotcom bubble burst, the internet was, indeed, becoming more corporate than it had been as the ARPANET. The film brings to the fore the concern that technologies would deny us agency and choice in ways that are not clear to the individual. The discovery of these hierarchies, through a retelling of the Allegory of the Cave (albeit with a good deal more violence), and the rebellion against those hierarchies using the same technologies to revolutionary ends was the major plot of the trilogy of films. In our world, Slavoj Žižek remarks that the film highlights a major problem of the internet: rather than a "Big Other" against which we can unite and struggle, the internet exposes us to a nearly incomprehensible universe of "little others," leading us to struggle, fight, and argue with one another rather than against any common Other.¹⁹⁸ These small struggles, he predicted in 1999, would be likely to

¹⁹⁸ Žižek, Slavoj. 1999. "The Matrix, or the Two Sides of Perversion." *Inside the Matrix: International Symposium at the Center for Art and Media, Karlsruhe*. Karlsruhe. Online <https://www.lacan.com/zizek-matrix.htm>.

lead to a proliferation of conspiracy theories of increasing absurdity to help individuals and small, tribalistic groups make sense of the incoherent world in which they now find themselves.¹⁹⁹ Journalist Samuel Earle, in an opinion piece in the *New York Times*, finds that the internet that we encounter now conditions the agency of users in similarly totalizing ends to the fictional matrix, though to the ends of being effective, constant producers and consumers for the benefit of large corporations.²⁰⁰

Though *Neuromancer* and *The Matrix* come at technology from different artistic angles, both express a concern for the possibility of technologies being developed at the end of the 20th century to reinforce the hierarchies of power present in the state or corporations at the expense of individual freedoms or to at least cause people to see each other as enemies rather than examining how to best build democratic practices. They were works of science fiction, both of which expressed deep concern for the power dynamics that could be brought about through technologies, and they stand in stark contrast to the optimistic thinking around the development of the internet, which I highlighted in the previous chapter.

Moving from the fictional world to the theoretical, the more democratically-minded public policy thinkers have been, for some time, speculating as to whether or not the web can be used to the ends of practicing democracy.²⁰¹ Astra Taylor, in her work noting that the web as it is now has become dominated by corporate interests, laments the

¹⁹⁹ Ibid.

²⁰⁰ Earle, Samuel. 2021. "The Timeline We're on is Even Darker than 'The Matrix' Envisioned." *The New York Times*, December 22: Online.

²⁰¹ Simon, Leslie David, Javier Corrales, and Donald Wolfenberger. 2002. *Democracy and the Internet*. Washington DC: The Woodrow Wilson Center Press.

lack of a more critical history of the web as well.²⁰² Similarly, Cass Sunstein finds a relative paucity of histories of the web that explain in detail how, exactly, we have ended up with echo chambers full of divisive rhetoric rather than an inclusive digital agora.²⁰³ There has similarly been, Cristian Vaccari finds, a lack of scholarship or public discourse that focuses on the ways in which users and nonhuman actors can, and do, influence each other on a global digital scale; most works now are American-centric and privilege corporate narratives, preferring stories of business success and increasing shareholder profits.²⁰⁴ What the writers of *Neuromancer* and *The Matrix* suspected in the closing decades of the 20th century, that the internet may be used to forward the interests of capital over democratic practices, has also, it seems, caught the attention of scholars. Giving a foil to the more optimistic thinking I explored in the previous chapter, the science fiction writers, and scholars I have thus far cited here urge caution in studying the internet. This chapter seeks to begin an explanation as to why the internet has turned from the democratic hopes of some theorists toward the concern of dystopian fiction. Here, I offer a critical history of the web to weigh in on those concerns that science fiction highlights in *The Matrix* and *Neuromancer*, that the internet contains, also the possibility to affect changes in people's behaviors in ways that effect their lives dramatically.

To the end of offering a mapping of digital power that explains corporate actors' ability to affect users, a theoretically informed conception of the internet is a necessary

²⁰² Taylor, Astra. 2014. *The People's Platform*. New York: Metropolitan Books. Pgs. 3-7.

²⁰³ Sunstein, Cass. 2007. *Republic.com 2.0*. Princeton: Princeton University Press.

²⁰⁴ Vaccari, Cristian. 2013. *Digital Politics in Western Democracies*. Baltimore: Johns Hopkins University Press.

starting point to provide a foundation upon which I place a broader narrative of structures of digital power that have developed over time. The use of computer networks, and the data generated on those networks, need contextualization and critique if we are to better understand the normative implications of specific technologies.²⁰⁵ Thus, this chapter opens with the case for a materialist conceptualization of the internet as an assemblage. New materialism, as understood in the perspectives of Gilles Deleuze, Manuel DeLanda, and others holds that social, physical, and ideological entities as contingent results of processes of production that occur within the bounds of the material world at a particular place and time. Asking for a definition of the internet from a new materialist perspective transforms the question of empowerment into a historical one.²⁰⁶ New materialists ask what the internet is by explaining who made the internet, when, how, and from what materials and processes.

This anchoring of the internet to the material world opens it up to analysis in terms of the processes, materials, and people that made it. This renders it clear that the web was a construction in which both human and nonhuman agents played a role. The thinking of Bruno Latour is enlightening in exploring the agency of material in the formation of assemblages. His actor-network theory (ANT) bolsters the topographical project of new materialism by providing a set of patterns and trends for which to look in the historical construction of actor-networks. Latour's development of ANT is mainly descriptive but lacks some explanatory power in terms of describing asymmetry between

²⁰⁵ Boyd, Danah, and Kate Crawford. 2012. "Critical Questions for Big Data." *Information, Communication, and Society* 662-679.

²⁰⁶ Gamble, Christopher, Joshua Hanan, and Thomas Nail. 2019. "What is New Materialism?" Angelaki, 111-134. <https://doi.org/10.1080/0969725X.2019.1684704>.

actors in a given actor-network. To explain the apparent asymmetries in digital power that have implications for the establishment of deliberative publics online, I deploy an adapted version of ANT that makes room for asymmetries: this is in keeping with Latour's thinking in some of his clearer explanations of ANT, as well as secondary scholarship that aims to bring ANT into conversations with materialist thinking.

Having made the case for conceiving of the internet as an actor-network, I propose an understanding of the web as an actor-network developed through close cooperation between the state, corporations, and university grantees in the mid-20th century. This places it in a temporal context with other assemblages produced by similar productive processes and to similar ends. This allows us to search for patterns that have emerged in several co-existing actor-networks, gaining more perspective on all of them, as well as the larger actor-networks to which those actor-networks contribute. To gain that critical important context for the development of the internet, I highlight examples of pre-internet assemblages that share disempowering qualities with the internet, namely highway systems, and the Michelin Star system.

With these examples in mind to help with the mapping of patterns of disempowerment of certain elements of assemblages to empower others, the chapter then proceeds by beginning a critical history of the internet that focuses on major developments that have made the internet what we see today. Many of these developments have, I argue, privileged profit and the centralization of power in ways that have made the internet a less than hospitable environment for the growth of the democratic practices and possibilities that the optimists had hoped for. The ARPANET, as well as other phenomena that came about in the decades preceding the internet's

opening to commercial purposes, were, in my analysis, actor-networks that empowered states and corporations, sometimes disempowering ordinary people along the way. These patterns of disempowerment, I argue in league with new materialists are contingent results of productive processes that did not have to be so. This contingency opens the possibility for digital futures that challenge existing patterns of disempowerment, potentially towards assemblages that could empower more people to participate in politics by digital means.

Developing a Materialist Understanding of Internet History

In terms of methodologies by which to study the internet, historical materialism²⁰⁷ has its attractions. After all, historical materialism came about as a method by which to explain the emergence of new forms of economic and political life that rests on the assertion that those forms of life are composed of both material objects and the humans that relate to one another through those material objects.²⁰⁸ Thus far, much of the literature engages in class-based analyses from a variety of methodological and ideological perspectives. For example, Astra Taylor's illuminating work, *The People's Platform*, argues that the development of the internet led to a rearrangement of the ways in which labor and consumption are done, but does not represent any sort of revolution in terms of ownership of the means of production and the accompanying concentration of

²⁰⁷ In the context of this work, I define historical materialism as the tradition of dialectical thought begun in Marx's interpretations of Hegel, which hold that both matter and ideology co-constitute the lived experiences of relevant actors. The Stanford Encyclopedia of Philosophy's page on Karl Marx offers an accessible and clear definition of historical materialism.

²⁰⁸ Marx, Karl. 1972. "Marx on the History of His Opinions." In the Marx-Engels Reader, by Karl Marx and Fredrich Engels, 3-11. New York: WW Norton and Company.

political power.²⁰⁹ Other analyses of digital class focus on the hope that tech giants will improve our lives out of benevolence,²¹⁰ or observe them as subjects of biographical interest rather than as members of a class with interests in profit and power.²¹¹

While socioeconomic class does matter a great deal online, a singular focus on a class or its members that misses the novel ways in which corporate actors' structuring of contemporary social media platforms affects the agency of internet users. This over-reliance on class as a causal factor places power dynamics on the internet in a secondary role analytically, which I find to be a misstep that bears similarities to the problems that Andreas Malm finds in the treatment of the natural in scholarship of the environment. Malm, in his recent work, *The Progress of This Storm*, summarizes the poststructuralist critique of objective history well. In brief, history is always contingent and necessarily contextual.²¹² We make history out of the texts, stories, and objects that we must render into narratives that have meaning for *us*. The contingency of histories, then, are that they are made by and for people who cannot help but interpret to make meaning: to do so is simply to be human.²¹³ If we are not cognizant of that human contingency, that we make

²⁰⁹ Taylor, Astra. 2014. *The People's Platform*. New York: Metropolitan Books.

²¹⁰ Jarvis, Jeff. 2011. *Public Parts*. New York: Simon and Schuster.

²¹¹ Smith, Andrew. 2012. *Totally Wired: The Rise and Fall of Josh Harris and the Great Dotcom Swindle*. New York: Black Cat.

²¹² Malm, Andreas. 2020. *The Progress of This Storm*. London: Verso. Pgs. 21-23.

²¹³ *Ibid.*

meaning for us in the now, we run a major methodological risk of mistaking a history that exists temporarily within our own context for one that is True in the Platonic sense.²¹⁴

That is to say, if we cannot recognize that people make histories to explain the world to ourselves and each other, we run the risk of mistaking the construction of that history for a simple penciling down of a series of inevitable facts that have led us to the present moment. In so doing, we may make the mistake with the internet that Malm finds has been made in thinking about the natural as a concept: if all history is natural rather than constructed by humans, we run the risk of excusing people from responsibility in their role in causing events to occur due to the choices that they have made.²¹⁵ If instead, we consider the history of the web to be a contingent one rather than an inevitable natural one, we can begin to question current power dynamics and work to remake them in more empowering ways.

In Malm's work, the issue at stake is the environment: by placing nature and the idea of the natural as something *a-proori* to and outside of human intervention, he claims, we have created economies and modes of production that have ignored and will continue to ignore the natural to the detriment of human life. Following a similar line of thinking, I claim that it is not a mere fact of the "nature" of the internet, whatever that may be, for falsehood and trolling to drown out empowerment and deliberation. That supposedly objective truth merely reflects a perspective within an inter-subjectively constructed sense of history—its claims on truth reflect the values, norms, and hierarchies of power

²¹⁴ Plato. 1993. Republic. Oxford: Oxford University Press.

²¹⁵ Malm 60.

that produced it.²¹⁶ Similarly, those values, norms, and hierarchies are not themselves established merely by linguistic relationships of conventions to one another to establish coherence. Were that the case, then the concern that Zizek expresses surrounding the potential of sequels to *The Matrix* would manifest themselves once again: without materiality to ground the analysis, it is difficult to make sense of much of anything, and we would resign ourselves to describing layers of simulation with no way to tell which is realer than any other layer.²¹⁷ A materialist analysis at the macro level offers explanations for some actors' relative power: analyses that center the effects of centralized corporate profit and exploited labor owe much to the materialist tradition. In explaining user experiences, however, analyses that privilege class as the main level of analysis risk paving over the novelty of some of the phenomena that I find in the contemporary internet from the perspective of internet users.

Work that seeks to explain the origins, structures, and current practices of the internet and digital life more broadly should be able to take seriously both the material objects that make up the network as well as the ideology, ideas, and other nonphysical elements of that same network. Given that the overall question I raise in this work, whether the internet as we have it now serves to empower or disempower persons from participating in democratic deliberation, has a nonhuman subject of inquiry at the core of the argument, the theories deployed to work towards an answer to that question, too, must allow for the serious consideration of nonhuman elements as important constitutive

²¹⁶ Ibid, especially see chapter two. Also, Baudrillard, Jean. 2001. *Selected Writings*. Stanford: Stanford University Press.

²¹⁷ Zizek 1999.

factors in political hierarchies, communications, and structures of power. Additionally, the interactivity of the internet demands theory that deals not only with the way that human beings interact with one another through the internet but how the internet itself shapes those interactions.

New materialism,²¹⁸ an eclectic body of thinking that de-centers anthropocentric notions in favor of considering a broader set of relevant actors, to include matter without consciousness when offering descriptions phenomena,²¹⁹ offers avenues for analytical insight in developing a critical history of the internet, which I set upon in the subsequent chapter. The remainder of this section consists of an explication of new materialist thought as an epistemology oriented at a study of power with an emphasis on the work of Gilles Deleuze, Manuel DeLanda, and Bruno Latour, whom I deploy to develop an analytical lens through which to map contemporary digital power dynamics.

As a body of thought, William Connolly describes new materialism as analyses that:

encourage us to identify shifting elements of ontological uncertainty and real, conditioned creativity in the periodic intersections between several forces in the world. There is often an ebb and flow in most domains, as a system goes through a period of relative equilibrium followed by another of radical disequilibrium. A philosophy of becoming set on several tiers of temporality does not, though some

²¹⁸ New materialist thought runs across disciplines: here, I am most concerned with the thinking of Gilles Deleuze and Manuel DeLanda, whose projects emphasize the ontological importance of nonhuman matter in the creation and change of assemblages that are made up of both human and nonhuman elements, in which relationships are power-laden, and that exist as more than the material sum of their parts.

²¹⁹ Coole, Diana, and Samantha Frost, 2010. *New Materialisms*. Durham: Duke University Press. The introductory chapter is an excellent introduction to new materialism.

fools project such a conclusion into it, postulate a world in which everything is always in radical flux.²²⁰

This places new materialism not as a single school of thought, but as a general epistemological approach that recognizes that the objects of philosophical and political inquiry are in constant motion and to understand them an understanding of the processes by which that change occurs is critical. New materialism, in its focus on the “...periodic intersections between several forces in the world” does not present a total break from previous materialist thinking: that intersection, because it is “creative” is still dialectical in the Marxist sense. Where new materialism finds new ground to explore, I concur with Connolly, is in its mappings of periods of (dis)equilibrium in dialectical terms rather than looking for overarching narratives of thesis, antithesis, and synthesis that can be found in Marxist thought, especially that written by Marx and Engels. Innovating on the insistence on anthropocentrism that many new materialists find within fields ranging from political science to biology, new materialists instead attempt “to problematize the anthropocentric and constructivist orientations of most twentieth-century theory in a way that encourages closer attention to the sciences by the humanities.”²²¹ Christopher Gamble, Joshua Hanan, and Thomas Nail offer three general principles that guide new materialist analyses:

²²⁰ Connolly, William. 2013. "The 'New Materialism' and the Fragility of Things." *Millennium* 401.

²²¹ Gamble, Christopher, Joshua Hanan, and Thomas Nail. 2019. "What is New Materialism." *Angelaki* 24 (6): 111.

(1) *Indeterminacy*, or otherwise new materialism will fall back into attributing the activity of matter *to something else* such as forms, deterministic or probabilistic natural laws, forces, or God.

(2) Matter must be an *ongoing iterative process*, or else new materialism will fall back into substance-based ontology or risk reducing matter to something else like rationalism or formalism.

(3) Matter must be fully *relational* and immanently self-caused. Matter is not the merely passive effect of God, nature, or humans. Nor is matter a merely active agent, however. Material relations are always asymmetrical (both active and receptive at once)- not “flat.”²²²

Taken together, these principles constitute a decentering of anthropocentrism in social thought as well as a call to explain relationships between actors (both human and nonhuman) in terms of mapping shifts, reconfigurations, and contestations between actors. An analysis based on these principles, as Rossi Braidotti explains in identifying a post-materialist understanding of subjectivity, that subjects should be seen as “...a point of overlap between the physical, the symbolic, and the sociological” and that we must consider the “specifically human capacity to be both grounded and to flow.”²²³ Again, this is not a total repudiation of the dialectical model held by materialists for several centuries: it is an application of the dialectic to phenomena beyond class struggle on the macro level. I deploy new materialism, then, as a way to tighten the analysis presented

²²² Ibid, 125.

²²³ Braidotti, Rossi. 2012. "Interview with Braidotti Rossi." In *New Materialism: Interviews and Cartographies*, by Rick Dolphijn and Iris van der Tuin, 33. Ann Arbor: Open Humanities Press.

here to the interaction between sets of actors on the contemporary internet rather than a class-based analysis.

In the context of this work, the stakes of a new-materialist analysis demand an examination of the construction of the internet as a set of material objects, created in a social context by actors, but also influence that social context—specifically in terms of the (dis)empowerment of human subjects that are both grounded (in their identities, communities, nationalities, for example) but are also, simultaneously, in flux in part because of their interactions through the internet. In so doing, I contend as Braidotti expresses as central to a new materialist understanding of phenomena to develop an analysis that follows, “concrete yet complex materiality of bodies immersed in social relations of power.”²²⁴ People experience this materiality, in Braidotti’s analysis, as a nomad subject, who is not only moving through material reality but is changed by it, and further changes that environment: some of this motion, I argue, conditions actors’ relationships to and through the internet.

Turning more directly to a new materialist conception, Manuel DeLanda founds his understanding of materialism upon a rejection of essentialism asserting that:

But if one rejects essentialism then there is no choice to answer the question [of the identity of material objects] like this: all objective entities are products of

²²⁴ Ibid, 21.

historical projects, that is, their identity is synthesized or produced as part of a cosmological, geological, biological, or social history.²²⁵

This synthesis, DeLanda finds in the work of Deleuze and Guattari, is in the form of a “double articulation,” where the raw matter of a particular object must first be found and processed, and, second, that processed matter is then “consolidated into a whole with properties of its own.”²²⁶ Here, I am less concerned with the former: the physical means by which to make computers and networks from silicon, iron, and other forms of matter are not at the forefront of the narrative I construct here (though they do, at times, play important roles). Instead, I focus on the consolidation of the internet with properties of its own with a keen eye on properties that (dis)empower persons, as nomadic subjects, to participate in democratic deliberation through the consolidated, but still in-flux, internet. As Wendy Hui Kyong Chun develops in *Programmed Visions*, the software with which users interact affects the agency of those users in terms of connections, memory, and perception²²⁷: the goal of this project is to map the relationships that describe the effects of those changes on some internet users.

Considering the internet as an assemblage that is in flux and influences human subjectivities which are themselves in flux, I aim to construct map power on the internet in such a way that presents the web as, to reference Diana Coole and Samantha Frost’s understanding of new materialism, “a complex, pluralistic, relatively open process...” in

²²⁵ DeLanda, Manuel. 2012. "Interview with Manuel DeLanda." In *New Materialism: Interviews and Cartographies*, by Rick Dolphijn and Iris van der Tuin, 39. Ann Arbor: Open Humanities.

²²⁶ Ibid.

²²⁷ Chun, Wendy Hui Kyong. 2011. *Programmed Visions*. Cambridge: The MIT Press. Pg. 177. See Also Part II of the book for a discussion of agency in the internet age.

which I emphasize the “productivity and resilience of matter.”²²⁸ In so doing, it is necessary to decenter class as the major driver of change in this mapping: elevating nonhuman elements as co-agents with human beings allows for fuller cartography of the territory in which human beings are (dis)empowered to act in one way or another.²²⁹ New materialists such as Haraway, Coole, and Frost have begun to explore these processes of co-constituted agency between human beings and technology,²³⁰ and new materialism, buttressed with an adapted version of Actor-Network Theory, offers the possibilities for critical insights into the creation and exercise of digital power.

Actor-Network Theory as Critical Methodology

Though new materialists do follow some general trends, which I have noted thus far, it is an eclectic, contested territory of intellectual exploration rather than a cohesive school of thought. Thus, instead of claiming to present a history of the internet from *the* new materialist perspective, I instead outline *a* new materialist perspective, which I use as guidance for the following history of both the internet and the human subjects which have co-construed one another over the past several decades. Specifically, Bruno Latour’s presentation of what he terms actor-network theory (ANT) informs a nuanced analysis of the processes by which agents co-create one another, which speaks well to the

²²⁸ Coole, Diana, and Samantha Frost. 2013. "Introducing the New Materialism." In *New Materialisms*, edited by Diana Coole and Samantha Frost, 7. Durham: Duke University Press.

²²⁹ *Ibid*, 14.

²³⁰ *Ibid*, 17.

new-materialist perspectives of Gilles Deleuze, Felix Guattari, Manuel DeLanda, and Jane Bennett.²³¹

The foundational lesson of new materialist thinking taking both the material and the ideational seriously in the study of technology is not new if one is willing to look outside of the sciences and into the arts for a moment. ANT, quite deliberately, borrows from literary theory in the mandate to tell a story as accurately and sensibly as possible.²³² Thus, when literature, here broadly and generously defined, offers the challenge to build narratives that take the material and the ideological seriously as foundations to narratives and explanations, theory would do well to respond by adding serious consideration of material as co-constitutive of political phenomena.

The materiality of the web, from a new materialist perspective, is central to the productive processes that create not only the web but the human subjects that relate to the internet. Latour holds that human beings intervene in productive, material processes at frequent intervals to construct a world of facts, norms, and objects.²³³ Keeping the human at the center of analyses of processes that appear objective, such as the publication of scientific papers, ANT insists that humans and nonhuman objects are both equally necessary to the construction of what Latour refers to as an actor-network.²³⁴ Meaningful experiences are had in the interaction between people and material objects which, for

²³¹ Bennett, Jane. 2010. *Vibrant Matter*. Durham: Duke University Press.

²³² Latour, Bruno, 2000. *Pandora's Hope*. Cambridge: Harvard University Press.

²³³ Latour, Bruno. 1986. *Laboratory Life*. Princeton: Princeton University Press.

²³⁴ *Ibid*, 11-14.

both Latour and the new materialists so far surveyed, co-constitute that experience in an iterative fashion that has been, is, and cannot help but be open to change. To illustrate this point, allow me a brief example of a series of events.

Examine the two following sentences:

1. Donald sends an angry message through Twitter.
2. Twitter spreads Donald's angry message to his followers.

In the first sentence, the actor, Donald, is the doer of the deed. As a human being, that he can affect change in the world around him is apparent in the ability of Donald to Tweet. In the second, however, Twitter, a nonhuman thing (or, more accurately, a network of humans and nonhumans), is doing the spreading. These examples show two of the core assertions of ANT. First, it does not come across as immediately foolish for a nonhuman actor to act as an agent that can effect change in the world.²³⁵ The second is that human and nonhuman actors often work in the same networks.²³⁶ Taken together, these assertions undergird Latour's analytical stance in ANT: human and nonhuman exist together, and both participate in the shared construction of networks. In fact, the human and nonhuman participants in the network depend on one another to act. If we remove the human actor, Donald, then his phone merely resides on a desk, and no angry message spreads through Twitter. Removing the human from the network, in this example, renders the network itself inert. Similarly, were there no phone to type with, then the message could not reach Twitter. Without Twitter, even if a message existed on a phone screen,

²³⁵ Ibid, 71.

²³⁶ Ibid.

Donald would not be able to share information in the same way. To have Donald able to Tweet requires both the presence of the human actor, Donald, as well as Twitter, and all the electronic devices that connect Donald, Twitter, and his followers. This small example demonstrates one of the central points of ANT: both humans and nonhumans act as agents in the construction and experiencing of networks. Latour's ANT, he notes in *Laboratory Life*, is an anthropological lens through which to study the sciences, but since fruitfully applied to many realms of science and technology studies, is not a strict set of methodological rules. Instead, it forwards an epistemology that privileges neither the materialism of so-called objective reality nor the conventional construction of intersubjective reality found in some poststructuralists, such as Baudrillard.²³⁷ Both, Latour develops over the body of his work, are co-constitutive elements of our lived, social realities. That epistemology, which has us examine the complex relationships between types of data instead of insisting on beating reality into neat categories and doing untold damage to the narratives that we end up constructing in the process, insists on taking both the materiality of our subjects of study, as well as the interventions and intentions of human actors equally seriously.²³⁸ Speaking to the tradition of critical theory, from which Latour hails, Actor-Network Theory attempts to keep both empiricism and the tools of theoretical critique well in hand to better develop a picture of the world that places human beings as mediators acting in a material world, albeit themselves mediated by the constraints of that materiality as well as their ideologies and psychologies. For ANT, one can understand phenomena in terms of a cast of actors, both

²³⁷Latour, Bruno. 2005. *Reassembling the Social*. Oxford: Oxford University Press.

²³⁸ Ibid, 64.

human and nonhuman, which exist in relationship to one another in the material world.²³⁹ Note that actors need not necessarily be human beings. Examine the Twitter example again: the digital platform of Twitter (itself an assemblage in new materialist terms), which is clearly not human, is as central to the expressing of a digital message to an audience as the human actor who composed the Tweet. Put differently: Twitter's existence, passing a message through content filters, and dissemination of a tweet makes it as much an agent as Donald is in the eventual sharing of the message. To make the example even clearer, we can remove human beings entirely from the immediate series of sentences and have a program write the message for us, which will then be Tweeted out just as if Donald did it himself. Journalist Andrew McGill has, in cooperation with *The Atlantic*, developed a project that assesses Donald Trump's Tweets. A bot seems to write some of the Tweets, usually to make announcements at odd hours of the night.²⁴⁰ Another way to understand this is by examining the language that we use to describe things. The existence of this bot, which occasionally took Donald's mantle before Twitter banned them both from the platform for inciting violence,²⁴¹ provides proof for the new materialist insistence on decentering anthropocentric notions of actors as the analytical touchstone for explaining phenomena. In any given sentence, there will likely be both at least one noun and at least one verb. To a scholar of ANT, anything that can be a noun

²³⁹ Ibid, 159

²⁴⁰ McGill, Andrew. 2017. *A Bot That Can Tell When It's Really Donald Trump Who's Tweeting*. March 28. Accessed September 7, 2020. <https://www.theatlantic.com/politics/archive/2017/03/a-bot-that-detects-when-donald-trump-is-tweeting/521127/>.

²⁴¹ Twitter. 2021. "Permanent suspension of @realDonaldTrump." *Twitter*. January 8. Accessed September 8, 2021. https://blog.twitter.com/en_us/topics/company/2020/suspension.

that relates to a verb is an actor. Nouns, ultimately, are things that do. They are often *due* to other things: nouns establish the network in the verbs through which they relate to one another, creating a network of actions between actors. Whether that noun is “Donald,” “Twitter,” or “Flying Spaghetti Monster” matters little: all are potential agents if only they relate to other actors in some meaningful way.

Latour explains this well in one of the first works of ANT, *Laboratory Science*, where he makes the case that science is not simply human scientists discovering pre-existing facts about their objects of study. Instead, he finds, human scientists construct facts in a social setting, with complex goals, and in a network of actors that include the scientists themselves, a broader academic/professional community, and the matter that the scientists study. In claiming that the matter being studied, the broader academic/professional community, and the scientists themselves all co-create the findings of research presented as facts, Latour seeks to both decenter anthropocentric narratives of the discovery of facts, and instead to call for richer narratives, including a larger cast of actors in the creation of any given piece of information, object, or scientific result.²⁴² Yes, the material of the stated subject matter is one such actor, but there are others as well that affect the scientific process strongly. The production of scientific facts, for Latour, entails much more than the relationship of the scientist to the object of discovery. First, for Latour, scientists depend upon a mutually intelligible cultural context: this shared context of known and accepted ideas (the boundaries of which science seeks to expand through their so-called discoveries) is what designates scientific activity as such and, using

²⁴² Latour, Bruno. 1986. *Laboratory Life*. Princeton: Princeton University Press. Pgs. 25-39.

Latour's example, differentiates scientific activities from food preparation or the reading of entrails for prophecy reading.²⁴³ Latour's insistence on the shared context as a precondition for both doing and understanding science on behalf of readers and the observers deployed in the research of scientists for *Laboratory Science* has an important methodological impact on the history of the internet I conduct here.

For Latour, someone must understand science as science, whether as a professional within the scientific community or as an observer and commentator on the processes of that community. All these individuals possess at least some passing familiarity with how the scientific apparatus functions within its social context is vital to understanding and critiquing those processes. One must at least have some relationship, however remote, with a particular actor-network to make sense of it. This, I argue, is as true in the study of the internet as it is with a laboratory. Thus, to understand the internet, speaking from my position as not only someone trained in political theory as an academic but as an actor who has lived through what I find to be the beginnings of the feudalization of digital space, gives me the context in which to render intelligible narratives about digital spaces to those who also, almost certainly, have encounters with digital technologies.

Returning to Latour's findings, science has a strong creative and social component. Scientists often make their facts after having discussed a piece of data or finding with their colleagues. After this discussion between people, the scientists write an accompanying narrative that explains those findings in a scientific presentation, paper, or

²⁴³ Ibid, 42-44.

book: in the production of these literary artifacts, Latour asserts, that the fact itself is a creation. In this assertion, Latour presents himself strongly as a new materialist who focuses on the formation of social hierarchies consisting of actors, human, nonhuman, and non-living. To produce a fact, the scientists, the laboratory, the academic journals, the conference organizers, and others, are vitally important to the eventual production and understanding of a scientific fact. Here, the epistemological underpinnings of new materialism's consideration of facticity are vital to understanding the importance of Latour's work to this project.

To get a more complete picture of the construction of facts, then, Latour would have us look beyond the limited narratives proposed in the academic papers, as they are but one product of the scientific process. Instead, to get the whole picture he followed the members of a lab for a length of time and concluded that science is, in fact, a network that produces facts: the people, machines, organizations, journals, and publishers all play an important role in the production of a fact. It is in the relationships that these actors have with one another that facts form. Latour's ANT does not deny *a-priori* phenomena. For example, in making use of Plato's Allegory of the Cave to position scientists within society in *Politics of Nature*, Latour gives us the following on his epistemological stance:

What is the use of the allegory of the Cave today? It allows a constitution* that organizes public life *into two houses*. The first is the obscure room depicted by Plato, in which ignorant people find themselves in chains, unable to look directly at one another, communicating only via fictions projected on a sort of movie screen; the second is located outside, in a world made up not of humans but of nonhumans indifferent to our quarrels, our ignorances, and the limits of our

representations and fictions. The genius of the model stems from the role played by a very small number of persons, the only ones capable of going back and forth between the two assemblies and converting the authority of the one into that of the other. Despite the fascination exercised by Ideas (even upon those who claim to be denouncing the idealism of the Platonic solution), it is not at all a question of opposing the shadow world to the real world, but of *redistributing powers* by inventing both a certain definition of science and a certain definition of politics. Appearances notwithstanding, idealism is not what is at issue here. The myth of the Cave makes it possible to render all democracy impossible by neutralizing it; that is its only trump card. In this Constitution dispensed by (political) epistemology, how are the powers in fact distributed? The first house brings together the totality of speaking humans, who find themselves with no power at all save that of being ignorant in common, or of agreeing by convention to create fictions devoid of any external reality. The second house is constituted exclusively of real objects that have the property of defining what exists but that lack the gift of speech.²⁴⁴

These considerations are central to Latour's work. That Plato's ideal world of the Forms exists is not the analytical center of Latour's analysis. Instead, Latour takes the role of the scientist to be one of the human actors who makes the effort to attempt to understand the "real objects" that make up the material world and explain them to other human beings that co-create the social world. In *Politics of Nature*, Latour deploys the Allegory as a means by which to defend the creation of the field of political ecology.

²⁴⁴Latour, Bruno 2004. *Politics of Nature*. Cambridge: Harvard University Press. Pgs. 13-14.

Taking the same lessons to *Laboratory Life*'s subject of study, the scientific "fact" can be located at the junction between these two epistemological houses. Given Latour's acceptance of a material world and Ideas (he uses the customary capitalization scheme to refer to Plato's Forms), the existence of matter and concepts that exist independent of human considerations is not the issue at hand. Instead, I suggest that the scientific "fact" is a process done within the context of the actor-network in which the scientist intervenes. A fact, in this new materialist interpretation, is produced by an actor,²⁴⁵ often in the form of a research paper or some other publication, as an attempt not only to describe a given phenomenon but also to intervene in the broader actor-network of, for instance, the scientific community. This production of facts, Latour notes, occurs in an iterative, temporal fashion: a phenomenon is described in an initial draft, which is critiqued before (and often after) publications as a paper or article.²⁴⁶ If others within the actor-network hold it to be valid, the fact becomes, eventually, part of the unstated set of assumptions held by human agents (or programmed into machines, computer models). Latour explains the relationship between material objects and scientists thusly:

The so-called material elements of the laboratory are based upon the reified outcomes of past controversies which are available in the published literature. As a result, it is these same material elements which allow Papers to be written and points to be made. Furthermore, the anthropologist feels vindicated in having retained his anthropological perspective in the face of the beguiling charms of his informants: they claimed merely to be scientists discovering facts; he doggedly

²⁴⁵ In the example of *Laboratory Life*, the scientist.

²⁴⁶ Latour 1986, 80-81.

argued that they were writers and readers in the business of being convinced and convincing others.²⁴⁷

This analysis opens a methodological path that I follow in the rest of this work. For Latour, the material elements of a laboratory (the raw materials, animal subjects, tools, etc.) allow people to produce facts in the form of papers. It is then the role of the scientist to convince and be convinced or, in other terms, to make meaning and share it with others. This process is iterative and done over time within the contestation over the creation, acceptance, spread, citation, and validity of facts. Thusly, Latour opens the door for not only the scientist as a person who can go between two houses, explaining material phenomena to scientists and the general public, but Latour also develops a method of research: the anthropologist observing the lab produces a book detailing the processes by which laboratories produce facts as actor-networks. I propose to follow the same new-materialist track with the internet and to develop a critical history that maps how people, in creating and using digital platforms, (dis)empower one another in terms of their ability to participate in democratic political life.

From the perspective of ANT, one can ask questions about how a fact or material object came to be: the fact or object, that human actors create, goes on to influence the relationships between human actors in the future. This analysis differs from older, Marxist materialism in the emphasis on the agency of nonhuman actors: Latour, in developing ANT, challenges some of the more anthropocentric notions of Marxism's focus on classes made up of human actors. The processes of the production and sharing of those facts and material objects, when considered in the pre-existing social contexts,

²⁴⁷ Ibid, 87-88.

illuminate the power-laden relationships between sets of actors. Actors, both human and nonhuman condition one another through what Latour terms “programs of action.” These programs of action influence what actors relating to one another can do, and what effort might be necessary for an actor to take certain actions. For instance, as Latour develops, a speed limit sign, a speed bump, and a police officer all affect a driver’s ability to speed, with differing effects and consequences.²⁴⁸ Programs of action, I argue, are also built into digital platforms that internet users encounter online.

Additionally, if one holds that material objects and facts that influence human beings are themselves given meaning in the context of continually changing actor networks, I measure those changes in terms of the normative benchmarks which I established in the previous chapter. In other words: in mapping the creation and implementation of the internet within larger social contexts from a new materialist perspective, I aim to evaluate the trajectory of that development and implementation in terms of the (dis)empowerment of varying sets of actors: delineating the relationship between the actors is where we can begin to map digital power

Latour’s conception of what counts as an actor, here, is also of vital importance to the development of a critical history of the internet that takes matter seriously. Keeping in mind his commentary on Plato, which maintains that material objects are “indifferent to our quarrels, our ignorances, and the limits of our representations and fictions,”²⁴⁹ a brief

²⁴⁸ Latour, Bruno. 1992. "Where Are the Missing Masses? The Sociology of a Few Mundane Artifacts." In *Shaping Technology/Building Society*, edited by Wiebe Bijker and John Law, 225-258. Cambridge: MIT Press.

²⁴⁹ Latour 2004, Pgs. 13-14.

example might bring into greater clarity a new materialist conception of matter as it relates to (dis)empowerment of human beings.

Take, for example, a hammer. One human being can, of course, make a hammer initially to build a home. That same hammer, either in the hands of that person or another person, facilitates the destruction of some other material object. At the worst, a murderer or member of a shadowy government agency may make use of the same hammer to inflict harm on other people, disempowering them from living normal lives thereafter. Different humans may and do use tools to differing ends. The existence of the hammer once it has been made, again returning to Latour's commentaries on Plato, inhabits the second house: it simply exists. To what ends the hammer will become deployed, much in the case of scientific facts is up to the interactions of human actors with that object. One can, despite this unpredictability of the eventual usage of tools, learn a fair bit about the agents behind the tools by examining the stated or implicit intentions of those who first manipulated matter into a specific configuration. First, if we untether the tool from that agent that put purpose into it, we can learn the aims of the agents by studying the object, effectively retracing the steps used above to sketch purpose on a conceptual level. There is a wide variety of hammers that have wildly different programs of action, even if they consist of the same base materials. These programs of action, if we relax Latour's insistence that ANT considers all actors to be symmetrical,²⁵⁰ give insights into the power dynamics of actor networks. Allow me another example:

²⁵⁰ Castree, Noel. 2002. "False Antithesis? Marxism, Nature, and Actor-Networks." *Antipode* 111-146.

The first is a framing hammer. Typically, this is what comes to mind if one does not place a modifier in front of “hammer”; likely, you own one already. These hammers are of moderate weight and have two distinct features—a strike face and a claw for pulling nails. The purpose that an agent places into a framing hammer, I infer from the name of the thing (more on naming in a bit), is the framing of walls. In the object, then, we see that these two features correspond to that purpose. With the first, the strike face, careful observation would reveal that the face has a cross-hatched pattern on it. Aside from being great at worsening injuries, an unintended feature, this cross-hatching on the face keeps the head of a nail from sliding under the force of the blow, more effectively transferring the energy from the agent into the nail. Second, modern construction techniques for raising wood-framed walls eventually require the pulling of a great many nails: thus, a claw attached to the rear of the hammer ensures that the agent, in this case, a framer, has the right tool at hand without needing to carry or locate a second one: this increases the overall efficiency of the agent.

In examining both objects, the only real difference between them is the shape of the implement opposite a striking face. One could begin to make several inferences based merely on the presence of those objects, and the context in which they inhabit. If, for instance, one could find a hammer on a workbench at a job site, then it would be reasonable to infer that there are roofers and framers afoot, who have these purposeful objects present to assist them in fulfilling the wishes of an agent—to eventually make a building. Removing those objects from that context and placing them in another, for instance in a toolbox in a shop, changes the inference we can make about them then. We

reasonably infer that in finding both of those objects in the same toolbox stored in a shop, we have found the shop of a general contractor, who may use either of those tools.

Mainly, I use the example of the hammers to make an analytical assertion that guides the rest of the chapter: if we can learn about the purpose of an object, and the intentions of the agents who made that object, from the examination of those objects, then we may begin to do so in the case of the contemporary internet as well. Thus, I assert that corporate actors, operating in the context of the internet, exhibit some of the effects that Latour attributes to capitalism as a set of affective foreclosures²⁵¹: the massing of profit as the good is a choice corporations make and it conditions what programs of action these corporations come to build into online platforms. Users, then, are affected by these same programs of actions in ways, I develop in chapter five, that limit some users in terms of their ability to think critically and clearly. Once viewed as such, it becomes possible to begin to address the fitness of the systems of the web that we have now to address the needs of other agents. If we, as agents seeking to make democracy, are handed or already have tools that have been designed to implement different programs of actions, then we might find that those tools come up short in similar ways that roofing with a framing hammer is slower, more difficult, and often deeply frustrating as the agent continually bumps against the limitations of the tools at hand.

In a similar vein, the original intention of the creator, or set of creators, of an object, is sometimes divergent from those of later users of an object. Returning to Latour's example from "Where Are the Missing Masses," a driver may well wish to speed, and

²⁵¹ Latour, Bruno. 2014. *On Some of the Affects of Capitalism*. Lecture, Copenhagen: Royal Academy, Copenhagen.

will find varying degrees of both frustration and conditioning of their behavior by objects programmed by the state to stop speeding: a police officer cannot stop speeding, but will raise frustration through ticketing, and a speed bump can physically stop speeding lest the driver risk damage to their car's suspension.²⁵² In mapping digital power accurately, then, the contestation between actors and their varying programs of actions is vital to a full understanding of the dynamics of those power-laden relationships.

Painting the picture of the internet will require, in keeping with the methodological attitudes of ANT's interpretation of new materialism, three things. First is an understanding of the nonhuman components of the network: in this case the computers and connections that make up the physical parts of the network. Establishing a shared, if brief, history of those nonhuman actors in the network is the goal of the remainder of this chapter. Second, in the following section of this chapter, as well as the rest of the work, I place human actors (users, owners of websites, and others affected by digital practices) in their relationship to the nonhuman actors and structures of the web and each other. Then, third, I can begin to examine the relationship between the human and nonhuman elements of this network to draw a larger picture and begin to address more directly the fundamental question that drives the work as a whole: how these human and nonhuman actors are configured in such a way that makes digital democracy so seemingly difficult when compared to the hopes held by thinkers in the decades preceding our own, which I codify in terms of the normative benchmarks presented in the preceding chapter.

²⁵² Latour 1992.

Materialist explanations of capitalism offer rich descriptions of effects that impact the actors which make up the contemporary internet, especially corporations that own social media platforms. These capitalist effects, namely the concentration of capital, dependence on labor for the generation of profit, and resistance to constraint by the state, affect how corporations behave in the contemporary internet: they are the programs of action that the corporate actors design digital platforms to follow. A version of ANT that slightly relaxes some of the assumptions of Latour, namely the symmetry between actors in terms of power,²⁵³ recognizes that these capitalist effects exhibited by corporate actors asymmetrically affect concentrations and flows of power online.

Latour's ANT focuses on the co-constitutive relationships in actor-networks. The observation that actors at least influence, if not outright construct or destroy one another, is key to materialist thinking dating back to Marx.²⁵⁴ Latour's ANT is thus an apt descriptive methodology first and foremost. What it lacks, I find in concert with Johan Soderberg and Adam Netzen, is in accounting for asymmetries between actors. In the case of the internet, for instance, describing an individual user and Meta as merely co-constitutive would miss out on the clear asymmetries in power to influence their shared actor-network. Instead, I suggest borrowing materialist conceptions of power, which do focus on asymmetries and exploitations between actors, to adapt Latour's ANT to the study of digital power. Deploying this adapted version of ANT, however, allows me to provide an analysis which describes the ways in which some users experience social

²⁵³ Soderberg, Johan, and Adam Netzen. 2010. "When All That is Theory Melts Into (Hot) Air: Contrasts and Parallels Between Actor Network Theory, Autonomist Marxism, and open Marxism." *Ephemera* 95-118.

²⁵⁴ A dialectical relationship, in light of ANT, ought to be considered a relationship in the same vein that the laboratory scientist and the materials that the scientist studies both constitute a "fact."

media platforms in ways that modify their agency substantially. I suggest, then, making the following adaptations to Latour's ANT in order to more accurately map digital power:

1. Recognize capitalistic affects on the agency of actors, especially corporations.
2. Emphasize asymmetry: some actors, especially those who enter networks before other actors, may have more opportunities to implement programs of action that come to affect other actors later.

These two modifications allow for actors to affect one another and for me to keep the contributions of materialist scholarship in mind when describing power dynamics. In so doing, I aim to map the topography of digital power in such a way that I can evaluate the internet normatively against a Habermasian ideal.

The internet is at least in part made up of nonhuman objects: it is in the smart phones, computers, wires, data centers, and, increasingly, refrigerators and children's toys that we, the human actors, have decided to link together across the globe. It is also in less immediately physical nonhuman mediators—the software platforms, user interfaces, and code that condition the flow of data between physical objects as well as the human actors. Getting a clear idea of how these nonhuman mediators came to be is vital to the development of a full picture of the internet as an actor-network. Humans created these nonhuman actors to accomplish set goals: in understanding those goals and the eventual machines made to fulfill them, we will come to more carefully learn how these nonhuman mediators have come to affect human political life.

The importance of the nonhuman elements of the internet, explained well by Latour's understanding of the production of scientific facts and the positioning of the

scientist as a subject in a broader actor-network, is made even more apparent by Foucault: the prisoner is convinced of his being watched by the physical presence of the mirrored tower.²⁵⁵ Given enough time and experience at being the examined individual, the prisoner will remain uncertain whether or not he is currently being surveilled, and will continue to comply with the prescribed behavior even when there is no guard in the tower at all. This is Bentham's main point, not to mention a remarkably efficient way of turning the prisoner into a source of prison labor as his own guard (a phenomenon we will turn to again in the next chapter).²⁵⁶ The physical presence of the guard tower itself serves as a physical site and constant reminder of the surveillance power of the carceral system. Physical objects, thus, very clearly matter for the carrying out of human behaviors. A history of the web is thus likely to be only partially the story of the series of electronic objects that we as a species have decided to hook together. It is just as much the story of the development and current experience of power-laden relationships between people.

The quality of democracy has been of serious concern to political theory since its inception in the ancient world.²⁵⁷ As the world changes, it is critical to both scholarship and to political life that our theory keeps up with those changes. To put it simply, a better understanding of how the web and democracy are related may help us to preserve and grow democratic politics toward more just and inclusive ends. Thus, the remainder of this chapter presents the first part of a history of the internet that, as of yet, has been

²⁵⁵ Foucault, Michel. 1995. *Discipline and Punish*. New York: Random House.

²⁵⁶ Ibid, 201-206.

²⁵⁷ Aristotle. 1995. *Politics*. Oxford: Oxford University Press. Pg. 66.

absent from studies of digital politics, which tend to either focus on narrow sets of phenomena, such as protest movements,²⁵⁸ or on the history of the relationship between people and objects.²⁵⁹ There has, as of yet, been only limited work that provides a history of the web conceiving of the internet as an actor-network in which some actors attempt to enact capitalist programs of action in ways that affect the agency of internet users.

Defining the Internet

I begin with a general definition of a communications network offered by members of the early organization working towards an internet, the Institute of Electrical and Electronics Engineers (IEEE). In a 1974 report detailing some of the finer technical points for making inter-computer communication possible, Vincent Cerf and Robert Kahn offer that an internet is:

A packet communications network includes a transportation mechanism for delivering data between computers or between computers and terminals. To make the data meaningful, computers and terminals share a common protocol (i.e., a set of agreed-upon conventions).²⁶⁰

This basic definition, offered before the internet that we know now, proposes simply that linked systems of computers ought to have shared languages to facilitate data sharing.

Not just a merely technical definition, there was also a normative element to this

²⁵⁸ Larson, Jennifer, Jonathan Ronen, Joshua Tucker, and Jonathan Nagler. 2019. "Social Networks and Protest Participation: Evidence from 130 Million Twitter Users." *American Journal of Political Science* 690-705.

²⁵⁹ Illich, Ivan. 2009. *Tools for Conviviality*. London: Marian Boyers.

²⁶⁰ Cerf, Vincent, and Robert Kahn. May 1974. "A Protocol for Packet Network Intercommunication." IEEE Transactions on Communications: Digital Version.

definition around the idea of efficiency, in indicating that “A principal reason for developing such networks has been to facilitate the sharing of computer resources.”²⁶¹

We see then in this early definition, a bringing together of machines speaking a common language for the purpose of sharing already developed resources. The question of who is sharing those resources, and to what ends, is an integral part of the history of the networks that would eventually come to compose the contemporary internet.

Early Networked Computing

Many of the resources shared in the early days of networked computing in the United States came from the Department of Defense (DoD). Tracking funding for the internet specifically is a murky task. The Advanced Research Projects Agency (ARPA), a sub-unit of the DoD, had a somewhat casual process by which grants were provided to universities in which to conduct research, develop computers, and other related activities: these grants were given out mostly through personal academic networks.²⁶² Despite the somewhat informal processes by which ARPA grants were doled out to create the precursor to the internet that would be named after ARPA (ARPANET), it is possible to gauge the relative importance of this project to the federal government in terms of their funding commitments. ARPANET’s funding began in 1967, when Joseph Licklider, a mathematician, and early computer scientist, began with \$500,000 from ARPA’s budget to study and implement computer networking, which he had been studying conceptually

²⁶¹ Ibid.

²⁶² Hauben, Ronda. n.d. "The Birth and Development of the ARPANET." Working Paper. <http://www.columbia.edu/~hauben/book-pdf/CHAPTER%208.pdf>.

at MIT before moving to ARPA.²⁶³ Converted to 2020 dollars,²⁶⁴ the initial funding allotment to found ARPANET was \$3,874,426.15. This initial commitment of funding on behalf of the federal government would grow considerably. By the middle of the 1970s, the federal government was providing just under \$4 billion (in 2020 dollars) to universities to research the field of computer science: the majority of this came from the DoD, with other federal agencies presenting small fractions of the financial weight that the DoD was willing to use to continually expand the capabilities of ARPANET. This would grow considerably, peaking in 1989 with an expenditure of 21 billion 2020 dollars: the trend steeply drops after that, with 1994's spending at a comparatively svelte six billion 2020 dollars.²⁶⁵ In this there is a broader theme at work, the relations between people, resources, and information: the federal government funded ARPANET, with the funding dropping off in the early 1990s when the internet became commercialized.

In this early period of the internet, the state took a predominant role, and its programs of actions aimed at defensive research. Most of the funding for ARPANET came from the militarized branch of the American federal government. Despite the funding source, the stated purpose of the ARPANET, as of 1985, was "...to advance the state of the art in computer networking" which "successfully provided efficient communications between

²⁶³ Abbate, Jane. 1999. *Inventing the Internet*. Cambridge : The MIT Press. Pgs. 43-45.

²⁶⁴ I use the inflation calculator at <https://www.officialdata.org/us/inflation/1800?amount=1> for all currency conversions to assure consistency.

²⁶⁵ Committee on Innovations in Computing and Communications: 1999. *Funding a Revolution: Government Support for Computing*. Washington DC: The National Academies Press.

heterogenous computers, allowing convenient sharing of hardware, software, and data resources among a varied community of geographically dispersed users.”²⁶⁶

If an internet is simply a means to share information within a common language, then one could suppose that it is open to the same analytical tools that are open to us in the study of language more generally. As the industry paper indicates, these tools of information center around the sharing of data to the end of efficiency: this indicates that there is a close relationship between the creation of these tools and profits concentrating into a small number of large corporations. President Eisenhower famously remarked just over a decade before the creation of the ARPANET, there had been growing entanglements in the United States between the military and large-scale industry. In the pre-internet era, this meant that private companies that made cars and other consumer goods also made the planes, tanks, and other equipment that the United States had been, and still is, so willing to spend on with reckless abandon. This same trend, I argue, continued with the development of the ARPANET: corporations, funded directly by federal contracts, or indirectly by grants to universities, built the physical infrastructure of the ARPANET. In the early days of ARPANET, then, these corporate actors were directly involved in the development of the tools and techniques intended initially to conduct militarily relevant research. Corporate actors, which I develop later in this chapter, later used the same tools and techniques to gain major footholds on the contemporary internet. That corporations and other private interests had been deeply interested in the handling and processing of information was not, in the 1960s, a new

²⁶⁶ Defense Communications Agency. 1985. ARPANET Information Brochure. Government Informational Brochure, Washington DC: Defense Communications Agency.

phenomenon. To the end of developing a history of the corporate and industrial creation and use of information systems up to the contemporary internet, Moscovitis, et al have already done a remarkably well-researched study, which begins, in their view, in 1843, with the publication of one of the early works of modern machine learning, “Sketch of the Analytical Engine Invited by Charles Babbage.”

Taking a cue from Moscovitis, et al, and without diverting into a history of human information keeping that would distract from the modern and contemporary political assessments I make in this work, I begin our critical history in the mid-19th century, where the smog of industry had begun the era in which data, stored in computers, had begun to be an industrial commodity that was put to practical use by the bourgeoisie to the ends of profit on a societal scale. This new commodity, along with the goods, services, and increasingly both human and mechanical labor, were key to the commodification of human life and thought that has been a critical element to modern capitalism.

When it comes to repetitive tasks that require precision and perfect data recall, we *homo sapiens* are far from ideal actors to implement as industrial tools. We get tired and require breaks for food, water, and rest. Sometimes, we suffer fatal workplace accidents when our fatigue leads to mistakes.²⁶⁷ There had to be a better way to do some of the most mind-numbing and repetitive activity that was becoming more common with the

²⁶⁷ Alamgir, Hasanat, Sharon Cooper, and George Delclos. 2013. "Garments fire: History repeats itself." *American Journal of Industrial Medicine* 1113-1115 .

streamlining of industrial production through capitalism. And indeed, there was: The Jacquard Loom.

A user programmed the loom with punch cards (early data storage, simply pieces of card stock with holes which would allow, or disallow, a mechanical arm from passing through and interacting with another mechanical part): the loom, then, could reproduce patterned fabrics both quickly and with nearly perfect precision. They could run for hours, only needing to be powered, kept fed with raw material, and occasionally repaired or maintained: this was often done by children, whose quick and small hands were perfect for working in machines that were still running.²⁶⁸ This practice of exploiting children in the early days of computing marks the beginning of a longstanding trend in the development of modern computer systems in which the already vulnerable face obstacles to their empowerment as democratic agents: it is an obstacle to future democratic participation, for instance, if one dies in a child labor accident. In thinking through the logic of the use of such machines in the industrial, capitalist context, it became clear to some of the brighter minds of the time that the general principles of automating simple, repetitive tasks could, and for the sake of efficiency become automated. Charles Babbage, Ada Lovelace, and others began, in the late 19th century, to lay the intellectual groundwork for machines that could not only make fabric but also do

²⁶⁸ Randell, Brian. 1982. *The Origins of Digital Computers*. New York: Springer. See the Introduction in particular. Also see Humphries, Jane. 2003. "Child Labor: Lessons from the Historical Experience of Today's Industrial Economies." *The World Bank Economic Review* 175-196.

calculations and keep tabulations of large amounts of data, more quickly and accurately than human beings could hope to.²⁶⁹

These early computerized looms stored and reproduced information faster than had been previously possible and allowed companies to produce commodities with greater efficiency. The productive purposes of computing would, we shall soon see, remain a central factor right through to the present implementation of the internet. But a loom running in a mill on punch cards is still quite different from anything resembling today's web.

In the 20th century, computers that stored data for fast retrieval to the ends of production became increasingly common in a variety of industries including, infamously, the war-making industry where these new computers, based on the same principles that were forwarded by Babbage and Lovelace, were put to use in the commission of the Holocaust, an IBM-facilitated data storage project.²⁷⁰ The commission of that crime against humanity required the management of human beings as they were added to complex systems, sorted for differing treatments, and then abused systematically by the managers of that data. The forced number tattoos were an integral part of establishing a network of people, data, and machines that were used to commit a genocide.²⁷¹ That computers can and have been made in some instances to be harmful to people has been yet another feature that has been part of the history of these nonhuman devices which

²⁶⁹ Plant, Sadie. 1995. "The Future Looms: Weaving Women and Cybernetics." *Body and Society* 45-64.

²⁷⁰ Dillard, Jesse. 2003. "Professional Services, IBM, and the Holocaust." *Accounting Information Systems* 1-16.

²⁷¹ Black, Edwin. 2002. "The IBM Link to Auschwitz." *The Village Voice*, October 8. <https://www.villagevoice.com/2002/10/08/the-ibm-link-to-auschwitz/>.

critical historians and theorists must keep in mind: to do otherwise would be to sanitize the history of these devices.

In the example of the Holocaust, the sheer scale of the horrors committed demonstrates the importance of the relationship between human beings with bad intentions and machines. One set of human beings set out to commit genocide upon their chosen victims and the then most advanced information technologies in the world made that most awful of crimes much easier to commit. From the perspective of the victims of the Holocaust, then, the computers used by the perpetrators of the genocide were means to the end of genocide. The mechanization of this dehumanization and destruction no doubt increased its scale and efficiency of disempowerment.

During that same time, from the mid-19th century to the conclusion of the Second World War, another one of the core ideas central to the eventual internet would begin to develop, in both the telegraph and the telephone. By 1946, instant communication by these means was possible in increasingly large parts of the world, though access to telephones was more common in the so-called developed world, tending to be sparser in rural and poorer parts of our world. Entering the Cold War period, we already had systems that began to work towards the communicative aspect of the internet that we have today, albeit in networks disconnected from one another.²⁷² There was an increasing capacity for organizations of several kinds, including universities, the state, and large corporations to own computers capable of data storage, recall, and processing with

²⁷² Coe, Lewis. 1993. *The Telegraph: A History of Morse's Invention and its Predecessors in the United States*. Jefferson: McFarland and Company.

decreasing cost and increasing complexity.²⁷³ There were also means of instant telecommunications, including the relatively newly invented fax machine. By the middle of the 20th century, Theodor Adorno grew concerned that then-contemporary technologies such as television had a disempowering effect on the ability of individuals to think for themselves:

The culture industry fuses the old and familiar into a new quality. In all its branches, products that are tailored for consumption by the masses, and which to a great extent determine the nature of that consumption, are manufactured according to plan. The individual branches are similar in structure or at least fit into each other, ordering themselves into a system almost without a gap. This is made possible by contemporary technologies as well as by economic and administrative concentration.²⁷⁴

Adorno's description of the modern world made its mark on later new materialism and ANT: the overall idea of a wide range of actors, systems, and structures all working together was present in *The Culture Industry*. Thus, even though Adorno's work well pre-dates the internet, it does serve as a description of the internet's precursors: in those precursors, Adorno grows concerned that people living in mass culture will have lives composed primarily of work and inane leisure, making Mass Man, at the very least, unaware of his political potential.²⁷⁵

²⁷³ Moschovitis, Christos, Hillary Poole, Tami Schuyler, and Theresa Senft. 1999. *History of the Internet: A Chronology, 1843 to the Present*. Santa Barbara: ABC-CLIO.

²⁷⁴ Adorno, Theodor. 1991. *The Culture Industry*. New York: Routledge. Pg. 91.

²⁷⁵ Ibid, 161, 190-197.

Adorno's concerns which *The Culture Industry* documents in the essays spanning from the late 1940s until just before Adorno died in the late 1960s predate the internet. The internet, read through Adorno may well be a ubiquitous experience by which Mass Man could become brutalized into sameness, leaving little possibility for self-realization and empowerment available should we choose to free ourselves from mass culture's productive industries and instrumental thinking.²⁷⁶ Fusing the capabilities of data storage and sharing, production, communication, and consumption did not occur until later in the century when, as I develop shortly, the internet went public in the early 1990s.

ARPANET

The limits of technology in the early to mid-Cold War period can be seen well in the example of the film and television industries, through which the growing middle classes, and increasingly even poorer and more rural folks, could consume the products of bourgeois society, thereby learning its values and becoming a more homogenous mass of producers and consumers that kept postwar capitalism chugging along in the United State and elsewhere.²⁷⁷ In 1950, for instance, only nine percent of American homes owned a television. It was not until 1962 that over ninety percent of homes did²⁷⁸ and the homogenizing culture industry could more directly reach the public with instrumental thought. This condition worsened in the 20th century until the radical social thinker became a figure worthy only of Adorno's derision:

²⁷⁶ Ibid, 197.

²⁷⁷ Ibid.

²⁷⁸ TV History, n.d. "Number of TV Households in America 1950-1978." The American Century. Accessed October 15, 2021. <https://americancentury.omeka.wlu.edu/items/show/136>.

To see them²⁷⁹ as renegades is to assess them too highly; they mask mediocre faces with horn rimmed spectacles betokening ‘brilliance,’ though with plain-glass lenses, solely in order to better themselves in their own eyes and in the general rat race. They are already just like the rest. The subjective pre-condition of opposition, unco-ordinated judgment, is dying out, while its gesticulations continue to be performed as group ritual. Stalin only needs to clear his throat and they throw Kafka and Van Gogh on the rubbish heap.²⁸⁰

Adorno’s comment needs some contextualization in terms of the relationships between people and the technologies at their disposal before the digital age. As audience members of television or films, the format of the media limits interactivity between the audience and producers of content. The producers of the culture industry relied on ticket sales numbers, reviews, or, at best, crude Nielsen Devices to make educated guesses about audience preferences.²⁸¹ The flow of information is deeply asymmetrical: film and television provide a lot more information to the audience than the audience does back at the studios. The kind of interactivity that we see in the contemporary internet had not yet reached the consumptive aspects of the film and television industries in the Cold War period.

²⁷⁹ Those who consider themselves radical within mass consumer society.

²⁸⁰ Adorno, Theodor. 2020. *Minima Moralia*. London: Verso. Pgs. 220-221.

²⁸¹ Govoni, Norman. n.d. "Storage Instantaneous Audimeter (SIA)." *SAGE Reference, Dictionary of Marketing Communications*. Accessed July 12, 2020. <https://sk.sagepub.com/reference/dictionary-of-marketing-communications/n3516.xml>.

The same is true for the fax machine, a common subject of discussion when one brings up antecedents to the internet. A fax machine represents two-way data transfers and storage that can happen instantly. To illustrate the limits of the kind of interactivity made possible by the fax machine imagine, for a moment, maintaining and using something like a Wikipedia page via fax.

Imagine, for a moment, that you have just watched a baseball game and would like to know the statistics for your favorite player. You write a quick note and fax it over to a trusted appointee who has such information stored in a file at home, or more likely given actual technological development, a massive data warehousing service that keeps the records. Sometime later, you get a fax back with the statistics of your favorite player, but, you notice, missing the most recent game. So, you keep this flawed copy and send back a fax with an addition of that game. But being human, you miscalculated his batting average and over-reported it. Now, several other fans will get your flawed update and will make their own corrections, sending them all in via fax. The result would be a dizzying mess of paper and highly inaccurate information. Faxes offer, at best, a snapshot of information held in another location. They do not, on the other hand, present a shared source of information that people produce, and curate in real-time from disparate locales. By the end of the Cold War, ARPANET had grown substantially, thanks to decades of generous DoD funding, and had been split into two somewhat interrelated networks, MILNET (Military Network), which handled classified, military information and was split from the larger ARPANET in 1983,²⁸² and NSFNET (National Science Foundation

²⁸² Abbate, Jane. 1999. *Inventing the Internet*. Cambridge: The MIT Press. Pg. 143.

Network), which was used to do un-classified science beginning in 1980, funded by the National Science Foundation, at substantially more modest levels than the DoD had provided ARPANET over the preceding decades.²⁸³ These networks were used to share computing resources, files, and emails in nearly real-time. But these were still government-controlled networks unavailable to most of the civilian populace. To arrive at the internet as we know it today, several developments, both within ARPANET and its descendants, as in the computing world more broadly took place in the closing decades of the 20th century.

As ARPANET waned, MILNET and NSFNET grew in both the number of connected computers, and the complexity of those computers, programs, and research agendas grew, it became increasingly clear to the computer scientists employed within academia, private industry, and the federal government that a standardized system of rules and norms would be useful to aid the efficiency of the networks' functions. To this end, a set of code that governs the overall rules of a computer system was crafted to ensure the smooth transfer and accurate translation of data from one computer to another on the ARPANET's descendants.²⁸⁴ Eventually, there was some agreement between the major interests on ARPANET on the pattern that computer code for the sharing of data between computers should take, namely the ASCII protocol, which computers use to this day.²⁸⁵ The agreement from within the industry to use ASCII as the fundamental

²⁸³ Ibid, 191.

²⁸⁴ Van Vleck, Tom. 2015. "The IBM 7094 and CTSS." *Multicians.org*. March 15. Accessed July 22, 2020. <https://multicians.org/thvv/7094.html>.

²⁸⁵ Mackenize, Charles. 1980. *Coded Character Sets, History and Development*. Reading: Addison-Wesley Publishing Company.

language of computing was further reinforced in 1968, when President Lyndon Johnson, in a memorandum to all agency heads, mandated that:

All computers and related equipment configurations brought into the Federal Government inventory on and after July 1, 1969, must have the capability to use the Standard Code for Information Interchange and the formats prescribed by the magnetic tape and paper tape standards when these media are used.²⁸⁶

In this mandate, Johnson further cemented the future of ASCII, making it, in effect, the default language for computer-to-computer communication for the next several decades. But, outside of technical experts, few human beings can read ASCII the same way, for example, we would read a newspaper. In addition to this shared digital language among computers to facilitate easier transfer and access of data, there was a key innovation that made things easier for us human actors as well: hypertext.

Hypertext, a term first coined by sociologist Theodor Nelson in the mid-1960s,²⁸⁷ refers to the text within a digital document that, to the human reader, appears as both plain text and as a link to other information. Upon clicking the linked text with a cursor, the screen displayed the linked document, which contained, ideally, information useful to the user. Thus, hypertext transforms simple text documents into interconnected webs of information, similar topics, and other linked documents. The major benefit of this for human users is that it takes them to relevant information without having to know if, or

²⁸⁶ Johnson, Lyndon. 1968. "Memorandum Approving the Adoption by the Federal Government of a Standard Code for Information Interchange." The American Presidency Project. March 11. Accessed October 22, 2021. <https://www.presidency.ucsb.edu/documents/memorandum-approving-the-adoption-the-federal-government-standard-code-for-information>.

where, a given network stores certain information. Before the widespread implementation of hypertext in networks, users had to memorize file locations, make notes, or contact other users to discover the locations of files in networks. Hypertext transformed this process into one that is less dependent on the human user's bookkeeping prowess and is more accessible to nonexperts. This allowed users to simply interact with a text that would, with the selection and press of a button, allow us to view connected, relevant data without starting a query from scratch.²⁸⁸ This norm, of hypertext linking, would later become one of the main architectures of the internet, which would come, as Sunstein notes, to have major human consequences that I explore in chapter five.²⁸⁹

Bringing The Net Home

Through the 1970s and 1980s, ARPANET grew as the Department of Defense and their contractors, for instance, the RAND Corporation, whose Paul Baran had been an early consultant in the development of the network, conducted defensive research and planning using ARPANET as part of a broader actor-network of civilian contractors, military personnel and resources.²⁹⁰ On the civilian side, researchers, using technologies developed in the decades leading up to the 1980s to create and maintain the ARPANET began to use the network for purposes we would recognize today on the internet: email, gossiping, and, occasionally, playing jokes on one another.²⁹¹ Additionally, computers

²⁸⁸ Smith, John, and Stephen Weiss. 1988. "Hypertext." *Communications of the ACM*, July: 816-819.

²⁸⁹ Sunstein Chapter Three.

²⁹⁰ Ellsberg, Daniel. 2017. *The Doomsday Machine*. New York: Bloomsbury.

²⁹¹ Hafner, Katie, and Matthew Lyon. 1998. *Where Wizards Stay Up Late: The Origins of the Internet*. New York: Simon and Schuster.

capable of increasingly complicated tasks were getting cheaper. In 1985, the same computing power that had at one point needed a cargo plane for transportation now came home in a station wagon and an increasing number of American households began to use computers for basic home accounting, word processing, and even basic video gaming.²⁹²

Yet, these cheaper and more capable home computing machines were still quite different from the contemporary internet. To do much of anything with these early home computers, one had to know the code, the language, of the operating system. Upon flipping the power switch on one of these computers, for example, an Apple I computer, the computer presented the user with a black screen and a blinking green line. All you had were your wits, ideally some formal training or a reference book, and a keyboard. To get communication in the form of a letter to another person, you would have to first open, through code, a basic text editor, write your message, then, assuming you had one of the first home printers, command the printing of the letter, which you would then have to mail or fax to your recipient. This was quite different from the instant communication that we have now. The major innovation that led from the old days of having to code in every command to the present was the development of the graphical user interface or GUI.

Computers still operate in terms of programming languages that require no visual representation themselves and exist as text. Operating in that world of coded text, however, is outside of the realm of experience of most users today. Instead, users are accustomed to manipulating icons, buttons, and other visual widgets to encourage our

²⁹² Comen, Evan. 2018. "Check out how much a computer cost then." USA Today, October 3: Online.

devices to do what we please. Translating the textual languages that make a computer function to that more visual format that we are accustomed to today is the GUI.

A GUI takes the ideas of hypertext and applies them to the operating system of a computer. Before the advent of a GUI, human beings interfaced with computers through commands entered via the keyboard, known as a Command Line Interface, or CLI.²⁹³ Though learning to both operate and program computers through CLI alone is possible and is often the baseline of a project for programmers today, the GUI much-simplified matters, allowing human beings to point and click to achieve the functions they wanted to access on their personal computers, such as word processing and bookkeeping for small businesses and families.

This would finally be possible as we know it today in 1989 with the commercial release of Microsoft Office.²⁹⁴ You would still, in 1990, likely need to mail through the post or fax any document you would write if you wanted someone in a different location to be able to see it. At this point, with the Windows operating system and its competitors in a growing number of homes and businesses, there were the material necessities for the internet to begin to take shape, but no internet yet, at least not in the sense that we know it now.

As I have thus far covered, ARPANET, in its original form, was funded by research grants from the Department of Defense; this, too, was the case for MILNET and

²⁹³ Sheldrick, George. 2008. "A short history of SHELX." *Acta Crystallographica Section A Foundations and Advances* 112-122.

²⁹⁴ Microsoft. 2020. "Facts About Microsoft." Microsoft.com. March 30. Accessed July 14, 2020. <https://news.microsoft.com/facts-about-microsoft/>.

NSFNET. As a string attached to that public funding, ARPA stipulated that contractors and grant recipients could not use the network for personal or commercial purposes. This became something of an issue after the NSFNET and MILNET split in 1980, which left the former lacking in funds. In 1991 the National Science Foundation concluded via an internal audit that, if scientists' work could go on unhindered, the commercial interests that had long cooperated in the development of the NSFNET could use it for other, profitable purposes. Thus, with the stroke of a regulatory pen, the NSF opened the internet up to commercial use and began awarding contracts to facilitate the development of private, subscription-based internet services on a national scale.²⁹⁵

The process that led the NSF to that decision was, Jay Kesan and Rajiv Shah note, a largely opaque one in which companies that had been involved with federal contracts since the ARPANET influenced the process of privatizing the internet in ways that gave those corporate actors influence over not only governmental processes of privatization but the shape that the internet came to take in the 1990s.²⁹⁶ This change came after over a decade of waning funding for the NSFNET, while MILNET's funding from the government was along the same generous lines as the early ARPANET. To survive, then, NSFNET would need to expand possible means by which to gain income, and without the generous government funding they had enjoyed during the ARPANET era, the

²⁹⁵ The Internet Corporation for Assigned Names and Numbers. 1991. Network Information Services Manager(s) for NSFNET and the NREN: INTERNIC Registration Services. Government Contract, Washington DC: ICANN. <http://archive.icann.org/en/nsi/coopagmt-01jan93.htm>.

²⁹⁶ Kesan, Jay, and Rajiv Shah. 2001. "Fool Us Once Shame on You—Fool Us Twice Shame on Us: What We Can Learn from the Privatizations of the Internet Backbone and the Domain Name System." *Washington University Law Review* 91-220. https://openscholarship.wustl.edu/cgi/viewcontent.cgi?article=1399&context=law_lawreview. The article in its entirety is enlightening, but Section II. C. comments most directly on opaque corporate influence in the late NSFNET.

businesses that had co-developed the computers and software of ARPANET and NSFNET were more than willing to step up as the major actors of a civilian internet by providing already-developed and newly-developed services to individuals and companies now that the strings that often came with scientific research grant funding were cut. With networking services now legally allowed using the same technologies that had corporate actors and academics developed for ARPANET and its offspring, physically connecting these new home computers through phone lines and onto massive servers, the commercial internet had begun.

As ARPANET, the early internet's cast of actors consisted of the state, which sought to use ARPANET to further defensive research and those that the state allowed to participate, namely university grant recipients and contractors hired to build and maintain the network. While civilians outside of these government agencies, universities, and contractors had little to no direct connection with ARPANET, this early phase begins to show patterns that would become the programs of action for corporate platforms on the contemporary internet, namely the centralization of power to a single set of actors. In the early internet, that actor was the state. Later, however, corporate actors came to gain control over much of the internet, and thus began to direct that centralizing program of action towards casting the user in such a way as to increase profits for corporations.

On Computers, Highways, Stars, and the State

Thus far, the network that would become the internet has gone by several names: ARPANET, MILNET, and NSFNET all refer to the iterations of the actor-network

controlled by the United States government's various branches, with the cooperation of universities and private companies. Today, "the internet" is the most common name for the network built after NSFNET, though, before the acceptance of that term, others, such as the Information Superhighway and the World Wide web were in more common usage. For the remainder of this chapter, I take a moment to pause the historical narrative to comment on the significance of the change in name of this actor-network in terms of what it may tell us about the shifting balance of power to a new set of actors in what would become known as the internet. Names, Harmeet Sawhney notes, are words deployed by human actors to fix meaning to a phenomenon, idea, object, or collection of objects. In the case of new technologies, these words serve several important purposes. First, the names place the technology in the realm of the familiar by relating it to other, older technologies.²⁹⁷ As something at least intended to be new and novel, human actors search for some clue, provided by the designer or owner of the object, as to the intended use of a particular technology. The name, then, gives a context and primes human actors to understand the object in a certain way. To return to an earlier example from the chapter, were I to invent a new type of hammer, say one specialized for the mending of wire fences and thus needing a cutting implement instead of a nail puller, you may be more prone to recognize it as a hammer despite its new form if it had a label calling it a hammer on the rack at the hardware. In addition to their contextualizing function, names are also aspirational. Much in the same way that soon-to-be parents often spend hours poring over baby name books (or, in the internet age, through dozens of websites) to

²⁹⁷ Sawhney, Harmeet. 1996. "Information Superhighway: Metaphors as Midwives." *Media, Culture, and Society* 291-314.

imbue their child with some sort of purpose or meaning, the naming of an emerging, still mostly unformed technology is a means by which to guide the hopes and actions of its users and owners to a specific end. These two functions coexist with the third, the more obvious one that is still worth mentioning here: names are the sounds and symbols that we human beings use to describe people, objects, and ideas.²⁹⁸

So, for the internet, what is in a name? There are two names for the internet that give some clue to the features of the internet that we see now that are cause for some level of analysis here. Firstly, I take up the “information superhighway,” a term popular before the turn of the 21st century. In calling the internet a superhighway, one involves the context and image of the other, physical highways that have states built on physical territory over the last century or so. The archetype for the modern highway was the German Autobahn. Examining this original, modern superhighway may well give us some clues as to the intent and understood context of the people who used that name to describe the internet: the programs of action that states attempt to implement in highways may well repeat in other actor-networks as well.

The Autobahn, a product of the German state beginning in the interwar period, was a project that, in several regards, exemplified the balance of power between the state and corporate actors in Germany at the time. It was at least in part a political project that was meant to unify the German state physically and to do so also ideologically, by connecting disparate places more closely and quickly. This attempt to unify the German nation-state around a large project that would make it physically easier to move from one

²⁹⁸ Ibid.

place to another was fundamentally aspirational for a state trying to both maintain the recent unification of the state itself, as well as recover from the insurmountable financial ruin of the First World War and concurrent Great Depression. The building of the Autobahn was, in this sense, an aspirational metaphor for the goals of those who funded it, a German bourgeois class willing to invest in massive state projects even before the consolidation of Nazi power.²⁹⁹

In this aspirational act of creation, what did the relevant actors really create? Primarily, to not ignore the obvious, the highway system was meant to ring the country in the most modern of roads to facilitate the easy movement of people, resources, and goods around Germany. The Autobahn was on its face and in its stated intent a capitalistic enterprise aimed at re-energizing a failing German economy. It also created, at least, again, in an aspirational sense, a new opportunity for German tourism.³⁰⁰ What better way to see a vibrant nation on the rise than in a tour in an elegant German sedan? Of course, at the time such an experience was the domain of the bourgeois class I had mentioned earlier: the average German could in no way afford a personal automobile at the time for personal leisure travel around the countryside.³⁰¹ The physical construction, then, of a capitalistic and tourist-oriented highway, complete with modern aesthetics, buttressed the ideological construction of a unified Germany.

²⁹⁹ Rollins, William. 1995. "Whose Landscape? Technology, Fascism, and Environmentalism on the National Socialist Autobahn." *Annals of the Association of American Geographers* 454-520.

³⁰⁰ Ibid.

³⁰¹ Dimsdale, Nicholas, Nicholas Horsewood, and Arthur Van Riel. 2006. "Unemployment in Interwar Germany: An Analysis of the Labor Market, 1927-1936." *The Journal of Economic History* 778-808.

Interestingly, this act of creation was simultaneously an act of destruction. In making this new superhighway, the state destroyed no small amount of the German countryside and remade the modernist image of the new Germany, with its consistent aesthetics in roads, signage, and service stations making manifest the ideological dreams of a unified state. This came also, as most road projects do, with the destruction of forests, natural habitat, and the world as it generally was.³⁰²

Germany did not have a monopoly on 20th-century construction. In the United States, a similar project was underway as well. Though there were, of course, paved roads in the U.S. before this, the story of the interstate system began in 1919 with an ill-fated road trip. In the shadow of both a 1916 law that intended to share highway costs between the states and federal governments, as well as the new mechanization of war in the recently concluded Great War, a pressing question was on the mind of some in the federal government: how long would it take to drive from coast to coast? This was no idle curiosity; keep in mind that it was 1919. If the government in Washington had to get men and war machines to California, the practical options were rail and ships. World War One demonstrated the vulnerability of the former to aerial bombardment and the latter meant a journey to Panama. Neither would do for speedy and robust national defense. So, in the summer of 1919, Eisenhower headed West. The three-mile convoy arrived in Los Angeles sixty-two days later, having suffered two dozen human casualties, several dozen vehicles discarded, and an incident in which the entire convoy nearly drowned in quicksand.³⁰³ For some comparison, there is a contemporary race held among car

³⁰² Rollins 1995.

³⁰³ Dwight D Eisenhower Presidential Library, Museum, and Boyhood Home. n.d. "1919 Transcontinental Motor Convoy." The National Archives. Accessed November 2021, 11.

enthusiasts along a similar distance, from New York to Los Angeles, called a Cannonball Run. Without the blessing of the army and much to the ire of state and local law enforcement, some enterprising people have completed the Run in just under twenty-six hours.³⁰⁴

The motivations for the expansion of the American highway system were multiple, and echo those we will see again in the next chapter's exploration of the early days of the commercial internet in its shift from a government project: early proponents of a federally supported highway system touted its military significance, economic benefits, and its probability for creating a powerful symbol for the arrival of the country as a modern, unified nation.³⁰⁵ In the interwar period, Franklin Roosevelt took this wisdom to heart and was more than happy to use the construction of roads as a jobs program as part of the New Deal.³⁰⁶ The commitment to the building of a modern interstate was redoubled through Eisenhower again, now as president, with the passage of the Federal Highway Act of 1956. The law committed the federal government to spend, in cooperation with states, what was necessary to modernize American highways.³⁰⁷

<https://www.eisenhowerlibrary.gov/research/online-documents/1919-transcontinental-motor-convoy>.
Note: The cited page provides general information; the reports and documents linked there are a wealth of anecdotes and observations from the convoy's journey.

³⁰⁴ Silvestro, Brian. 2020. "Every Known Modern Cannonball Run Cross Country Record." Road and Track, December 25. <https://www.roadandtrack.com/car-culture/g35016829/cannonball-run-cross-country-records/>.

³⁰⁵ Bement, Austin. 1916. "The Economic and Strategic Value of the Lincoln Highway as Considered from the Standpoint of National Defense." *The Scientific Monthly* 373-380.

³⁰⁶ Reading, Don. 1973. "New Deal Activity and the States, 1933 to 1939." *The Journal of Economic History* 792-810.

³⁰⁷ Griffith, Robert. 1982. "Dwight D. Eisenhower and the Corporate Commonwealth." *The American Historical Review* 87-122.

As a long-running technical and bureaucratic endeavor, the Eisenhower administration brought local and state actors into the process of planning highways, promising funding mostly, with federal money.³⁰⁸ What this federal inclusion in highway planning did, in some instances, was provide room for actors outside of the government, with more local political interests to make use of the technology of highway construction to further ends of racializing the geography of Miami. In the case of Overtown, the building of a highway paved over a community quite literally and served to disempower its members.

Overtown, a community in Miami, Florida went by the unofficial name of the Harlem of the South in the early 20th century, and it lived up to that moniker in many ways. Home to mostly black residents, many of whom worked in the service sector in Miami's more affluent neighborhoods, Overtown was, into the early 1950s, a center for black life in Miami. This life was a vibrant one, consisting of homes, businesses, and cultural centers that reflected Miami's singular mix of influences ranging from Afro-Caribbean to the Deep South.³⁰⁹

Sadly, one of the elements that Miami borrowed from some of its Deep Southern roots was racism. Overtown is some of the choicest real estate in the area in terms of geographic centrality in the greater Miami area. Just to its South are those affluent neighborhoods I mention above. To the East, Miami Beach. And on the west, Miami

³⁰⁸ Rose, Mark, and Raymond Mohl. 2012. *Interstate*. Knoxville: The University of Tennessee Press. See chapters 5-7 for a discussion of the political actors and climate of the 1950s in the context of American highway construction.

³⁰⁹ Institute of Government at Florida International University. 1998. *Final Report: Historical Impacts of Transportation Projects on the Overtown Community*. Final Research Report, Miami: Florida International University.

International Airport. If you want to get anywhere in Miami, or to Miami in the first place, your path will likely run straight through Overtown. For the majority-white county government, incorporated in 1956,³¹⁰ to accommodate the needs of a growing Miami-Dade County, Overtown being at the center of all that new growth posed a problem that needed solving. As if on cue, the federal government, pockets flush with funding, came asking for local “expertise” and input for proposals to extend the interstate through Miami and down to the Keys further South.

The federal government took two proposals somewhat seriously. One had the new highway going through the Florida East Coast Railway Corridor which would have put I-95 next to the water, just east of Overtown. The second was to pave over a thriving black community that had been the target of highly racialized campaigns against proposals for public housing and other community development efforts. Instead of making use of a railroad tract whose best days were long behind it, the state and federal governments agreed to run interstate routes right through Overtown. The project began in 1956, coinciding with Federal Highway Act passed the same year.³¹¹

For residents of Overtown, the interstate meant something different, and much worse. First came the evictions, then the bulldozers. What was once a thriving community for people of color now existed as memories or in the shadows of a complex of overpasses. Under those overpasses, where homes, businesses, and lives once unfolded relatively normally, you will now find a homelessness crisis. As a tourist or a resident of the rest of

³¹⁰ Miami Dade County. 2019. Home Rule Charter. November 5. Accessed November 18, 2021. <https://www.miamidade.gov/charter/home.asp>.

³¹¹ Rose and Mohl Pgs. 117-122, xi, xiv.

Miami, you would be able to ignore this, though, as you drive right over Overtown, admiring the giant glass obelisks and billboards that make up the Miami skyline today, blissfully unaware of the history that you are driving over.

In the destruction of Overtown, we see an example of the development of an infrastructure project that provides a means by which the state creates a homogenous experience of flow, in this case of vehicle traffic, along the routes and by the rules set by the state. By setting the routes and the rules, a productive process, the state reifies a relationship of power, with that state as agenda-setter and, in Overtown, a racist county government consulting. The new highway over Overtown occupied a moment of simultaneous production and destruction. That destruction, which defined the boundaries of the assemblage of the highway privileged capitalist development of Miami over the lives of poor and working-class black folks: in 1950, 45% of the black population of the county lived in Overtown. A decade later, Overtown's population, and rates of homeownership, dropped by half. Residential use of land in Overtown, by 1990, virtually ceased to exist.³¹² The state, in building I-95, paved over Overtown, and disempowered many of its residents. What communities faced the same paving over in the development of the internet? I take up this question in the next chapter.

The destruction of Overtown to build a highway also shows that hierarchies of power can, and are, repeated through the building and experiences of public infrastructure projects. The aesthetic experience of Overtown now is a clear indicator of this. Those with the wealth to have cars experience I95 in Miami in the sunshine, taking in all the

³¹² Institute of Government at Florida International University 1998, Pg. 9.

glitz that late capitalism can offer. Those without access remain hidden from those above, living in the shadows and amidst the deafening noise cast from the road above, where the overpass serves as the roof for an encampment of houseless persons.³¹³ The physical differentiation between those who have been empowered using highway technologies, namely real estate developers and the federal government, and those who have been disempowered, the residents of Overtown, clearly demonstrate that the construction of I95 was an example of an actor-network in which the technologies at play mediated and created power-laden relationships in which some people distinctly came out worse than others. While the paving over of Overtown happened in a less immediately spectacular fashion than, for example, the Tulsa Race Massacre several decades earlier, the destruction of the community was nonetheless disempowering to its residents' ability to live their chosen lives in Overtown.

This example, too, demonstrates the ability of nonhumans to serve as agents. People drew the plans, but it is the road itself that paved over Overtown: the interstate now sits over what was once a thriving community. The original planners have likely since died of old age; they can no longer act as agents. The road, however, still affects lives above and below its surfaces: Overtown remains, as of this writing, a deeply impoverished community with sparkling examples of postmodern architecture casting long shadows on what was once a thriving center for black life in Miami. In terms of the analysis I developed earlier in the chapter, the Overtown example demonstrate that corporate interests have, historically, used technologies developed by the state to affect the agency

³¹³ Bojanasky, Erik. 2021. "The Politics of Homelessness in Miami." The Miami Times, March 3. https://www.miamitimesonline.com/news/the-politics-of-homelessness-in-miami/article_66e2bb08-7c2f-11eb-959e-ef743d6c9d46.html.

of others. Specifically, the corporate program of action oriented at profit disempowered the people living in Overtown from continuing to live their lives as normal.

The Michelin guides exemplify the case for considering highways as actor-networks consisting of actors related to one another through power relations. In the development of those guides, we see that the highways, this time in France, provide a space in which Michelin produced and combined elements of existing assemblages in ways that reify relationships of power in ways that relate directly to the (dis)empowerments of people to participate in democracies. Michelin's red guides, first appearing in 1900 as free guides (they began charging in 1920), began with a simple purpose: to help the French tire company sell its goods. Drivers would drive more, and thus need tires more often, if only they knew where to go for good food and accommodations. Also, tires in the first years of the automotive era were a lot more temperamental than they are today, so the guides contained a lot of technical information to help customers maintain their tires.³¹⁴ If you were to find an inaccuracy in the Red Guides, for instance, an incorrectly measured road distance, and wrote the company to inform them, Michelin would mail you a small check in thanks for your recommendations³¹⁵: this attempt at what we would now call crowdsourcing indicates, in this assemblage, the willingness of corporate actors to include the labor of customers into products, a trend that comes to the fore in the subsequent chapters of this work. This led to the Red Guides becoming the gold standard of French roadmaps to such an extent that the Germans would later use them as a

³¹⁴The Michelin Tire Company. n.d. "History of the Michelin Guide." Michelin Guide. Accessed November 18, 2021. <https://guide.michelin.com/th/en/history-of-the-michelin-guide-th>.

³¹⁵ Harp, Stephen. 2001. *Marketing Michelin*. Baltimore: The Johns Hopkins University Press. Pg. 246.

strategic planning tool for the invasion of France in the opening bout of the Second World War, as would the British in their counter to said invasion.³¹⁶ The guides' use as military maps points to the ease with which highways and their components can be adapted to some of the most destructive ends of the state, even when that destruction is antithetical to the stated ends of the component of an assemblage: the same guide used to find a hotel in 1938 can be used to target it for an artillery bombardment in 1940. Aware of the relationship between the state, maps, and corporate profits along highways, Michelin themselves published motoring tour guides after the First World War that traced battle lines.³¹⁷ In so doing, Brian Murphy argues, Michelin engaged in what he calls "dark tourism," in which companies create and profit from opportunities that engage people with memorials to sanitized violence³¹⁸: this trend in highway history is something I explore in subsequent chapters on the contemporary web.

The interwar years saw the guides resume publication as normal with something of a new twist. Beginning in 1923, Michelin began to classify restaurants using a system of stars.³¹⁹ The Michelin family was using the proceeds of the sales from the guides and the company more broadly, to fund, and provide advertising pages to, the French nationalist cause of winning the peace by producing more French people than the Germans could make Germans. It was, in the eyes of the company's leadership, one's patriotic duty to

³¹⁶ Black, Jeremy. 2018. "Maps and Navigation in the Second World War." *The RUSI Journal* 62-74.

³¹⁷ Winter, Caroline. 2019. "Touring the Battlefields of the Somme with the Michelin and Somme Tourisme Guidebooks." In *The Palgrave Handbook of Artistic and Cultural Responses to War since 1914*, by Martin Kerby, Margaret Baguley, and Janet McDonald, 99-115. London: Palgrave Macmillan.

³¹⁸ Murphy, Brian. 2015. "Dark Tourism and the Michelin World War 1 Battlefield Guides." *Writing The War*. <https://arrow.tudublin.ie/cgi/viewcontent.cgi?article=1041&context=jofis>.

³¹⁹ Harp 2001, Pg. 246.

take a nice holiday, enjoy good French food, and procreate.³²⁰ The encouragement of the creation of more French people extended to company pay policies, which would increase the family allowance given to employees based on the number of children they had.³²¹ The red guides, before and after the Second World War, were surveys and rankings of the amenities of non-Parisian, French, and then colonial areas. The rankings of this period presented exclusively French foods even in, for instance, Algeria.³²² In so doing, I argue the guides not only reified a notion of French-ness that held Paris as the center of French culinary culture but also gave Parisian-style cuisine the economic benefits through free advertising.

It is only recently that the guides have become slightly less focused on French food: in 2008, a Chinese restaurant earned three stars for the first time.³²³ Reification of Parisian-centered food culture, however, continues today: globally, restaurants that seek the prestige and profit that comes with a Michelin star spend great efforts to become more Parisian, and the perception as being more French. The association of the Michelin star, today, with excellence in food is also part of a long history of an attempt to construct a homogenous sense of French identity, even including directly aiding in war efforts to preserve that nation through the production of not only maps but also of tires.³²⁴ The guides, and their stars, came to be in the broader contexts of a developing industrial

³²⁰ Ibid, 98-99, 117-118, 134, 141.

³²¹ Ibid, 146.

³²² Ibid., 249, 252-253.

³²³ Dunlop, Fuchsia. 2008. "China's First Michelin Star." *The Financial Times*, December 12: <https://www.ft.com/content/e9245b78-c718-11dd-97a5-000077b07658>.

³²⁴ Harp 2001. See Chapter 4.

capitalist France that, among other things, possessed a growing number of highways. As a component of these broader assemblages, the guides made use of the existing roads to continue the paving project that began with the construction of those roads: Michelin made French identity, nationalism, and Parisian power, with not only tires and propaganda donations, but the guides as well.

From the examples of the highways, taken as assemblages, several patterns emerge that are important to the study of the internet as well. First is that the motivations for the construction and use of highways lay at the intersection of the construction of state power, the furthering of commercial enterprise, and the provision of a more efficient, mechanized defense of that state. Once under construction, the state, especially in the U.S. and Germany, understood their highways as symbols of power as well as mechanisms for centralizing state power through force, funding agreements, agreements, or, in the French case, the propagation of a homogenous culture. Second, the adaptability of highway systems to accomplish differing ends simultaneously has made it increasingly possible for actors to harness the productive power and finding of the state apparatus and leverage that power to their own ends. This is the clearest in the example of Overtown: a county government managed to use the power and capital of the federal government to attempt the destruction of a community. Finally, the literal paving over that marked these highways was representative of a paving over of not only nature but of cultures and communities. The I95 extension destroyed a thriving center of culture, and the guides, in the French case, closed off other culinary possibilities. These three features of highways: the location between assemblages, the pliability to novel ends, and the destructive paving over, are antecedents to the web. Thus, in the study of the web, it may well be that these

same effects might well be found as programs of action in a corporate-dominated internet.

Conclusion

In this chapter, I have made the case for mapping digital power through an analysis that deploys the theoretical innovations of new materialism as well as an adapted version of Bruno Latour's ANT which looks for asymmetries of power that affect the agency of actors. I examine the precursors of the internet, namely the American ARPANET, MILNET, and NSFNET as actor-networks in which the state reified and expanded its power in cooperation with corporate actors, empowering both to pursue the ends of technological development and profit. These technological innovations, which I trace from the mid-1960s until the initial commercialization of the internet in the early 1990s, I argue, set programs of action for an internet in which, as the state's role waned over time, the role of corporate actors expanded over time. Bringing the development of what would lead to the internet into historical context, I conclude the chapter with an initial reflection on the implications of considering the internet as an information superhighway. Taken from the perspective of ANT, the development of highways has served, previously, to empower the state, as well as corporate actors and, in some instances, disempowered individuals and communities through the paving over of physical and culinary spaces to the end of reinforcing and reifying state and corporate power.

The next chapter resumes the project of sketching an ANT-influenced history of the internet beginning in the dotcom boom of the early 1990s, when corporate actors began forays into newly commercialized digital spaces: this period, moving from the dotcom era to Web 2.0, and finally into the contemporary internet, ushered in several waves of

contestation between states, corporate actors, and individuals in ways that have, I come to argue, have made it more difficult over time for people to use the internet to work towards the democratic ends that I outlined in chapter two.

Bibliography

- Abbate, Jane. 1999. *Inventing the Internet*. Cambridge: The MIT Press.
- Adorno, Theodor. 2020. *Minima Moralia*. London: Verso.
- . 1991. *The Culture Industry*. New York: Routledge.
- Alamgir, Hasanat, Sharon Cooper, and George Delclos. 2013. "Garments fire: History repeats itself." *American Journal of Industrial Medicine* 1113-1115.
- Arendt, Hannah. 1998. *The Human Condition*. Chicago: The University of Chicago Press.
- Aristotle. 1995. *Politics*. Oxford: Oxford University Press.
- Aydin, Ciano. 2017. "The Posthuman as Hollow Idol: A Nietzschean Critique of Human Enhancement." *Journal of Medicine and Philosophy* 304-327.
- Baudrillard, Jean. 2001. *Selected Writings*. Stanford: Stanford University Press.
- Bement, Austin. 1916. "The Economic and Strategic Value of the Lincoln Highway as Considered from the Standpoint of National Defense." *The Scientific Monthly* 373-380.
- Bennett, Jane. 2010. *Vibrant Matter*. Durham: Duke University Press.
- Black, Edwin. 2002. "The IBM Link to Auschwitz ." *The Village Voice*, October 8. <https://www.villagevoice.com/2002/10/08/the-ibm-link-to-auschwitz/>.
- Black, Jeremy. 2018. "Maps and Navigation in the Second World War." *The RUSI Journal* 62-74.
- Bojanasky, Erik. 2021. "The Politics of Homelessness in Miami." *The Miami Times*, March 3. https://www.miamitimesonline.com/news/the-politics-of-homelessness-in-miami/article_66e2bb08-7c2f-11eb-959e-ef743d6c9d46.html.
- Boyd, Danah, and Kate Crawford. 2012. "Critical Questions for Big Data." *Information, Communication, and Society* 662-679.
- Braidotti, Rossi. 2012. "Interview with Braidotti Rossi." In *New Materialism: Interviews and Cartographies*, by Rick Dolphijn and Iris van der Tuin, 33. Ann Arbor: Open Humanities Press.

- Brand, Stewart. 2001. "Founding Father." *Wired*, March 1.
<https://www.wired.com/2001/03/baran/>.
- Brooks, Alison, and Catherine Smith. 1987. "Ishango revisited" new age determinations and cultural interpretations." *The African Archaeological Review* 65-78.
- Butterfield, Herbert. 1965. *The Whig Interpretation of History*. New York: WW Norton and Company.
- Castree, Noel. 2002. "False Antithesis? Marxism, Nature, and Actor-Networks." *Antipode* 111-146.
- Cerf, Vincent, and Robert Kahn. 1974. "A Protocol for Packet Network Intercommunication." *IEEE Transactions on*, May: Digital Version.
- Chun, Wendy Hui Kyong. 2011. *Programmed Visions*. Cambridge : The MIT Press.
- Coe, Lewis. 1993. *The Telegraph: A History of Morse's Invention and Its Predecessors in the United States*. Jefferson: McFarland and Company.
- Comen, Evan. 2018. "Check out how much a computer costs." *USA Today*, October 3: Online.
- Committee on Innovations in Computing and Communications: 1999. *Funding a Revolution: Government Support for Computing*. Washington DC: The National Academies Press.
- Connolly, William. 2013. "The 'New Materialism' and the Fragility of Things ." *Millennium* 400.
- Coole, Diana, and Samantha Frost. 2013. "Introducing the New Materialism." In *New Materialisms*, edited by Diana Coole and Samantha Frost, 7. Durham: Duke University Press.
- Coole, Diana, and Samantha Frost. 2010. *New Materialisms*. Durham: Duke University Press.
- Defense Communications Agency. 1985. *APRPANET Information Brochure*. Government Informational Brochure, Washington DC: Defense Communications Agency.
- Descartes, Rene. 1996. *Meditations on First Philosophy*. Cambridge: Cambridge University Press.
- Dillard, Jesse. 2003. "Professional Services, IBM, and the Holocaust." *Accounting Information Systems* 1-16.
- Dimsdale, Nicholas, Nicholas Horsewood, and Arthur Van Riel. 2006. "Unemployment in Interwar Germany: An Analysis of the Labor Market, 1927-1936." *The Journal of Economic History* 778-808.

- Dunlop, Fuschia. 2008. "China's First Michelin Star." *The Financial Times*, December 12: <https://www.ft.com/content/e9245b78-c718-11dd-97a5-000077b07658>.
- Dupuis-Deri, Francis. 2009. "Anarchy in Political Philosophy." In *New Perspectives on Anarchism*, by Nathan Jun and Shane Wahl, 9-25. New York: Rowman and Littlefield.
- Dwight D Eisenhower Presidential Library, Museum, and Boyhood Home. n.d. "1919 Transcontinental Motor Convoy." *The National Archives*. Accessed November 2021, 11. <https://www.eisenhowerlibrary.gov/research/online-documents/1919-transcontinental-motor-convoy>.
- Earle, Samuel. 2021. "The Timeline We're on is Even Darker than 'The Matrix' Envisioned." *The New York Times*, December 22: Online.
- Ellsberg, Daniel. 2017. *The Doomsday Machine*. New York: Bloomsbury.
- Falck, Oliver, Robert Gold, and Stephan Heblich. 2014. "E-lelections: Voting Behavior and the Internet." *American Economic Review* 2238-2265.
- Foster, Lucia, John Haltiwanger, Shawn Klimek, CJ Krizan, and Scott Ohlmacher. 2015. *The Evolution of National Retail Chains: How We Got Here*. Governmental Research Report, Washington DC: US Census Bureau Center for Economic Studies.
- Foucault, Michel. 1995. *Discipline and Punish*. New York: Random House.
- . 2004. *Security, Territory, Population*. New York: Palgrave.
- Friedman, Jonathan. 1974. "Marxism, Structuralism, and Vuglar Materialism." *Man* 444-469.
- Gamble, Christopher, Joshua Hanan, and Thomas Nail. 2019. "What is New Materialism." *Angelaki* 24 (6): 111.
- Gamble, Christopher, Joshua Hanan, and Thomas Nail. 2019. "What is New Materialism?" *Angelaki*, 111-134. <https://doi.org/10.1080/0969725X.2019.1684704>.
- Gibson, William. 1988. *Neuromancer*. New York: Ace.
- Govoni, Norman. n.d. "Storage Instantaneous Audiometer (SIA)." *SAGE Reference, Dictionary of Marketing Communications*. Accessed July 12, 2020. <https://sk.sagepub.com/reference/dictionary-of-marketing-communications/n3516.xml>.
- Gramsci, Antonio. 2014. *Selection from the Prison Notebooks*. New York: International Publishers.

- Griffith, Robert. 1982. "Dwight D. Eisenhower and the Corporate Commonwealth." *The American Historical Review* 87-122.
- Hafner, Katie, and Matthew Lyon. 1998. *Where Wizards Stay Up Late: The Origins of the Internet*. New York: Simon and Schuster.
- Harford, Tom. 2017. "What tally sticks tell us about how money works." *BBC News*. July 10. Accessed July 12, 2020. <https://www.bbc.com/news/business-40189959>.
- Harp, Stephen. 2001. *Marketing Michelin*. Baltimore: The Johns Hopkins University Press.
- Hauben, Ronda. n.d. "The Birth and Development of the ARPANET." Working Paper. <http://www.columbia.edu/~hauben/book-pdf/CHAPTER%208.pdf>.
- Humphries, Jane. 2003. "Child Labor: Lessons from the Historical Experience of Today's Industrial Economies." *The World Bank Economic Review* 175-196.
- Iglesias, Carlos. 2020. "The gender gap in internet access: using a women-centered method." *World Wide Web Foundation*. March 10. Accessed July 17, 2020. <https://webfoundation.org/2020/03/the-gender-gap-in-internet-access-using-a-women-centred-method/>.
- Illich, Ivan. 2009. *Tools for Conviviality*. London: Marian Boyers.
- Illing, Sean. 2019. "Are we living in a computer simulation? I don't know. Probably." *Vox*. December 27. Accessed July 17, 2020. <https://www.vox.com/future-perfect/2019/4/10/18275618/simulation-hypothesis-matrix-rizwan-virk>.
- Institute of Government at Florida International University. 1998. *Final Report: Historical Impacts of Transportation Projects on the Overtown Community*. Final Research Report, Miami: Florida International University.
- Jarvis, Jeff. 2011. *Public Parts*. New York: Simon and Schuster.
- Johnson, Lyndon. 1968. "Memorandum Approving the Adoption by the Federal Government of a Standard Code for Information Interchange." *The American Presidency Project*. March 11. Accessed October 22, 2021. <https://www.presidency.ucsb.edu/documents/memorandum-approving-the-adoption-the-federal-government-standard-code-for-information>.
- Kesan, Jay, and Rajiv Shah. 2001. "Fool Us Once Shame on You—Fool Us Twice Shame on Us: What We Can Learn from the Privatizations of the Internet Backbone and the Domain Name System." *Washington University Law Review* 91-220. https://openscholarship.wustl.edu/cgi/viewcontent.cgi?article=1399&context=law_lawreview.

- King, Gary, Robert Keohane, and Sidney Verba. 1994. *Designing Social Inquiry*. Princeton: Princeton University Press.
- Kuhn, Thomas. 1996. *The Structure of Scientific Revolutions*. Chicago: University of Chicago Press.
- Kushner, David. 2019. *The Player's Ball*. New York: Simon and Schuster.
- Larson, Jennifer, Jonathan Ronen, Joshua Tucker, and Jonathan Nagler. 2019. "Social Networks and Protest Participation: Evidence from 130 Million Twitter Users." *American Journal of Political Science* 690-705.
- Latour, Bruno. 1986. *Laboratory Life*. Princeton: Princeton University Press.
- . 1992. "Where Are the Missing Masses? The Sociology of a Few Mundane Artifacts." In *Shaping Technology/Building Society*, edited by Wiebe Bijker and John Law, 225-258. Cambridge: MIT Press.
- . 2000. *Pandora's Hope*. Cambridge: Harvard University Press.
- . 2004. *Politics of Nature*. Cambridge: Harvard University Press.
- . 2005. *Reassembling the Social*. Oxford: Oxford University Press.
- . 2014. On Some of the Affects of Capitalism. Lecture, Copenhagen: Royal Academy, Copenhagen.
- Longman, Martin. 2018. "Owning the Libs" Has Always Been With Us." *Washington Monthly*, July 26: Online.
- Mackenzie, Charles. 1980. *Coded Character Sets, History, and Development*. Reading: Addison-Wesley Publishing Company.
- Malm, Andreas. 2020. *The Progress of This Storm*. London: Verso.
- Martin, Michael. 2018. "For the First Time, Census Bureau Data Show Impact of Geography, Income on Broadband Internet Access." *The United States Census Bureau*. December 6. Accessed July 17, 2020.
<https://www.census.gov/library/stories/2018/12/rural-and-lower-income-counties-lag-nation-internet-subscription.html#:~:text=Nationally%2C%2078%20percent%20of%20households,national%20average%20by%2013%20points.&text=throughout%20the%20country.-,Nationally>.
- Marx, Karl. 1972. "Marx on the History of His Opinions." In *The Marx-Engels Reader*, by Karl Marx and Friedrich Engels, 3-11. New York: WW Norton and Company.
- Marx, Karl. 1978. "The German Ideology." In *The Marx-Engels Reader*, by Karl Marx and Friedrich Engels, 174-5. New York: WW Norton and Company.

- McGill, Andrew. 2017. *A Bot That Can Tell When It's Really Donald Trump Who's Tweeting*. March 28. Accessed September 7, 2020. <https://www.theatlantic.com/politics/archive/2017/03/a-bot-that-detects-when-donald-trump-is-tweeting/521127/>.
- Miami Dade County. 2019. *Home Rule Charter*. November 5. Accessed November 18, 2021. <https://www.miamidade.gov/charter/home.asp>.
- Microsoft. 2020. "Facts About Microsoft." *Microsoft.com*. March 30. Accessed July 14, 2020. <https://news.microsoft.com/facts-about-microsoft/>.
- Moschovitis, Christos, Hillary Poole, Tami Schuyler, and Theresa Senft. 1999. *History of the Internet: A Chronology, 1843 to the Present*. Santa Barbara: ABC-CLIO.
- Murphy, Brian. 2015. "Dark Tourism and the Michelin World War 1 Battlefield Guides." *Writing The War*. <https://arrow.tudublin.ie/cgi/viewcontent.cgi?article=1041&context=jofis>.
- Murugesan, San. 2007. "Understanding Web 2.0." *IT Professional* 31-41.
- Nelson, Brian. 1996. *Western Political Thought from Socrates to the Age of Ideology*. Upper Saddle River: Prentice Hall.
- Nesson, Charles, and David Marglin. 1996. "The Day the Internet Met the First Amendment: Time and the Communications Decency Act." *Harvard Journal of Law and Technology* 113-136.
- Plant, Sadie. 1995. "The Future Looms: Weaving Women and Cybernetics." *Body and Society* 45-64.
- Plato. 1993. *Republic*. Oxford: Oxford University Press.
- Preston-Werner, Tom. n.d. "Semantic Versioning 2.0.0." Accessed July 8, 2020. <https://semver.org/>.
- Randell, Brian. 1982. *The Origins of Digital Computers*. New York: Springer.
- Rawls, John. 2005. *Political Liberalism*. Chicago: Columbia University Press.
- Reading, Don. 1973. "New Deal Activity and the States, 1933 to 1939." *The Journal of Economic History* 792-810.
- Rollins, William. 1995. "Whose Landscape? Technology, Fascism, and Environmentalism on the National Socialist Autobahn." *Annals of the Association of American Geographers* 454-520.
- Rose, Mark, and Raymond Mohl. 2012. *Interstate*. Knoxville: The University of Tennessee Press.
- Sartre, Jean-Paul. 1984. *Being and Nothingness*. New York: Washington Square Press.

- Sawhney, Harmeet. 1996. "Information Superhighway: Metaphors as Midwives." *Media, Culture, and Society* 291-314.
- Sheldrick, George. 2008. "A short history of SHELX." *Acta Crystallographica Section A Foundations and Advances* 112-122.
- Silvestro, Brian. 2020. "Every Known Modern Cannonball Run Cross Country Record." *Road and Track*, December 25. <https://www.roadandtrack.com/car-culture/g35016829/cannonball-run-cross-country-records/>.
- Simon, Leslie David, Javier Corrales, and Donald Wolfenberger . 2002. *Democracy and the Internet*. Washington DC: The Woodrow Wilson Center Press.
- Smith, Andrew. 2012. *Totally Wired: The Rise and Fall of Josh Harris and the Great Dotcom Swindle*. New York: Black Cat.
- Smith, Anthony. 1982. "Robert Nozick's Critique of Marxian Economics." *Social Theory and Practice* 165-188.
- Smith, John, and Stephen Weiss. 1988. "Hypertext." *Communications of the ACM*, July: 816-819.
- Soderberg, Johan, and Adam Netzen. 2010. "When All That is Theory Melts Into (Hot) Air: Contrasts and Parallels Between Actor Network Theory, Autonomist Marxism, and open Marxism." *Ephemera* 95-118.
- Sunstein, Cass. 2007. *Republic.com 2.0*. Princeton: Princeton University Press.
- Taylor, Astra. 2014. *The People's Platform*. New York: Metropolitan Books.
- The ACLU. 2017. "Reno V. ALCU Challenge to Censorship Provisions in the Communications Decency Act." *ACLU*. June 20. Accessed October 28, 2021. <https://www.aclu.org/cases/reno-v-aclu-challenge-censorship-provisions-communications-decency-act>.
- The Internet Corporation for Assigned Names and Numbers. 1991. *Network Information Services Manager(s) for NSFNET and the NREN: INTERNIC Registration Services*. Government Contract, Washington DC: ICANN. <http://archive.icann.org/en/nsi/coopagmt-01jan93.htm>.
- The Michelin Tire Company. n.d. "History of the Michelin Guide." *Michelin Guide*. Accessed November 18, 2021. <https://guide.michelin.com/th/en/history-of-the-michelin-guide-th>.
- The United States Census Bureau. 2017. "The Digital Divide: Percentage of Households by Broadband Internet Subscription, Computer Type, Race and Hispanic Origin." *The United States Census Bureau*. September 11. Accessed July 17, 2020. <https://www.census.gov/library/visualizations/2017/comm/internet.html>.

- The World Bank. 2020. "Individuals using the Internet (% of population)." *International Telecommunication Union, World Telecommunication/ICT Development Report and database*. Accessed July 17, 2020.
https://data.worldbank.org/indicator/IT.NET.USER.ZS?end=2018&most_recent_value_desc=true&start=2018&type=shaded&view=map.
- TV History. n.d. "Number of TV Households in America 1950-1978." *The American Century*. Accessed October 15, 2021.
<https://americancentury.omeka.wlu.edu/items/show/136>.
- Twitter. 2021. "Permanent suspension of @realDonaldTrump." *Twitter*. January 8. Accessed September 8, 2021.
https://blog.twitter.com/en_us/topics/company/2020/suspension.
- Vacarri, Cristian. 2013. *Digital Politics in Western Democracies*. Baltimore: Johns Hopkins University Press.
- Van Vleck, Tom. 2015. "The IBM 7094 and CTSS." *Multicians.org*. March 15. Accessed July 22, 2020. <https://multicians.org/thvv/7094.html>.
1999. *The Matrix*. Directed by Lily Wachowski and Lana Wachowski.
- Walsh, Charlotte. 2011. "Drugs, the Internet and Change." *Journal of Psychoactive Drugs* 55-63.
- Wedeles, Lauren. 1965. "Prof. Nelson Analyzes PRIDE." *Vassar Miscellany News*, February 3: 3, 4 .
https://web.archive.org/web/20130510074431/http://faculty.vassar.edu/mijoyce/MiscNews_Feb65.html.
- Winter, Caroline. 2019. "Touring the Battlefields of the Somme with the Michelin and Somme Tourisme Guidebooks." In *The Palgrave Handbook of Artistic and Cultural Responses to War since 1914*, by Martin Kerby, Margaret Baguley, and Janet McDonald, 99-115. London: Palgrave Macmillan.
- Zizek, Slavoj. 1999. "The Matrix, or The Two Sides of Perversion." *Inside the Matrix: International Symposium at the Center for Art and Media, Karlsruhe*. Karlsruhe. Online. <https://www.lacan.com/zizek-matrix.htm>.

Chapter Four: The Feudalized Internet: Corporate Hegemony on the Contemporary Internet

Introduction

In the previous chapter, I made the case for studying the history of the internet in terms of its creation as an actor-network controlled by the state, which later ceded control to corporate actors. I followed the history of the predecessors of the internet, the ARPANET, MILNET, and NSFNET, as the state and corporate actors co-created them. Within the context of the mid to late 20th-century development of those networks, I argue, the state took an early role in using those networks to reify and solidify state power, but, as NSFNET commercialized in the early 1990s, the stage was set for a shift in the balance of digital power that could potentially empower corporate actors through the now-commercial internet: Because corporations had an earlier role in the internet than people outside of the relevant corporations, universities, and government agencies, those corporations began to set programs of action into digital platforms that continue to affect users today.

With the relative retreat of the state from the commercial internet, there, too, was an opportunity for ordinary people, users who bought or accessed internet subscriptions through computer terminals enabled with graphical user interfaces, to participate in digital life as well. The introduction of the commercially available internet made room for some fascinating human stories which exemplify broader trends of digital power that suggest that the internet may not live up to the democratic ideals I outlined in the second chapter.

This chapter takes up a critical history of the internet from its commercialization in 1991 until roughly the present. In walking through that two-decade period, I make the

case that on the early commercialized internet, corporate actors tried out new strategies to expand their influence, power, and profits on the internet. With the dotcom crash of 1999 and 2000, however, many of these companies failed, as did websites that existed outside of corporate frameworks. After the crash, I argue here, some corporate actors massively expanded their power in the Web 2.0 era, and, in so doing, re-constituted the relationship between themselves and internet users in such a way that treats internet users as both consumers of goods as services as well as producers of data. This relationship between corporate actors that own massive swaths of the digital landscape and users who both produce and consume on corporate platforms, I make the case, represents a feudalization of digital power that disempowers persons from acting outside of corporate platforms online, which poses a threat to the possibility of empowering, democratic digital political life between free and equal persons. This feudalized structure leaves most users with little choice but to engage with the internet through the platforms in which those users will encounter corporate programs of actions.

Of Hermits and Con-Artists: Two Vignettes from the Early Internet

Taking up one of those human stories, focusing on the period just after the opening of the internet for commercial use, highlights some of the dynamics that have come to influence contemporary online political life. Josh Harris was part of the first generation to grow up concurrently with the internet. When he was born in 1960, ARPANET had not yet been created.³²⁵ Harris focused his early career on the technology of his day, and he became a moderately successful communications consultant for the

³²⁵ Smith, Andrew. 2012. *Totally Wired: The Rise and Fall of Josh Harris and the Great Dotcom Swindle*. New York: Black Cat.

radio and television broadcasting industry. Things got a little more interesting in 1993 when Harris founded Pseudo, an internet video and radio broadcasting company on the newly commercialized internet. By the end of the decade, Harris was throwing lavish office parties, engaging in postmodern performance art pieces, and attracting large sums of investment money from venture capitalists, all to the optimistic cheers of media outlets.³²⁶ So far, the story was not unusual for the mid- to late-1990s: companies registering sites with the domain suffix “.com” were popping up, being sold, and their often young and inexperienced executives were making fast millions. And they celebrated those millions with gusto. Socially, this period added to, and complicated, the myth of the American entrepreneur, with Harris and others like him working long hours, taking large financial risks, and, in some cases, becoming, at least temporarily wealthy.³²⁷

The name for this period era, the dot-com era, came from the suffix, or domain, of the websites: “.com”³²⁸ was the domain that companies or individuals could claim for commercial (or social) purposes on the web.³²⁹ Early on, these could be claimed for a small fee so long as the registrant was willing to pay Network Solutions, a contractor for the National Science Foundation that was responsible for administering the domain name

³²⁶ Ibid. See also, Bunn, Austin. 1998. "Free for All." *The Village Voice*, January 20: <https://www.villagevoice.com/1998/01/20/free-for-all/>. Additionally, see Katz, Richard. 1999. "Pseudo Programs Interacts With \$14 Mil Capital Infusion." *Variety*, June 17: <https://variety.com/1999/biz/news/pseudo-programs-interacts-with-14-mil-capital-infusion-1117503201/>.

³²⁷ Reich, Robert. 2005. "The Lost Art of Democratic Narrative." *The New Republic*, March 21.

³²⁸ Com, in this instance, is shorthand for commercial.

³²⁹ Network Working Group. 1984. Domain Requirements. October. Accessed December 15, 2020. <https://tools.ietf.org/html/rfc920#page-2>.

system.³³⁰ This naming and payment scheme not only gave the name to the era of the present discussion but also provided for the opportunity to buy, sell and sue over these domain names. Harris and others founded digital companies with little startup money. Dotcom businesses often paid their staff in stock options; this allowed these businesses to operate on shoestring budgets, but it made things especially risky for workers. Just under half of tech industry employees in New York in 1999, for example, were paid at least in part in stock options, and many worked under “nonstandard” arrangements such as being considered contractors, freelancers, or part-time: these arrangements left workers paying for much of their training and taking on a great deal of economic risk to participate in the internet in its early commercialized period.³³¹ Furthermore, this system sometimes either prevented employees from selling the stock for a set period or left them with massive tax bills when they did.³³² The potential upside was that, were the dotcom enterprises sold either privately or publicly, those previously worthless stock options could be sold for real cash. Before and after such sales, investors kept companies like Harris’ afloat with venture capital: the investors expected that these new internet-based companies would not turn a profit and would be rather expensive in terms of their quarterly losses.³³³

The promises of golden egg-producing geese were so compelling that many investors were willing to sign agreements that prevented them from selling their shares

³³⁰ CNET. 2002. "NSI Makes Timely Change to Domain Payment Policy." CNET, Jan 2: <https://www.cnet.com/news/nsi-makes-timely-change-to-domain-payment-policy/>.

³³¹ Neff, Gina. 2012. *Venture Labor*. Cambridge: The MIT Press. Pgs. 43-46.

³³² Weston, Lizz Pulliam. 2000. "Stock Options Add Wrinkle for Many Dot-Com Employees." *The Los Angeles Times*, December 22. <https://www.latimes.com/archives/la-xpm-2000-dec-22-fi-3328-story.html>.

³³³ Cochran, James, Ali Darrat, and Khaled Elkhail. 2006. "On the Bankruptcy of Internet Companies: An Empirical Inquiry." *Journal of Business Research* 1193-2000.

for a set period.³³⁴ Like Howard Hughes and his Spruce Goose, businesses built on soaring narratives sometimes fail to take flight. After several years of failing to secure funding, Harris' corporation filed for bankruptcy in 2001.³³⁵ After the demise of his company, Harris moved nearly as far as a person could get from Silicon Valley and bought a small compound in Ethiopia in 2007.³³⁶ There, he seemed to make his life into one of his performance art projects, spending his days and nights musing mostly to himself, or to biographers who came to see what had become of one of the first internet millionaires. Who he had become was something of a parody of Martin Sheen's character in *Apocalypse Now*: it was only after losing his newfound millions that Josh felt the urge to disconnect utterly from the world he knew, to descend into a fractured version of his former self, sweating in a dingy room far from home.³³⁷ Ethiopia was the perfect place for a failed internet tycoon to run away from the web he had helped to spin: less than half a percent of the population of Ethiopia used the internet when he arrived in 2007.³³⁸

While Harris has since returned from his self-imposed exile, to help produce a documentary about himself,³³⁹ his story shows us several important dynamics in the

³³⁴ Teeter, Preston, and Jorgen Sandberg. 2017. "Cracking the Enigma of Asset Bubbles with Narratives." *Strategic Organization* 91-99.

³³⁵ Salkin, Allen. 2009. "For Him, The Web Was No Safety Net." *The New York Times*, August 28: <https://www.nytimes.com/2009/08/30/fashion/30harris.html?ref=fashion&pagewanted=all>.

³³⁶ *Ibid.*

³³⁷ Smith 2012.

³³⁸ The World Bank. n.d. "Individuals using the Internet (% of population) - Ethiopia." The World Bank. Accessed December 7, 2020. <https://data.worldbank.org/indicator/IT.NET.USER.ZS?locations=ET>.

³³⁹ 2009. *We Live in Public*. Directed by Ondi Timoner. Performed by Josh Harris. The film focuses on "artist, futurist, and visionary" Harris, including a six-month stint he spent recreating *The Truman Show* with his (very soon to be ex) girlfriend.

contemporary internet. First, and one that must remain in the foreground is that the dot-com era was one in which corporate actors grew quickly in size and influence on the web. The second is that this era resulted, as in the case of Harris' company, in crashes that would, I argue in the coming chapters, mark the beginnings of feudalization in the contemporary web. As Matthew Crain notes, many investors bought into or sold many dot-com companies on the promise of a new idea with some future profit potential.³⁴⁰ As if taking a note directly from Baudrillard, there was no longer any need for there to be a real company. Investors were more than happy to buy and sell companies based wholly on promises of future digital realities. This speculative investment in digital companies, aside from producing the fascinating personal stories that I have so far covered also generated a bubble in the economy. Stories of personal interest captivate people, whether those people are readers of fiction, day traders, or managers of venture capital. In the dot-com era, the stories sold a massive number of stocks based on little actual ability to produce the promised goods and services.

Economists such as Crain, writing in the aftermath of the soon-coming crash, found that the trading on the mere stories of companies showed that investors of all kinds were trading on feeling rather than reason: without a history of providing goods and services upon which to base decisions, investors bought into dotcom companies based on the information they did have, which consisted mostly of the ideas and presentation of the owners and employees of the dotcom companies, as well as generally positive hopes for a newly commercialized internet's capability as a new frontier of consumer commerce. The

³⁴⁰ Crain, Matthew. 2014. "Financial Markets and Online Investing: Reevaluating the Dotcom Investment Bubble." *Information, Communication, and Society* 17 (3): 371-384.

dotcom crash in 1999 and early 2000 crushed those feeling, as well as many dotcom companies, resulting in dramatic changes to the online landscape, forming the flows of power and information on the contemporary internet.

Beginnings of Feudalization of Digital Spaces

The previous chapter's history of the early internet and its precursors, which centered on the role of the state in its creation of the ARPANET, ended in the early 1990s with the opening of the internet for commercial use. In that period of digital history, the state, through federal funding constraints, was the dominant actor in the actor-network, as the government limited access to the network to those engaged in the state's research projects. These early funding restraints, in light of the adapted-ANT analysis I proposed in the last chapter, were programs of action that shielded most people from internet access at all. With the opening of the internet to commercialization, however, corporations had the opportunity to rewrite those programs in ways that would begin to affect the agency of internet users as people came online beginning in the early 1990s.

Here, I take up more contemporary internet history to make the case that, though there were attempts to create spaces online aimed at building solidarity and mutual empowerment to the end of more democratic participation on the part of everyday people, corporate actors have, in effect, feudalized the internet, becoming the dominant set of actors in the contemporary internet. I focus on the concept of feudalization in digital power dynamics for two main reasons. The first is that in the vein of the hopes for digital democracy that I outlined in chapter two, the ability for persons to communicate with one another through the internet makes it possible for people to deliberate with one another to empowering, democratic ends. It is possible, I argue, for participants in digital spaces to

work together towards something like Habermas' ideal speech situation. Keeping this optimistic potential in mind, I make the case here that, giving a second reason for focusing on feudalization, digital power in the contemporary era more closely resembles that of a Habermasian take on feudal power. As Mark Warren explains in his analysis of Habermas' conception of power under both feudalism and liberal public spaces:

If feudal politics meant legitimation by authority, the principles of liberal public space are different: Legitimation stems not from the authority of persons, but from the exercise of power have been put to the test of public discussion.³⁴¹

Taking Habermasian thinking into the context of the internet, if the "authority of persons" that marked feudalism becomes, authority of corporations, then the exercise of corporate power online may well foreclose democratic possibilities online if the platforms over which corporations exercise their authority do not privilege deliberative norms. Further, Warren notes that to reach the ideal speech situation in interactive contexts, participants must commit to a shared norm of persuasion through argumentation: to have a public in the Habermasian sense, we must enter a space as participants who seek to persuade and are open to persuasion by the speech acts of others, not by some other, strategic ideal, such as profit.³⁴²

If reaching the ideal speech situation requires that persons deliberate with one another without pre-determined motivations and strategies, then an internet that has pre-

³⁴¹ Warren, Mark. 1989. "Liberal Constitutionalism as Ideology: Marx and Habermas." *Political Theory* 519.

³⁴² *Ibid*,520.

set motivations such as corporate profits that are set by empowered corporate actors cannot be unproblematically considered a public space. This skepticism, which I develop in this chapter, rests on the historical observation that as the internet became commercialized in the mid-1990s into the present, corporations took the opportunity to carve out digital spaces in which those corporate actors set the terms rather than persons who would seek Habermasian norms for ideal democratic publics. I am not alone in this skepticism: Paul Grosswiler, for instance, argued in 2001 that the media ecology that was emerging at the time would, at best, present manufactured and manipulated public spheres that may well dampen the emancipatory potential of changing communications technologies.³⁴³

This feudalization, which occurred in the aftermath of the dotcom crash, has left us with an internet in which everyday people are being transformed, usually unwittingly, into users who are the key labor force of modern digital platforms. These platforms not only affect people outside of the corporate world as they become users but, increasingly, the physical development and deployment of the internet serves to reinforce existing hierarchies of economic power while negatively impacting those in parts of the world without much, if any, access to the internet. On the contemporary internet, users are affected by programs of action implemented by corporations which conscript the labor of users to generate data and content to generate profits for the corporations. This conscription of users as instruments of profit is one of several features of the digital power dynamic that pose the contemporary, feudalized internet in stark contrast to an

³⁴³ Grosswiler, Paul. 2001. "Jürgen Habermas: Media Ecologist?" Proceedings of the Media Ecology Association, 22-31.

ideal Habermasian public, in which free individuals should engage in communicative action. Further, I make the case that the current, feudalized internet is an actor-network configured such that it is difficult, but possible, to work outside of the platforms controlled by corporate actors, meaning that corporations have an effective hegemony of the current internet.

This hegemony imperils the possibility of online spaces of empowerment to democratic ends, though it has not, in its feudalization, completely paved over such spaces. As Antonino Gramsci formulated in his critiques of Italian fascism in the 20th century, hegemony in the contemporary period involves some set of actors setting the terms for social and economic activity without consensus from within civil society.³⁴⁴ In this case, the backing away of the state from the internet in 1991 allowed corporate actors to set the terms for economic and social life online: persons entered into that space as internet subscribers, users, and, eventually, producers of data. The performing of subscribing, using, consuming, and producing data is in line with programs of action, set by corporate actors that designed digital platforms, which would establish an asymmetry in power that has made Web 2.0 a capitalist space that favors corporate actors over other sets of actors and activities that earn profits over other sorts of ends.

The opening of the internet for commercial purposes, necessary to bring the web to people's homes, ushered in a new dynamic online. In the mid-1990s, with the help of graphics-based browsers such as Mosaic, people who were not experts in any coding

³⁴⁴ Bates, Thomas. 1975. "Gramsci and the Theory of Hegemony." *Journal of The History of Ideas* 351-366.

language began using the internet more readily.³⁴⁵ As Mosaic, and later Netscape, America Online, and other browsers proved, people were more than willing to use the internet for all these things and more but lacked the technical skills to design and implement the necessary digital platforms to facilitate those activities on their own.

Naming the Internet I: The World Wide Web

So far in this work, the network that would eventually become the internet has held several names such as ARPANET, The Web, the internet, Web 1.0, 2.0, and so on. While all of these describe the internet, most of them have fallen out of common usage with “the internet” and “the worldwide web” remaining in common English language usage. With all these names in mind, it seems prudent to spend a moment on the role of naming in the construction of this network. For much of the recent decade, internet users, and vitally, companies, used Web 2.0 as the moniker for this actor-network. Web 2.0 does not have a specific launch date in the same sense that, for instance, a sequel to a film containing the n two in the name will have a release date. There was no official announcement as there is no authoritative body to officially announce such things for the web. Instead, this new name for the web was a popular designation adopted in discourse retroactively to describe the post-dot-com crash internet.³⁴⁶ Web 2.0 was not a technical designation but instead was a marketing decision made by the companies that survived the bursting of the .com bubble of the late 1990s and early 2000s in an attempt to distance themselves not from the technologies of that era (though later, vague laundry lists of

³⁴⁵ Vetter, RJ, C Spell, and C Ward. 1994. "Mosaic and the World Wide Web." *Computer* 49-57.

³⁴⁶ Preston-Werner, Tom. n.d. "Semantic Versioning 2.0.0." Accessed July 8, 2020. <https://semver.org/>.

features were published by people trying to understand the 2.0 designation, often resulting in lists of corporations³⁴⁷), which they were happy to keep profiting from and innovating on, but from the practices that nearly derailed the project of the internet as it was just beginning to reach more and more American homes. In the aftermath of the dot-com crash, I develop in this chapter, that the landscape of digital power would shift, favoring a consolidated set of corporate actors who view and treat internet users as both consumers and producers of data. This powder dynamic privileges corporate actors' search for ever-increasing profits over the potentially empowering and democratizing communications capabilities presented on an internet that is accessible to large swathes of the population.

In naming the early internet an information superhighway, an image of 20th-century highway projects comes to mind in terms of historical framing. To that end, some of the things that have happened in web history come as no surprise. The internet as it came about in the aftermath of the opening of ARPANET was an example of corporations making informational infrastructure to fit their ends. The early web³⁴⁸ was a telling anew of the story of the attempts of the German bourgeoisie to make their interests into the national aesthetic. Similarly, with the paving over of the web with the revisionist history of the 2.0 discourse, as I develop later in this chapter, many of the more community-based sites, such as those run by and catered to otherwise underrepresented and marginalized groups are gone; corporate actors' commercialized platforms replaced them. Names also make claims

about the thing named.³⁴⁹ Naming the internet the World Wide Web, one might come to expect global access to it. For access to be global, in a democratic fashion as we may hope, we would expect this access to be equal in all places for all people. The empirical reality of the internet, on the other hand, does not paint that same picture. To analyze the claim that the web ought to be, indeed, worldwide, let us look at some of the global-level data published by the World Bank.

For the sake of easy reference, I present from their data set the top and bottom four countries in terms of internet use as a percentage of the population.³⁵⁰ In this small snapshot, the claim that the internet is worldwide in the sense that it is accessible and usable everywhere is patently false. Instead, as the World Bank data confirm, the ubiquity of the internet is much more the case in some countries as opposed to others. In this case, the massive differential in the usage of the internet recreates the same patterns in GDP per capita.³⁵¹

Discussing internet access in and of itself may be putting the cart ever so slightly before the horse in terms of

Income Group of Country	Percent of Population with Access to Electricity in 2018
High	100
Upper Middle	99.4
Middle	92.8
Low and Middle	87.6
Lower Middle	86.3
Low	41.9

Table 1: Percentage of Population with Access to Electricity by Income Group in 2018

³⁴⁹ Sawhney 1996.

³⁵⁰ Data for Figure: The World Bank. 2020. "Individuals using the Internet (% of population)." International Telecommunication Union, World Telecommunication/ICT Development Report, and database. Accessed July 17, 2020. https://data.worldbank.org/indicator/IT.NET.USER.ZS?end=2018&most_recent_value_desc=true&start=2018&type=shaded&view=map.

³⁵¹ The World Bank. 2020. "GDP per capita (current US\$)." World Bank national accounts data, and OECD National Accounts data files. Accessed July 17, 2020. <https://data.worldbank.org/indicator/NY.GDP.PCAP.CD>.

drawing an empirical picture of the distribution of the internet. Antecedent to any internet access at all is access to electricity. As the World Bank Data shows clearly in the snapshot that I have provided here, access to the lifeblood of any computer is far from equal in its distribution (See Table 1).³⁵² Without access to electricity, internet access is all but impossible, excluding large swaths of the population in less electrified nations from participating in digital life on any terms. Viewing the World Bank data in terms of the income groupings of the countries (grouped by GNI per capita), the lines along which

this exclusion affects people is clear: the poorer a country's population, the less likely it is to have access to electricity. Before one can even begin to discuss the internet in terms of digital power online, many poor folks do not participate in

Country	Percent of Population Using the Internet in 2019
Eritrea	1
Somalia	2
Burundi	3
Guinea-Bissau	4
Central African Republic	4
Iceland	99
United Arab Emirates	99
Kuwait	100
Qatar	100
Bahrain	100

Table 2: Percentage of the Population Using the Internet in 2019, Highest and Lowest Countries

online life as they do not have the electricity that is a prerequisite for participation. This de-facto disempowerment sets up the empirical foundations of the web tilted sharply in

³⁵² It is also worth noting that nearly half of countries have 100% electricity access.

the favor of richer nations and their residents. The countries ranked in the lower tiers of income in the World Bank measurements, tend to be in Africa and Asia.³⁵³

When it comes to internet access itself, the World Bank data indicates, economic disparities continue to drive disparities in internet access (See Table 2).³⁵⁴ Some nations, such as wealthy Bahrain, have nearly every one of its residents able to access the internet, while poor nations, such as Somalia, have nearly none of their citizens online. Even with these two measures, it is quickly becoming clear that the balance of power online, at least

Income Group of Country	Percent of Population Using the Internet in 2019
High	86
Upper Middle	58
Middle	47
Low and Middle	44
Lower Middle	36
Low	16

Table 3: Percentage of the Population Using the Internet in 2019 by Country Income Group

understood as being able to be a participant in digital life at all, runs a course familiar to critics of capitalism. Nations considered “developing” or on the “periphery” find themselves offline, and, thus, technologically three decades behind the “core” or “developed” nations. Presenting, again, the top and bottom five for the sake of perspective, there is a major divide in terms of the ability of persons to access the internet at all (See Table 3).³⁵⁵

³⁵³ The World Bank. 2021. "World Bank Country and Lending Groups." The World Bank. Accessed February 3, 2021. <https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups>.

³⁵⁴ The World Bank. 2019. "Individuals using the Internet (% of population) - Ethiopia." The World Bank. Accessed December 7, 2020.

³⁵⁵ Ibid.

Taking a broader look at the World Bank's data, the pattern in electricity access mirrors the percentage of populations using the internet. Richer countries have higher rates of internet penetration than do poorer ones, and many of the less internet-connected countries cluster in Africa and Asia. Rather than being omnipresent then, the internet is substantially more present in some places than others in terms of being able to access it at all. Whether this access is to empowering or disempowering means is the key matter of consideration in this work, but the physical distribution of the internet is currently such that some persons around the world are much more able to connect than others. This digital inequality in terms of access fundamentally disempowers those excluded from the internet by the mere fact of their birth, setting them up to enter the digital age much later than others. By the time poorer nations are more fully online, the pathways of power on the internet may well be more entrenched than they already are. At the very least, lack of connectivity excludes people without internet access from participating in online life.

Once connected to the internet, one of the key factors to digital participation is the speed of one's connection. In the early days of the internet, when most sites were text-based, slower connections were adequate, but as the internet has become more complex and graphics-rich over time, the ability to connect to a high-speed connection makes participation online much more possible. The World Bank's data speaks to this as well: the number of broadband connections in each country is one, albeit limited, way of ascertaining the potential internet speeds available to people.

Keeping with the trend that the data concerning electrical and general internet access begins to establish, internet speed tends to favor wealthier countries: Higher-income countries have proportionally more broadband connections than do lower-income

countries, and the latter are mostly in Africa and Asia. Even were broadband more widely available in poorer, and more rural areas, which is another line along which digital inequalities persist, it is not shocking that broadband connections are less common in poorer areas.³⁵⁶ The internet, even with Web 2.0's model of platforms that are free to use, internet access is typically a paid service that many simply cannot afford. In these poorer areas of the globe, mobile broadband is an increasingly affordable and popular solution that connects areas lacking physical, wired connections.³⁵⁷

Taken together, the empirical data suggest that the internet is much more available, faster, and more affordable in countries that are already wealthy. This raises some concerns in terms of the ability of the internet to potentially foster spaces of democratic deliberation that are inclusive of poor persons. In the Habermasian formulation of the ideal speech situation, which I hold to be a normative benchmark in this work, inclusion is the first requirement for ideal speech.³⁵⁸ Without the ability to be part of the internet as an actor-network, it is unlikely that these people, representing a large portion of humanity, will help to determine the practices and norms of the internet. People without internet access, though not directly participating as users in a feudalized internet, face disempowerment through lack of access. A praxis of digital deliberative democracy, then, cannot ignore the issue of access.

³⁵⁶ OECD. 2018. Bridging the Rural Digital Divide. OECD Digital Economy Paper, OECD Publishing. <https://www.oecd-ilibrary.org/docserver/852bd3b9-en.pdf?expires=1612809683&id=id&accname=guest&checksum=B2001CE803665AA70EAB3E7178AE6667>.

³⁵⁷ International Telecommunications Union. 2017. ICT Facts and Figures 2017. Geneva: International Telecommunications Union.

³⁵⁸ Young, Marion Iris. 2000. *Inclusion and Democracy*. Oxford: Oxford University Press.

Lacking access to the internet means that these people are, to understand the structures of power online, outside of the actor-network. At best, the internet's distribution simply excludes these people from participating on the internet and otherwise leaves their lives untouched. But this is empirically not the case. The internet, and accompanying physical devices, feed the growing problem of electronic waste, or e-waste. E-waste distribution affects the world unequally, with a heavier presence in poorer countries: poorer folks are more likely to live and work in toxic dumps full of discarded electronic devices than those in rich countries.³⁵⁹ Most electronics also depend on rare-earth metals, the mining of which is both environmentally destructive, and concentrated in poorer countries.³⁶⁰ Exclusion from the internet does not mean freedom from its consequences: many of those without internet access experience Web 2.0 in terms of poisoned water, food, and air. They are, in both their exclusion from internet access and the danger posed to them by e-waste, disempowered by the internet. Simply lacking internet access in and of itself does not necessarily have this effect. For example, were a person with a job in a wealthy country to refuse to use the internet, they would not face the same consequences as a person without internet access in a poor country. The latter person, due to both the physical layout of the web and the flows of e-waste, would be a victim of the internet in ways that would damage their health and make offline life more difficult than were the internet not to exist at all. Differentials in the economic power of states and within those states open certain populations to vulnerabilities created by how

³⁵⁹ Robinson, Brett. 2009. "E-waste: An Assessment of Global Production and Environmental Impacts." *Science of the Total Environment* 183-191.

³⁶⁰ Ali, Saleem. 2014. "Social and Environmental Impact of the Rare Earth Industries." *Resources* 123-134.

the internet has thus developed: the wealthier parts of the world benefit from faster internet at cheaper prices, whereas the poorer parts of the world have a harder time getting slower internet, which costs more in both terms of cash and mountains of e-waste. At the regional level, the story of hierarchical access to the internet continues. While it varies by region, no matter where you may find yourself in the physical world, women are less likely to use the internet than men: I take up several explanations for the gender disparity in internet use following chapter.³⁶¹ Looking at the United States as an example of a national-level network, other hierarchical trends are present. Poorer and more rural Americans are less likely to have internet access than richer, urban Americans.³⁶² Additionally, many nonwhite groups tend to have lower rates of internet access than their white counterparts.³⁶³ Access to the internet then is not equal worldwide: hierarchies of class and gender impact people's ability to get online in the first place. Here, ANT deployed alone would only tell part of the story: acknowledging, as materialist histories of capitalist corporations do, that patterns of inequality repeat and are structural to corporations offline and online begins to add more topography to an ANT-inspired mapping that accounts for the larger patterns of capitalist effects.

³⁶¹ Iglesias, Carlos. 2020. "The gender gap in internet access: using a women-centered method." World Wide Web Foundation. March 10. Accessed July 17, 2020. <https://webfoundation.org/2020/03/the-gender-gap-in-internet-access-using-a-women-centred-method/>.

³⁶² Martin, Michael. 2018. "For the First Time, Census Bureau Data Show Impact of Geography, Income on Broadband Internet Access." The United States Census Bureau. December 6. Accessed July 17, 2020. <https://www.census.gov/library/stories/2018/12/rural-and-lower-income-counties-lag-nation-internet-subscription.html#:~:text=Nationally%2C%2078%20percent%20of%20households,national%20average%20by%2013%20points.&text=throughout%20the%20country.-,Nationally>.

³⁶³ The United States Census Bureau. 2017. "The Digital Divide: Percentage of Households by Broadband Internet Subscription, Computer Type, Race and Hispanic Origin." The United States Census Bureau. September 11. Accessed July 17, 2020. <https://www.census.gov/library/visualizations/2017/comm/internet.html>.

Naming the Internet II: Web 2.0

For much of the recent decade, we have referred to this internet as Web 2.0. There was no official announcement as there is no authoritative body to officially announce such things for the web. In the realm of software development, a 2.0 version refers to a new product or piece of software than the first version, 1.0. Decimal places indicate patches, updates, and similar incremental changes in software. Version 1 of a given piece of software, then, would be the initial release, 1.1 would represent the same software with an update, and 2.0 would indicate a wholly new version of a piece of software that is not compatible with previous versions.³⁶⁴ In recent software design thinking, moving from one version number to another is typically done on the level of the software developer, indicating to users of the software and other clients that there were new, likely incompatible features in the newest version of the software when compared to the previous version, informing clients and users that they may need to carefully consider an upgrade or change behaviors to better fit the newly designed software.³⁶⁵ This was, for example, the nomenclature used to designate early versions of the Windows operating system.³⁶⁶ Web 2.0 was not a technical designation but instead a marketing decision made by the companies that survived the bursting of the .com bubble of the late 1990s and early 2000s in an attempt to carve out new practices to expand the profits and survivability of the remaining tech companies. Though the term had been in limited use

³⁶⁴ Preston-Werner, Tom. n.d. "Semantic Versioning 2.0.0." Accessed July 8, 2020. <https://semver.org/>.

³⁶⁵ Lam, Patrick, Jens Dietrich, and David Pearce. 2008. "Putting the Semantics into Semantic Versioning." arXiv. <https://arxiv.org/pdf/2008.07069.pdf>.

³⁶⁶ Calore, Michael. 2009. "A History of Microsoft Windows." *Wired*, December 10. <https://www.wired.com/2008/12/wiredphotos31/>.

since 1999,³⁶⁷ Web 2.0 would become the increasingly accepted term for the internet in the aftermath of the dotcom crash.

The brainchild of O'Reilly Media, a marketing company that specialized in dot-com companies, Web 2.0 became the moniker for a series of conferences beginning in 2004.³⁶⁸ These conferences demonstrate the state of power in this new era of the internet. The first of these conferences included speakers who continue to dominate the contemporary internet in economic terms, such as Mark Cuban and Jeff Bezos.³⁶⁹ The former, speaking at the conference, suggested that the attendees should all make sure to oppose legislation that would, if passed, hold software developers criminally liable for crimes committed using their software.³⁷⁰ The latter hoped that expanding the use of Amazon's programming interface and web services would lead, in effect, to developers all over the world working on projects that Amazon could ultimately profit from, without having to pay for the development in-house.³⁷¹ These mega-rich heads of corporations accompanied lawyers, other CEOs, and financiers on the speaking lists. At these conferences, the leading minds and wallets of the post-crash internet came together to

³⁶⁷ DiNucci, Darcy. 1999. "Fragmented Future." *Print*, April: 23, 221-222.

³⁶⁸ Musser, John. 2007. *Web 2.0 Principles and Best Practices*. Sebastopol: O'Reilly Media Inc.

³⁶⁹ Medialive International; O'Reilly Media Inc. 2004. "Web 2.0 Conference." June 02. Accessed January 27, 2021. web.archive.org/web/20040602111547/http://web2con.com/.

³⁷⁰ Olsen, Stefanie. 2004. "Mark Cuban Raises Specter of Dot-Com Redux." *Cnet*. October 2. Accessed January 26, 2022. https://web.archive.org/web/20050316013930/http://news.com.com/Mark+Cuban+prompts+dot-com+redux/2100-1026_3-5400029.html?tag=nefd.top.

³⁷¹ Steinberg, Daniel. 2004. "Making the Internet Useful for Computers." *O'Reilly Network Web 2.0 Conference Coverage*. October 6. Accessed January 27, 2022. <https://web.archive.org/web/20050605235218/http://www.oreillynet.com/pub/a/network/2004/10/06/bezos.html>.

discuss and develop common strategies to ensure their continued financial success.³⁷²

Their discussions, it seems, focused on developing the concepts of Web 2.0, covering themes such as marketing their new platforms, whether Web 2.0 was just another bubble and burgeoning social networks: the conferences focused on the internet as means by which to conduct commerce: the communicative, democratic potential of the internet that I highlight in chapter one was not a major subject of discussion at these conferences.³⁷³

As the marketer behind the conferences, Tim O'Reilly notes in a germane blog post, Web 2.0 was a shift in how companies thought about the internet and the innovations that would realize those new conceptions. He admits that there were no release dates for the 1.0 or 2.0 versions of the web but offers the IPOs of Netscape in August of 1995³⁷⁴ or Google in August 2004³⁷⁵ as potential dates at which to begin the Web 2.0 era. The shift to 2.0, O'Reilly claims, was a "gravitational shift" from a model that considered the internet as a means by which to sell products and services to a model that considered the web as a platform in which companies could increase their footprint, bringing users into their platform as consumers and producers of data. In terms of this work, that shift recognized that the internet is a space in which actors come together to interact with one another through relations marked by power dynamics. O'Reilly's piece sketches the shift to Web 2.0 as a change in the relationship between corporate actors and internet

³⁷² O'Reilly Media, 2004.

³⁷³ Ibid.

³⁷⁴ Shih, John. 2005. "Netscape, the IPO That Launched an Era." MarketWatch, August 5. <https://www.marketwatch.com/story/netscape-ipo-ignited-the-boom-taught-some-hard-lessons-20058518550>.

³⁷⁵ Ritter, Jay. 2014. "Google's IPO, 10 Years Later." Forbes, August 7. <https://www.forbes.com/sites/jayritter/2014/08/07/googles-ipo-10-years-later/?sh=4209a6292e6c>.

subscribers, in which the latter were no longer simply customers, but vital producers of data, which is a key commodity on the contemporary internet.

Under Web 1.0, corporations saw everyday people as customers: Amazon sought to sell you books, Pets.com sought to sell you dog toys, and Stamps.com offered postage supplies. Under this Web 1.0 model, the economic relationship was the same as that of a person entering a brick-and-mortar establishment. Under Web 2.0, the product or service sold by the site is of secondary concern. Rather than being mere retailers, these corporate actors began to see, and market, their sites as platforms. On these platforms, engagement and interactivity between users were the core of the business model. At the 2010 version of the Web 2.0 Conference, for instance, Mark Zuckerberg spoke at length, making the case that the user was critical to the survival, growth, and profitability of Facebook as a platform: users did not simply buy services sold through advertising links but their internet behaviors also generate engagement and data.³⁷⁶ Both engagement with the products and services offered, as well as interaction with other users, generates data. This data, in addition to products, services, and advertising revenue, has since become a major proportion of corporate profits.³⁷⁷ A recent investor press release by Meta, for instance, indicates that the company's ad revenues, which make up over 90% of the revenues, have held steady at around thirty billion dollars per quarter in the period from

³⁷⁶ O'Reilly Media. 2010. "Web 2.0 Summit 2010: Mark Zuckerberg, "A Conversation with Mark Zuckerberg"." YouTube. November 19. Accessed January 28, 2022. <https://web.archive.org/web/20101206063625/http://www.youtube.com/watch?v=CRUOI03nZlC&p=2737D508F656CCF8>.

³⁷⁷ Isaac, Mike. 2021. "Facebook's profit surges 101 percent on strong ad sales." The New York Times, July 28. <https://www.nytimes.com/2021/07/28/business/facebook-q2-earnings.html>.

2019 to 2021.³⁷⁸ Under Web 2.0, Amazon is as interested in selling data as it is in selling household goods, apparel, or books.³⁷⁹ Additionally, O'Reilly adopts language that, read through the lens of this work, speaks to ANT as a methodology appropriate to the study of the web. Referring to Web 2.0 as a "sense" that was "formulated," the marketer nods to the fact that the internet is a social construction on behalf of its participant actors, and that those actors attempt to implement programs of action into the network to shape the experiences of other actors.³⁸⁰ If this formulated sense takes hold, he notes that it will be key to the survival of Web 2.0 businesses to link to one another and make use of the data generated by its users: the creation of a network of overlapping and complementary platforms will make 2.0 more resilient and adaptable in his thinking.³⁸¹ This cooperative model, made possible in no small part by the participation of everyday people, speaks to Web 2.0 being, quite consciously, an effort at speaking into being an actor-network. As O'Reilly puts it in his description of web 2.0, "in others, the winner will be the company that first reaches critical mass via user aggregation and turns that aggregated data into a system service."³⁸²

Supposing web 2.0 as a network made up of hyperlinked platforms was also a reconsideration of the relationship between corporate actors and consumers. Since the

³⁷⁸ Meta Platforms, Inc. 2022. Meta Reports Fourth Quarter and Full Year 2021 Results. Corporate Press Release, Menlo Park, California: Meta Platforms, Inc. <https://investor.fb.com/investor-news/press-release-details/2022/Meta-Reports-Fourth-Quarter-and-Full-Year-2021-Results/default.aspx>.

³⁷⁹ O'Reilly, Tim. 2005. "What is Web 2.0." O'Reilly Network. August 30. Accessed January 27, 2021. <https://www.oreilly.com/lpt/a/1>.

³⁸⁰ Ibid, 1.

³⁸¹ Ibid, 5-14.

³⁸² Ibid.

data that users of sites generate became, under Web 2.0, a major source of corporate profits, many sites and services have become "free" to use. Any number of browsers, media streaming services, and social media sites are available for your use without the need to pay their corporate owners a cent directly. Instead, you pay for your use of those services by becoming a producer of data for the owners of the site: the sheer size of some platforms, for instance, Facebook and Google, have led U.S. Senator Elizabeth Warren, among others, to seek to use antitrust legislation to keep these corporate actors from becoming, or growing, as actors that have a monopoly on the data of individuals.³⁸³ This adds a new dimension to the relationship between the corporate owners of platforms and the people who make use of those platforms without paying for access to those platforms directly.

First, a user of a platform still encounters the internet as a consumer under Web 2.0: we pay for a subscription to one of a small number of internet providers. From there, one also has no small number of opportunities to spend one's money on Web 2.0. These elements have been true since Web 1.0 when the subscription model of internet access first emerged. Engaging in online commerce in Web 1.0 was not a radical departure from purchasing goods and services from physical stores or ordering via telephone. Under Web 1.0, consumers purchased goods, and producers made profits from those sales. Web 2.0, however, presents a new dimension in the relationship between producers and consumers. In using, for instance, one of the myriad social media sites, most users do not

³⁸³ Warren, Elizabeth. 2019. "Here's how we can break up Big Tech." *Here's How We Can Break Up Big Tech*, March 8. <https://medium.com/@teamwarren/heres-how-we-can-break-up-big-tech-9ad9e0da324c>.

pay a subscription fee. Instead, users create the data through site interactions that the corporations later sell. Facebook presents an excellent example of this. It is free for users to create a personal account and communicate with other users, form groups. From the perspective of the user, Facebook offers a free service, albeit one that allows advertisements, which are one source of revenue for Facebook. These users are the very heart of the corporate entity: without users participating to generate data, these companies quickly fold. Myspace, which launched in 2003 and peaked at 250 million American users,³⁸⁴ also made most of its money through advertising, including, at the height of the company, a nearly billion-dollar ad contract with Google in 2006.³⁸⁵ Though Myspace, as of February 2022, still exists, it is no longer a major social network and was sold by its parent company, News Corp, for \$35 million in 2011.³⁸⁶ The decline of Myspace, Spencer Ante and Catherine Holahan speculated in 2008, came from users growing fed up with what they felt were too many ads³⁸⁷: thus, the users fled in droves, usually to Facebook,³⁸⁸ and devalued the prospect of advertising on Myspace as it became a

³⁸⁴ Chokshi, Niraj. 2019. "Myspace, Once the King of Social Networks, Lost Years of Data from Its Heyday." *New York Times*, March 19. <https://www.nytimes.com/2019/03/19/business/myspace-user-data.html>.

³⁸⁵ Van Duyen, Aline, and Richard Waters. 2006. "Google in \$900m ad deal with Myspace." *Financial Times*, August 8. <https://www.ft.com/content/17e8e67e-2660-11db-afa1-0000779e2340>.

³⁸⁶ Rusche, Dominic. 2011. "Myspace sold for \$35m in spectacular fall from \$12bn heyday." *The Guardian*, June 30. <https://www.theguardian.com/technology/2011/jun/30/myspace-sold-35-million-news>.

³⁸⁷ Ante, Spancer, and Catherine Holahan. 2008. "Generation Myspace is Getting Fed Up." *NBC News*, February 8. <https://www.nbcnews.com/id/wbna23073811>.

³⁸⁸ Torkjazi, Motjaba, Reza Rejaie, and Walter Willinger. 2009. "Hot today, gone tomorrow: on the migration of Myspace users." *Proceedings of the 2nd ACM workshop on Online Social Networks*. Association for Computing Machinery. 43-48.

depopulated platform. The rise then subsequent fall of Myspace demonstrates the centrality of the user to the continued survival of social media platforms under Web 2.0.

Despite having collected no money directly from the users, Facebook remains immensely profitable. The advertisements that users see make up a substantial portion of Facebook's profits: in 2020, for instance, the company made \$25.44 billion from advertising revenue, about a quarter of the company's total profits.³⁸⁹ Much of this revenue comes from advertisers who collect data, which, as the public learned in the episode now known as the Cambridge Analytica scandal, is used by some actors to attempt to change voting behavior with further advertising.³⁹⁰ This differs from older capitalistic models of production, where consumers pay for commodities, and corporations profit from this exchange of capital for goods and services.³⁹¹ Where no capital is exchanged directly between corporation and user on the platform and the owners of the platforms still profit, the change of flows of capital gives some insight into the current state of digital power. At that moment, corporate actors have the opportunity to implement programs of action through the structure and governance of those platforms. In terms of economic structural stability, Tim Whang develops in *Subprime Attention* crisis, Web 2.0 companies trade in the attention of users (and the resultant of data) as the commodity that sustains and grows profits: if this attention wanes, a company

³⁸⁹ Needleman, Sarah. 2021. "Facebook's Ad Business Drives Surge in Revenue, Following Google's Act." *The Wall Street Journal*, April 28.

³⁹⁰ Davies, Rob, and Dominic Rushe. 2019. "Facebook to pay \$5bn fine as regulator settles Cambridge Analytica complaint." *The Guardian*, July 24.
<https://www.theguardian.com/technology/2019/jul/24/facebook-to-pay-5bn-fine-as-regulator-files-cambridge-analytica-complaint>.

³⁹¹ Marx, Karl. 1978. "Wage Labor and Capital." In the *Marx- Engels Reader*, edited by Robert Tucker, 203-217. New York: WW Norton and Company.

following a Web 2.0 model that depends on the user as prosumer is likely to falter or fail.³⁹²

Having a large, long-lasting base of users is the major difference between Facebook and Myspace. Where the former has succeeded, the latter has failed. Regardless of the platform a user chooses, however, there is a commonality that opens the way for the owners of the platforms to make a profit, the end-user license agreement, also known as terms of service.

With these legal agreements, signed via clicks untold times per day, these users have surrendered the right to act solely in their own interest; this bolsters the legal leeway already given to corporate actors by the state in the early days of the web in the lack of regulation of the early commercial internet as proposed in the 1996 Communications Decency Act. Platforms are not, legally, responsible for the content users create: the presence of users, regardless of the content that they produce and political leanings, are users who are the targets of ads and are generators of data are the resource that powers Facebook's immense profits. Cementing this relationship, Facebook's terms of service as of February 4, 2022, state that:

We³⁹³ allow advertisers to tell us things like their business goal, and the kind of audience they want to see their ads (for example, people between the age of 18-35 who like cycling). We then show their ad to people who might be interested.

³⁹² Hwang, Tim. 2020. *Subprime Attention Crisis*. New York: Farrar, Strauss, and Giroux.

³⁹³ "We" refers to Meta, Facebook's new corporate name as of late 2021.

We also provide advertisers with reports about the performance of their ads to help them understand how people are interacting with their content on and off Facebook.³⁹⁴

These terms of service provide an excellent example of the relations of power present in the contemporary web: the state, unwilling or unable to regulate the content of the web, has taken a back seat to corporate actors, who rely on users as a source of commodifiable data. It is in the interests of these corporations, then, to keep as many users as possible on their platforms to generate useful, profitable data, lest they go the way of Myspace, Pets.com, and so many others that failed to adapt to the Web 2.0 model of commerce.

Considering the history of the term Web 2.0, I make the case that it is a marker of a new set of relationships between companies and consumers. Where, in the early internet, people bought products and services from corporate actors online, in Web 2.0, corporate actors adopted models that considered consumers to also become producers of data that would become a major source of revenue for those corporations. In considering people to be both consumers and producers simultaneously, corporations managed to expand their profits, and their hegemony over digital space, in the present digital era by forwarding programs of action that cast the user as prosumer, further increasing corporate profits and, in the process, foreclosing other possibilities for action that would impede those profits.

³⁹⁴ Meta. 2022. "Terms of Service." *Facebook*. January 4. Accessed February 4, 2022. <https://www.facebook.com/terms.php?ref=pf>.

Dotcom Boom and Bust: Contestations in Digital Power Dynamics

By 1994, barely two years after the web had launched for consumers, online stores were popping up, first to sell books, and then nearly anything under the sun, including a thriving black market that would catch the attention of several nation-states.³⁹⁵ For instance, the FDA and its British counterpart have been trying, largely unsuccessfully, to regulate the online sale and distribution of drugs, both prescription and nonprescription, since the mid-1990s.³⁹⁶ These attempts by the government to regulate online sales and distribution of drugs, in terms of ANT, are telling. An actor, the state, which had enjoyed large sway over online life in the era of the ARPANET recognized that its hold on the digital tools it had helped create was loosening, and in response the state began using the legislative pen and the search warrant, to gain some part of that control back. In a similar vein, the 1996 Communications Decency Act was, in part, an attempt by the Clinton Administration to bring the internet into the fold of state regulation via the Federal Communications Commission (FCC): if the courts would hold that the internet was functionally like radio and television broadcasting, the FCC could fine and censor websites that posted, shared, or hosted content that the FCC found to be indecent.

At the time, this brought up substantial concerns around the freedom of speech: since it was mostly persons, rather than broadcasting companies, who made and posted most of the content on the internet, would the Act, as Charles Nesson and David Marglin speculate, suppress free speech on an internet that in the eyes of many, would foment an

³⁹⁵ Moscovitis et. al. Chapter Six.

³⁹⁶ Walsh, Charlotte. 2011. "Drugs, the Internet and Change." *Journal of Psychoactive Drugs* 55-63.

increasingly accessible and empowering norm of free communication between people?³⁹⁷ In 1997, the Supreme Court found that the Act was overbroad, poorly defined, and, in the opinion of Justice John Paul Stevens, placed an “unactable heavy burden on protected speech” that “threaten[ed] to torch a large segment of the Internet community.”³⁹⁸ While the state would later attempt to regain some semblance of the control it had under the ARPANET, the 1990s would remain a period relatively free of state control online when compared to our more recent era.

With all of this unclaimed digital territory, made available to the highest bidder by the federal government, there began a land grab in which entrepreneurs, businesses, tycoons, and swindlers began to buy up digital real estate, this time in the form of existing telecommunication companies, internet service providers, and DNS addresses (website names), and, predictably, began speculating on the value of these things while fighting amongst themselves, peddling flesh in new industries such as digital pornography and videogames, and, eventually, leading to a deeply unstable economic landscape that would soon crumble like it was 1928 all over again.³⁹⁹

This economic collapse, known as the dotcom bubble burst, looks on a structural level much like the aftermath of the 1928 collapse that eventually resulted in the Great Depression: a small number of massive companies, Amazon, eBay, Myspace, AOL, and

³⁹⁷ Nesson, Charles, and David Marglin. 1996. "The Day the Internet Met the First Amendment: Time and the Communications Decency Act." *Harvard Journal of Law and Technology* 113-136.

³⁹⁸ The ACLU. 2017. "Reno V. ALCU Challenge to Censorship Provisions in the Communications Decency Act." ACLU. June 20. Accessed October 28, 2021. <https://www.aclu.org/cases/reno-v-aclu-challenge-censorship-provisions-communications-decency-act>.

³⁹⁹ Kushner, David. 2019. *The Player's Ball*. New York: Simon and Schuster.

a few others, managed to survive, making the online economic world a much more homogenous place than it had been before, a space where production and consumption became the norm, as advertising became the model by which even niche discussion sites kept themselves going, and the corporate boardroom, as is so often the case with late capitalism, became the space where major decisions, such as the opening and closing of platforms, were to be made.

In terms of the potential of the dot-com-era internet to enable more people to participate in political, economic, and social life differently than before, some examples leave room for some optimism for the consideration of the internet as a space where empowering actor-networks could potentially form. During this era, Cynthia Forson, and Mustafa Özbilgin find, women began to use the relatively low costs of entry into online commercial life to start online businesses. Many of these women, the study finds, pursued online businesses reselling designer, Western-style clothes to sidestep the often sexist and patriarchal barriers to white-collar work in offline businesses.⁴⁰⁰ This deliberate use of the internet to realize economic self-empowerment is encouraging considering the democratic hopes I explored in previous chapters. Although there were already discursive processes, both in the computing field⁴⁰¹ and the larger public consciousness that were effectively gendering the web male,⁴⁰² the relative freedom of the dotcom era made room

⁴⁰⁰ Forson, Cynthia, and Mustafa Özbilgin. 2000. *Dotcom Women Entrepreneurs in the UK*. Working Paper, Hertfordshire: The University of Hertfordshire Business School.

⁴⁰¹ Varma, Roli. 2010. "Why So Few Women Enroll in Computing? Gender and Ethnic Differences in Students' Perceptions." *Computer Science Education* 4: 301-316.

⁴⁰² Bimber, Bruce. 2000. "Measuring the Gender Gap on the Internet." *Social Science Quarterly* 81 (3): 868-876.

for ways of knowing, being, and doing that allowed for more democratic participation in ways that could begin to challenge previously patriarchal economic spaces.

For some, the ability to use the internet to challenge norms presented an opportunity to challenge practices to empower themselves to participate more fully in economic life. For others, these challenges allowed for the construction of new communities aimed directly at building networks of support, solidarity, and belonging, as well as spaces for civil disagreement and dissent,⁴⁰³ the very foundations of democracy. Through the commercially accessible internet, members of the LGBTQ community created forums, chatrooms, and listservs that were more welcoming than much of the offline world. In those more welcoming digital spaces, people could share their experiences, build interpersonal relationships, and craft communities that were not bound by immediate geography.⁴⁰⁴ The internet, in this context, was a set of tools for building a community of shared experiences and identities: the material presence of the internet to link people together this building facilitated community building. Physical proximity, for members of the LGBT community, meant in the 1990s (and certainly still does today) a visibility that can lead to immediate physical danger.⁴⁰⁵ The web, in its displacement of the immediacy of the physical body and lessening the need for immediate physical

⁴⁰³ Mouffe, Chantal. 1999. "Deliberative Democracy or Agonistic Pluralism." *Prospects for Democracy* 745-758.

⁴⁰⁴ Koch, Nadine, and Eric H Shuckman. 1998. "Democratizing Internet Access in the Lesbian, Gay, and Bisexual Communities." In *Cyberghetto or Cybertopia?* edited by Bosah Ebo, 171-184. Westport: Praeger.

⁴⁰⁵ Curlew, Abigail. 2019. "Doxxing, Vigilantes, and Transmisogyny." *Medium*, May 3. <https://medium.com/@digitaljusticelab/doxxing-vigilantes-and-transmisogyny-c2b8a6abb2b2>.

proximity for community building, made it easier for these actors to form networks for the explicit purposes of self and group empowerment.⁴⁰⁶

Communities of color have similar stories. A small but growing number of African Americans whose interests in technology developed in the years before the commercialization of the internet became part of the pre-internet technology sector. Many of these, for example, the human computers employed by NASA, made popular in the film *Hidden Figures*, came into the computer industry as specialized workers. These folks, the first generation of whom trained at technical schools, junior colleges, and Historically Black Colleges and Universities (HBCUs), were also among the early adopters of the internet. One group, who Charlton McIlwain terms “the vanguard,” saw that first email chains, then more robust online forms such as Afronet could serve as important sites of empowerment and solidarity.⁴⁰⁷ These forums, where people of color could come together to share experiences, chat, discover new uses for the newly opened internet, and perform aspects of identity that had otherwise been marginalized through, for instance, code-switching in white-collar workplaces, eventually became vital for their members. One facet of digital communities becomes vitally important here. In forums, especially small ones, moderators, and members gatekeep: they can decide what is permissible within a given space and remove interlopers or abusers. Isaiah Berlin's

⁴⁰⁶ Miles, Sam. 2018. "Still Getting It ON Online: Thirty Years of Queer Male Spaces Brokered Through Digital Technologies." *Geography Compass*. doi:10.1111/gec3.12407.

⁴⁰⁷ McIlwain, Charlton. 2020. *Black Software*. Oxford: Oxford University Press.

conceptions of liberty are useful in demonstrating the politically empowering potential of gatekeeping.⁴⁰⁸

As Berlin explains, negative liberty is simply freedom from interference in individual action primarily in the form of legal restrictions. Now that it is illegal to hire, fire, admit, deny, or own humans based on race, the negative liberty argument goes, we can begin, as many neoliberals have, to consider the "problem" of race solved.⁴⁰⁹ I do not think I need to convince the reader that such thinking has not been borne out. Instead, consider Berlin's conception of positive liberty. In a society built on a foundation of stolen black labor, where black bodies are still⁴¹⁰ and were most certainly in the early days of the internet⁴¹¹ treated as disposable by the state, freedom from official, state-sanctioned racism was, and is, not enough. Rather, these marginalized people sought to create spaces where they were free to be black without immediate exposure to racist bigotry and to participate in discourse not explicitly intended for visibility through the white gaze. Moderating and curating specifically demarcated black spaces could, and did, help people to engage with each other, and their broader political communities. Put differently, spaces like Afronet and Noirnet provided their users with spaces that were not

⁴⁰⁸ Berlin, Isaiah. 1982. *Four Essays on Liberty*. Oxford: Oxford University Press.

⁴⁰⁹ Hohle, Randolph. 2012. "The Color of Neoliberalism: the "Modern Southern Businessman" and Postwar Alabama's Challenge to Racial Desegregation." *Sociological Forum* 27: 142-162.

⁴¹⁰ Black Lives Matter. n.d. Black Lives Matter. Accessed January 14, 2021. <https://blacklivesmatter.com/>.

⁴¹¹ Sastry, Anjuli, and Karen Grisby Bates. 2017. "When LA Erupted in Anger: A Look Back at The Rodney King Riots." NPR, April 26. <https://www.npr.org/2017/04/26/524744989/when-la-erupted-in-anger-a-look-back-at-the-rodney-king-riots>.

just relatively⁴¹² free from explicit bigotry, but where people of color could affirm shared identities.⁴¹³ This led to the creation of nonprofits aimed at technological literacy, more communication within and between African diaspora communities, and the inclusion of black-oriented publications into the new field of digital media.

These early examples from the black and LGBTQ communities show that the internet can certainly be a set of tools people use to empower themselves and others. But, I argue, the structures of power online that existed in the dot-com era have intensified, increasingly favoring large corporate actors' ability to dominate and pave over digital spaces to the detriment of marginalized groups. If you decide to go online today, most of the websites I have mentioned so far are either defunct⁴¹⁴ or are something like digital graveyards, riddled mostly with ancient links that go nowhere. Since the dawn of the 21st century, many of these sites have become defunct, replaced by something else in the current era of the internet, often referred to as Web 2.0. To get to 2.0, however, some major structural changes occurred to the digital landscape that would influence how we interact with and through it. Through the lens of ANT as developed in the previous chapter, there is room for some optimism about the empowering potential of the early commercial internet. Materially, the widening availability of the world wide web made it possible for new communities to form, and those agents who made those communities could, and did, devote efforts and resources to maintaining and growing in spaces where

⁴¹² Poland, Bailey. 2016. *Haters*. Potomac Books. Poland outlines that trolls, bigots, and other such ilk have also been online since the beginning of the commercial internet.

⁴¹³ McIlwain 2020.

⁴¹⁴ Noirnet, for example.

solidarity, understanding, and acceptance are predominant norms. It is important to remember, though, that actor-networks such as these new online communities are contingent, and thus will neither necessarily survive at all nor exist forever as the kind of spaces that they had originally been. Contingent though they were, the early online spaces I have thus far highlighted serve as a proof of concept for the ideas I laid out in chapter one. If it is materially possible and people are willing to do the work, it is possible even on a commercial internet to carve out spaces within the actor-network that explicitly aim at helping people feel empowered to enter and engage with social, economic, and political life in ways that they had not before the advent of the internet. In the early years of the commercial internet, I argue, corporations were experimenting with methods to gain digital power and to claim digital territory more completely. These methods were in their infancy, and the failures of many dotcom corporations show that they were only sometimes effective: those companies that would go on to survive the dotcom crash learned from those experiences, and their methods for the establishment of digital fiefdoms have improved over time. Here, a consolidation of profit in the companies that remained and prospered in the Web 2.0 era, as well as their innovations and intensifications in programs of action that increase profit would begin to reshape the web.

There are websites and platforms that directly attempt the empowerment or assistance of their users, and they represent hope for the remaining promise of further development of the empowering potential of the internet. They also offer a glimpse into both the cultures of Web 2.0s users and the problematic behaviors that sometimes manifest in contemporary online communities. I will give two brief examples here. The first is a

mutual aid forum, the subreddit *r/random_acts_of_pizza*.⁴¹⁵ As the name would imply, the purpose of the forum is to provide people with the opportunity to ask for, and receive, a pizza. With its thousands of fulfilled requests, I argue it is a great example of the sort of human solidarity that demonstrates the sort of solidarity than can be facilitated through open, communicative discourse on the web. The gifting of a pizza to a stranger out of kindness may be a small thing, but it shows that people choose to coexist even anonymously, help one another, and form a community. If they can avoid devolving into a tribalistic debate over toppings, or at least work out how to peacefully discuss whether pineapple on pizza is tolerable by a person with a reasonable comprehensive doctrine, then there is some hope that we can learn to talk about more politically relevant things, too.

Another, the African American Literature Book Club (AALBC), operates under a similar general premise as Amazon did: to sell books online. It has, since 1997, done so with a focus on promoting and platforming Black and African American authors, giving space to otherwise marginalized authors. In addition to selling books, there is also a forum for the discussion of Black and African American literature, mutual aid, and general discussions that are germane to the lived experiences of people of color. These services and forums bolster, through their funding, other efforts aimed at web accessibility and providing publishing assistance to authors of color.⁴¹⁶ AALBC, then, is a site that takes advantage of the Web 2.0 idea of the site as a source and invites the user

⁴¹⁵ Reddit. 2021. "Random Acts of Pizza-Restoring Faith in Humanity, One Slice at a Time." Reddit. February 2. Accessed February 2, 2021. https://www.reddit.com/r/Random_Acts_Of_Pizza.

⁴¹⁶ The African American Literature Book Club. 2021. The African American Literature Book Club. February 2. Accessed February 2, 2021. <https://aalbc.com/aboutus.php>.

to not only consume by purchasing books but also become an activist to forward empowering ends. As a retail site, it works within the existing actor-network of web 2.0 to recreate some of the adaptations taken by large corporate actors, albeit to the ends of Black empowerment rather than mere corporate profit. Making use of the idea of site-as-platform, AALBC invites internet users to become not only users but to join in a space of cultural progress where people can share, celebrate, and advocate for aspects of their identities outside of an environment where the user's data is commodified by a corporate actor.

What `r/random_acts_of_pizza` and AALBC have in common is that they have managed to exist within the Web 2.0 environment and do so to ends that serve the interests of people not as consumers or users, but as members of shared communities: and there are many others like them. In the case of the pizza gift-givers, we see that even in a highly corporatized framework such as Reddit, itself an immensely valuable seller of data,⁴¹⁷ it is still possible to deliberately empower others, even if is through strangers sharing and creating solidarity through pizza: the subreddit, though moderator tracking, allows for people to keep “score” of pizzas given and received. Many users have scores in both columns, which indicates that people engage with this community over time. AALBC, making use of the ability of retail sites to become platforms, has sought to become a centralizing site for resources and spaces of conversation that empower people of color to engage through and with literatures that advance their careers and cultural lives. In this sense, AALBC is a spiritual successor to the likes of Noirnet from the early

⁴¹⁷ Wagner, Kurt. 2017. "Reddit raised \$200 Million in Funding and is Now Valued at \$1.8 Billion." Vox, July 31. <https://www.vox.com/2017/7/31/16037126/reddit-funding-200-million-valuation-steve-huffman-alexis-ohanian>.

days of the web, with the adaptations of Web 2.0. Examples such as these add credence to the use of an adapted-ANT analysis: where some variants of classical Marxism might see relationships between actors (usually framed in terms of class) as antagonistic struggles, an adapted ANT is open to describing, in this case, examples where the users behind Noirnet and other sites deliberately resist the programs for action that corporate actors attempt to implement in online spaces. Contingency is critical to ANT more broadly, and also for normative possibilities for digital democratic deliberation in the future.

The examples I have highlighted as proofs of the possibility of spaces of empowerment and cooperation on the early web certainly appear promising considering the democratic hopes which I outline in chapter two. They were spaces where people came together, on an open and equal footing, to discuss issues and interests of common concern to the ends of self and group success, as well as to ask for help from fellow human beings. In terms of improving democracy and civil society to achieve inclusive and democratic ends, one hopes for exactly those sorts of spaces, and they have existed before. Jürgen Habermas found similar spaces in the German coffeehouses, British pubs, and French salons of the eighteenth century. In the German theorist's telling of that period, the development of mass commercial publishing foreclosed the possibilities for the development of bourgeois reading publics. Instead of critical reading publics which prized deliberation, mass publics that prioritized production and consumption grew with the expansion of modern capitalist economic structures.⁴¹⁸ This culture of mass

⁴¹⁸Habermas, Jürgen. 1991. *The Structural Transformation of the Public Sphere*. Cambridge: The MIT Press.

consumption, Habermas reasons, is not the birthplace of liberal democracy, but the field in which a feudalized political life has taken firm root.⁴¹⁹ In this feudalized digital landscape, we relate to corporations as serfs did to their feudal lords: dependent upon them for access to the bare resources of the actor-network, while also contributing to the power and longevity of the feudal system by paying the lord his share of the crop.

Habermas, studying the beginnings of mass politics in the modern era, found that capitalism, which was at the time industrializing, proved to be fruitful ground for the seeds of publics more concerned with production and consumption than with deliberation. What I observe in the history of the internet I have thus far presented is similar: the same economic system that produced mass publics in the 18th century, and highways and the Michelin Star system in the 20th, is likely to continue to produce technologies that lead to the concentration of power in the hands of the state and corporate actors. Undergirding all of this, and providing much of the labor, be it industrial, culinary, or digital, has been Mass Man. Mass Man, the concept Habermas' close adviser Theodor Adorno developed⁴²⁰ to describe the serfs victimized by this feudalization, are not active participants in political life as Habermas found in bourgeois reading publics. They do not come into political spaces as equal participants expecting to hear and be heard by other equals before coming to collective decisions. Instead, Habermas finds, that those living in mass democracies experience politics mediated through the discourse of production and consumption. Mass media, through which most

⁴¹⁹ Ibid, 195.

⁴²⁰ Adorno, Theodor. 1991. *The Culture Industry*. New York: Routledge.

of us get our information, is a proprietor of information as a commodity. The responsibility of these proprietors is to their financial stakeholders, not to the shared development of reasonable public discourse. Politics, in mass media outlets, is another product to be bought and sold: these outlets will just as gladly sell unverified supplements and pillows rather than, or often beside, the commodified opinions of pundits and other elites.⁴²¹ Politics, to mass man, is a product consumed with morning coffee in the privacy of one's own home before the day's production begins at work.⁴²² This does not bode well for the promise of liberal democracy as Habermas sees it in *The Structural Transformation of the Public Sphere*.

Although much has changed since the eighteenth century, reading Habermas through ANT provides some structural insights into the matter at hand—the development of the internet understood as a power-laden structure. Considering the internet as an actor-network, both its materiality and the actions and intentions of the actors should be at the foreground of analyses of the relationships that make up the actor-network. Materially, the internet during this early era made it possible, via computers and the connections between them, to connect people through text, images, and links. Once connected these actors and the technologies that link them relate to one another in relationships that are power-laden in terms of any actor's ability to set the agenda for activity, make rules, and participate in the shared network. Three general sets of actors, as I have argued, are of substantial importance on the internet. The first, which I covered in

⁴²¹ Habermas 1991, 164.

⁴²² Habermas 1991, 235.

detail in the previous chapter, is the state. Beginning with ARPANET, the state intended to make use of computer networks to reify and expand its power. The development of ARPANET to expand and manage the nuclear arsenal and other capabilities of the United States state apparatus is a clear example of the state using the precursor to the internet to amass and maintain power. Doing so, in the context of the cold-war era, in which the military-industrial complex was in full swing, meant that the state cooperated with our second set of actors: corporations. Eisenhower, one of the political architects of both the highway system and the ARPANET, was aware of this and deeply worried that it could mean the growing influence of the military-industrial complex on the behaviors of the state, leading to a policy dependence on violence as a method to solve problems rather than discourse.⁴²³

These corporations, which cooperated with the state to build the networks that would become the internet, have a clear motivation. To corporations, profit is the motivation that drives their actions, and corporations, thus, build programs of actions into artefacts, such as computer networks, which are intended to facilitate the generation of profit. Those profits came not only from the state directly, during, and after the ARPANET period, when corporations were the contractors who built and maintained the network, but from the third set of relevant actors once the internet went commercial: people who use the internet, whether paid subscribers or otherwise.⁴²⁴ These internet users, of course, have varying motives for interacting through the web. Those I have

⁴²³ Eisenhower, Dwight. 1961. "Transcript of President Dwight D. Eisenhower's Farewell Address (1961)." ourdocuments.gov. Accessed January 19, 2021.

⁴²⁴ Moschovitis, Christos, Hillary Poole, Tami Schuyler, and Theresa Senft. 1999. *History of the Internet: A Chronology, 1843 to the Present*. Santa Barbara: ABC-CLIO.

followed so far in this chapter tried to use the internet to empower themselves and others by using the government and corporate-created internet to find and make communities in which that empowerment could develop. What the internet was then, and became later, depends on the balance of power and interactions between these actors. In accepting the commercialization of the internet, the state took something of a background role in the dotcom era: this, combined with the overall trend toward corporate deregulation in the decades leading up to the opening of the commercial internet, hastened corporate actors' taking power in the early web.⁴²⁵ This stepping back of the state in the actor-network of the internet may have been, structurally, like Habermas' understanding of the waning of the feudal order in eighteenth-century Europe. With the state no longer dictating publicity as completely as it once had, there was room in that actor-network for new actors, bourgeois reading publics, to emerge and begin to operate to their ends. Similarly, the early online communities I have described existed at least in part because the state did not regulate the early web against it, and corporations had not fully taken over the agenda-setting and gatekeeping roles that they would occupy in more recent digital power dynamics.

In Habermas' analyses, read in terms of my adapted-ANT analysis, the private interests of the mass presses once made material via the publication of papers as a consumer commodity, were programs of action that affected the eventual content of publications and discourse. Making use of that space, they began to increasingly

⁴²⁵ Meltzer, Allan. 1988. "Economic Politics and Actions in the Regan Administration." *Journal of Post-Keynesian Economics* X (4): 528-540.

Green, Jeremy. 2016. "Anglo-American Development, the Euromarkets, and the Deeper Origins of Neoliberal Deregulation." *Review of International Studies* 42: 425-449.

constitute the informational life of the public in terms of consumption. In other words, companies structured the network of eighteenth and nineteenth-century European states such that it was more hospitable to enter it as a consumer or producer than as a citizen.⁴²⁶ The bandwidth of that network became increasingly devoted to production and consumption, space which was then less able to fill with discourse and action aimed at empowering everyday people to act outside of corporate spaces.

On the early web, corporations sought to buy up as much digital real estate as they could, and offer the internet as a service, much like the press which had commercialized two centuries earlier. As the corporations acted following the motive of profit, they also began to alter the network: the results of these structural alterations shaped the next era of the web.

In the two centuries between the re-feudalization of European political life and the commercialization of the internet, critical scholarship documented the tendency of corporate, private, and capitalist actors to make use of, and participate in the development of, actor-networks with the cooperation of the state to create and expand their influence and power. A complete re-reading of that critical scholarship through ANT, though an interesting project, falls outside of the scope of this work. Instead, I offer a few snapshots to demonstrate that corporations set profit-seeking features as programs of action into various actor-networks and find that they are doing the same online. Here, materialist analyses help to establish this profit-centralizing effect of capitalism over the past several centuries.

⁴²⁶ Habermas 1991. See part V.

Marx, writing in 1853, sees that the primary result of the British colonial enterprise is the expansion and consolidation of capitalist power. This happens with close cooperation, he finds, between the colonial state and corporations. The state, in close cooperation with corporate actors, structured the network of colonialism: in this analysis, Marx views the third set of actors, everyday people, as a source of labor and a consumer base, not as co-equal actors who have some of the power to structure the network as well.⁴²⁷ The relationship between industry and the state is somewhat complicated by Foucault. Rather than seeing the state and private corporations as mechanisms for forwarding bourgeois class interests, he finds both to serve as institutional sites, by the 20th century, to reify disciplinary power. For Foucault, in *Discipline and Punish*, it is ordinary people who are conditioned, through the institutions of school, work, and prison, into well-disciplined subjects. The awful lesson of Foucault's work, that we are as responsible for our own disciplining as is the carceral state or the rule-laden job, is of importance here. These disciplined subjects, the same people as Adorno's mass Men,⁴²⁸ learn so well in school, home, and other institutions that they are consumers and producers that, in Foucault's analysis, they have become their own disciplinarians.⁴²⁹ This is concerning in terms of those same people's probability of forming democratic publics along the lines that Habermas hoped for, or that I sketched in chapter one. I explore, in the next chapter, Mass Man's capability to participate in democratic

⁴²⁷ Marx, Karl. 1978. "The British Rule in India." In the Marx- Engels Reader, edited by Robert Tucker, 653-664. New York: WW Norton and Company.

⁴²⁸ Foucault was more concerned in *Discipline and Punish* with how people formed as subjects within disciplinary institutions, whereas Adorno was concerned more with the Culture Industry's effects of homogenization of modern life.

⁴²⁹ Foucault, Michel. 1995. *Discipline and Punish*. New York: Random House.

deliberation in online spaces, considering a century of disciplined enculturation as producers and consumers, as well as the development of a corporate internet that feeds Mass Man information at the speed of light.

The Dotcom Crash: The Beginnings of Feudalization

As the turn of the new millennium neared, several events converged in such a way that they would both shake the foundations of the internet's industries and restructure the corporate actors that dominate the contemporary internet. Investing practices earlier in the 1990s began to shift, a recession began, and dotcom companies either adapted or closed. These adaptations would have substantial ramifications for the structural future of the web.

Early in the dotcom era, venture capitalists were all too willing to throw money at new businesses based on interesting-sounding ideas for new digital services, with little to no solid proof that these companies would produce any such thing. This willingness, when contrasted to the Y2K scare, seems a jarring transition, but one that demonstrates the power of narratives in online discourse to shape the behavior of actors within the actor-network.⁴³⁰ Y2K was one such narrative. The most reasonable version of the "year 2000 problem," or Y2K, was a concern that various computing systems, ranging from airlines to banking, would not know what to do with data points once the clocks rolled over to 1/1/2000. The fear was that this would lead to widespread failures of computer networks in a global economy that was increasingly dependent on networked

⁴³⁰ Goodnight, Thomas, and Sandy Green. 2010. "Rhetoric, Risk, and Markets: The Dot-Com Bubble." *Quarterly Journal of Speech* 69 (2): 115-140.

computers.⁴³¹ In less reasonable versions, some Americans feared that the ball dropping on New Year's Eve was a signal to world governments to declare martial law, shut down telecommunications, and begin a new world order.⁴³²

Some shareholders and investors became increasingly reluctant to invest in technologies that they understood poorly. That concern would become magnified when, in March of 2000, Japan's economy—a major source of computers and software—had entered a recession. With these concerns and the recent expiration of the employee and investor agreements to hold dotcom company stock for set periods, a global selloff of dotcom stocks began,⁴³³ with scores of companies left valueless, shells of their former selves if not closed altogether. There were some large corporate casualties of the crash. For example, Pets.com, which had the marketing budget to purchase a Superbowl advertisement in 2000, went defunct shortly thereafter.⁴³⁴ The same is true of E-stamp, a stamp retailer attempting to make its way through the digital age that had dumped most of its IPO funding into advertising in a bid to save itself.⁴³⁵ This is just one small measure: businesses in nearly every sector one could imagine shared similar fates. The

⁴³¹ Unema, Francine. 2019. "20 Years Later, the Y2K Bug Seems Like a Joke—Because Those Behind the Scenes Took It Seriously." *Time*, December 30. <https://time.com/5752129/y2k-bug-history/>.

⁴³² Poulsen, Kevin. 1998. "The Y2K Solution: Run for Your Life!!" *Wired*, January 1. <https://www.wired.com/1998/08/y2k-2/>.
CBS News. 2014. "15 years ago: The Limited-Edition Y2K assault rifle." *CBS News*, December 30. <https://www.cbsnews.com/news/flashback-the-limited-edition-y2k-assault-rifle/>.

⁴³³ CNN Money. 2000. "NASDAQ Tumbles on Japan." *CNN*, March 13. https://money.cnn.com/2000/03/13/markets/markets_newyork/.

⁴³⁴ Thornton, Jennifer, and Sunny Marche. 2003. "Sorting Through the Dot Bomb Rubble: How did the High-Profile E-Tailers Fail?" *International Journal of Information Management* 23 (2): 121-138.

⁴³⁵ Crain, Matthew. 2014. "Financial Markets and Online Investing: Reevaluating the Dotcom Investment Bubble." *Information, Communication, and Society* 17 (3): 371-384.

dotcom crash, I argue, cleared many of the actors from the early internet from the network entirely, allowing for others, in the aftermath, to grow in terms of capability to influence digital power dynamics going forward.

Some of the survivors of the dotcom crash seemed to have figured out their survival strategies well beforehand. WebMD, for instance, was peddling terrifying self-diagnoses in effectively the same format in 2020 as it was in 1999.⁴³⁶ Others took on a more symbiotic, or parasitic, strategy to try to evolve and thrive after the dotcom crash. The clearest example of this is America Online. By 1999, AOL was a company in search of one thing it did well. It was part service provider, part media company, part email host. Keeping that corporate ship afloat became difficult and media conglomerate Time Warner purchased AOL, infusing the latter with capital for several more years. Despite concerns that this merger ran afoul of the spirit of antitrust laws intended to keep individual corporations from gaining too much power in economic life, the sale was allowed and AOL, which was spun off in 2009, continues to operate today as a media aggregating company with email services.⁴³⁷ The AOL sale was the first and clearest example of what would become a trend in both digital economics and power structures, the rise of giant companies that would hold effective monopolies in their market

⁴³⁶ WebMD. 1999. "Welcome to WebMD." WebMD. October 12. Accessed January 26, 20201. <https://web.archive.org/web/19991115232106/http://my.webmd.com/>.

⁴³⁷ Aufderheide, Patricia. 2002. "Competition and Commons: The Public Interest in and After the AOL-Time-Warner Merger." *Journal of Broadcasting and Electronic Media* 46: 515-531.

segments. Although there was scholarly,⁴³⁸ regulatory,⁴³⁹ and journalistic⁴⁴⁰ concern that the AOL-Time Warner merger would lead to a monopoly in the communications industry more broadly, the Federal Trade Commission allowed the two media giants to merge, providing that the combined entity assist other, non-affiliated broadband services in becoming available to potential customers before selling AOL's broadband subscription to customers in a given location. Upon their merging, however, the combined conglomerate became a one-stop-shop for media consumption: in 2003 one could watch television, surf the web, send emails, and consume advertising from any screen in their home or office having transacted with a single financial entity that now held a large swath of digital territory.

There are other examples of corporate giants that come immediately to mind: Amazon, which nearly failed for lack of funding in the early 2000s,⁴⁴¹ saw just under \$233 billion in sales in 2018,⁴⁴² and has made its founder, Jeff Bezos, among the richest humans ever to have lived. Google, which survived the crash, now handles nearly 90% of

⁴³⁸ Lopez, Sarah. 2003. "Evaluation of the AOL Time Warner Consent Decree's Ability to Prevent Antitrust Harm in the Cable Broadband ISP Market." *Journal of Civil Rights and Economic Development* 127-175.

⁴³⁹ Federal Trade Commission. 2000. *In the Matter of America Online and Time Warner. Order To Hold Separate*, Washington DC: United States Federal Trade Commission.

⁴⁴⁰ Cnet News Staff. 2002. "AOL, Time Warner Address Merger Criticism." CNET. January 2. Accessed February 11, 2022. <https://www.cnet.com/tech/services-and-software/aol-time-warner-address-merger-criticism/>.

⁴⁴¹ Davis, Andrew. 2018. "At One Point, Amazon Lost More than 90% of Its Value. But Long-Term Investors Still Got Rich." CNBC, December 18. <https://www.cnbc.com/2018/12/18/dotcom-bubble-amazon-stock-lost-more-than-90percent-long-term-investors-still-got-rich.html>.

⁴⁴² 2018. Amazon.com, Inc. Form 10-K, Washington DC: United States Securities and Exchange Commission, 15. <https://www.sec.gov/Archives/edgar/data/1018724/000101872419000004/amzn-20181231x10k.htm>.

all web search traffic.⁴⁴³ Additionally, there are around one and a half billion users of Gmail, their web service, meaning that there are more Gmail users than there are people in China.⁴⁴⁴ These few companies mark the beginning of a structural pattern that has emerged in the post dotcom crash era: giant corporations began to have near-monopolies over certain features or facets of online life. Here, I would like to return to the highway systems of the last chapter.

As I took up in the last chapter at some length, the 20th-century highways were actor-networks that, at least in part, empowered states to expand their power and capabilities to influence the lives of people within those states. Similarly, as companies began to develop near-monopolies in segments of the post-crash internet, I argue in the remainder of this chapter, that they expanded their power by regulating the behavior of the people who make use of the web. The communities I mentioned at the beginning of the chapter have been, much like Overtown, paved over. Instead of the federal government working in cooperation with a county commission, corporations working in the wake of ARPANET paved over other possibilities for digital life. The territory may be digital, but the effects are similar, communities now exist under the digital overpasses, the derelict sites from decades past in the shadows of a glittering, homogenous platform above. Whether digital or physical, this also forecloses other possibilities. It is, for

⁴⁴³ Fishkin, Rand. 2018. "SparkToro." New Jumpshot 2018 Data: Where Searches Happen on the Web (Google, Amazon, Facebook, & Beyond). April 4. Accessed January 26, 2021. <https://sparktoro.com/blog/new-jumpshot-2018-data-where-searches-happen-on-the-web-google-amazon-facebook-beyond/>.

⁴⁴⁴ Elias, Jennifer, and Magdalena Petrova. 2019. "Google's Rocky Path to Email Domination." CNBC, October 26: <https://www.cnbc.com/2019/10/26/gmail-dominates-consumer-email-with-1point5-billion-users.html#:~:text=Google's%20Gmail%20is%20the%20dominant,1.5%20billion%20global%20active%20users.>

instance, difficult to host a citizens' meeting on I-95 unless one is willing to deal with state and local law enforcement.⁴⁴⁵ It is just as difficult to build communities of empowerment when so much of the web consists of the traffic of Amazon, Google, and the like. On the contemporary internet, economic and geographic barriers to access, as well as to creating and participating on websites, place people working outside of corporate spaces at a relative disadvantage in their ability to make room for themselves, and each other, on the feudalized internet.

Put differently, an internet designed by the state and corporations is almost certain to work better for the state and corporations than it does for other sets of actors. By the end of the dotcom era, the internet as we know it now had begun to appear. With the commercialization of the internet a decade before, the state had taken a step back, which allowed for corporations to take a large role in influencing online life. In the time after commercialization, corporations are adapting, or attempting to adapt to, the digital environment. At a time when corporations had not yet found their evolutionary strategies to ensure their digital hegemony, there was some room for empowering communities to develop. The dotcom crash foreclosed much of this development, after which the development of massive digital companies carved out increasingly large online fiefdoms. This feudalized internet, now called Web 2.0, began in earnest: the lines along which that feudalization took place is of little surprise if we hold that corporations imparted capitalist effects as programs of action into the web from its commercial inception.

⁴⁴⁵ Russell, Ty. 2020. "Peaceful Miami Protest Temporarily Shut down Lanes Of I-95 Sunday." CBS4 Miami, June 8. <https://miami.cbslocal.com/2020/06/08/peaceful-miami-protest-temporarily-shutdown-lanes-of-i-95-sunday/>.

The Shift to 2.0 as Feudalization

In some sense, Web 2.0 has, in fact, empowered people. It is possible for us to talk to one another, and we can do so to directly democratic ends. Our potential digital empowerment, however, took place within a pre-existing actor-network that borrows some of its programs of action from corporations aiming to structure their relationships with other actors to the ends of profit. This actor-network, constructed by the state and corporate actors, empowered internet subscribers as users who participate within corporate-owned platforms and generate corporate profit through the generation and sale of data. That we can do things outside of those ends online, as the imperfect territorialization of capitalist and state power in the early internet provides for, may well be because the actor-network has not yet amplified its capitalist programs of action through new methods. Even incomplete as it is, the corporate feudalization of the internet has created a clear hegemony within the online actor-network. This hegemony is clear even in instances where the explicit goal is to combat systems of domination by either state or corporate actors.

If, for instance, you wanted to follow in the footsteps of the now-defunct forums from the early days of the net and simply create a space in which people could come together and empower one another, your easiest option would be to start a group on one of the social media sites. This may have no cost to you in monetary terms, but by doing so, the corporate owners of the platform can terminate the group at any moment.

The possibility for the immediate imposition of a corporation's will on a group of persons' ability to communicate is concerning in terms of freedom. Democratic theorist

Philip Petit comments in his development of an ideal notion of freedom in the context of democracies that:

Whenever another person or body imposes their will on you, allowing you to choose only within limits that they dictate or only on conditions that they decide, their hindrance certainly targets your ability to satisfy your will and constitutes an inherently inimical assault- an invasion of your choice.⁴⁴⁶

In the context of an internet in which corporate actors can set conditions for using platforms for communications, this leaves any attempts at establishing anti-corporate platforms or sites in a precarious state, permanently pushing against the programs of actions set by corporate actors who have been willing to suspend or remove groups with which they did not, usually for public relations reasons, agree.⁴⁴⁷ The other reasonable option would be to start your own website: this is an attractive option to those, for instance, seeking to organize and empower people against the corporate actors that own social media and other platforms. Taking this route is not without serious downsides in terms of growing and maintaining digital spaces. It is, I argue, difficult to compete with a multi-billion-dollar, multi-national corporation in terms of web design, moderation, advertising spending, and, all-importantly, search-engine placement. In terms of the ability of these non-corporate sites to survive and gain enough users to empower people

⁴⁴⁶ Petit, Philip. 2012. *On the People's Terms*. Cambridge: Cambridge University Press.

⁴⁴⁷ For instance, Reddit shut down several pro-Donald Trump subreddits in January 2021, shortly after many posts in that subreddit began to voice support for a coup in the United States. See: Reddit. 2022. "Congressional Subpoena to Reddit." Subpoena to Steven Huffman, CEO of Reddit. Washington DC: One Hundred Seventeenth Congress Select Committee to Investigate the January 6th Attack on the United States Capitol, January 13. https://january6th.house.gov/sites/democrats.january6th.house.gov/files/2022-1-13.BGT%20Letter%20to%20Reddit%20-%20Cover%20Letter%20and%20Schedule_Redacted.pdf.

to engage with one another in democratic deliberation, this presents major challenges to both Pettit's conception of freedom as non-domination⁴⁴⁸ as well as the Habermasian ideal speech situation.⁴⁴⁹ There are some additional concerns that I highlight here in terms of the feudalization of digital power.

The first is that even a non-commercial website is no longer free to set up and operate. Corporate actors have, at this point, purchased many millions of domain names: this began in the early dot-com era and continues today. To start a website, then, one must first pay one of those companies for the right to occupy that digital space to lease or buy a domain. The largest of these own tens of millions of domains.⁴⁵⁰ This not only adds a financial barrier to entry into cyberspace as a website owner but, once again, places the website in a corporate context where corporate actors regulate and govern all the content. It bears a striking similarity to the labor of serfs under feudal politics. You may gain the right to sow seeds and reap grain, but the land will still belong to the lord at the end of the day. The second is the problem of population. As I develop in detail in the following chapter, people tend to be creatures of digital habit: once they have found online communities with which they are compatible, it is difficult due to their psychology and the design of those platforms, to get them to look at new options. An average internet user visits fewer than one hundred domains per month, an increasingly tiny fraction of

⁴⁴⁸ A corporation censoring or shutting down a group, I argue, would fall well in line with what Pettit calls an "invasion." Petit 2012, Pg. 295.

⁴⁴⁹ The ability of corporations, rather than fellow participants in a discourse, to shut down a group is keeping in mind chapter two's reformulation of the Habermasian ideal, a constraint inherent to the structure of communication.

⁴⁵⁰ Domain State. 2020. Top Domain Registrars. Technical Data, August. <https://www.domainstate.com/top-registrars.html>.

the more than one billion websites.⁴⁵¹ Self-described digital cultural theorist Lev Manovich warns that corporations use user-generated data that are not accessible to the users, or to scientists in myriad fields, to do with what they will, including sell the data or use it to engender greater user engagement.⁴⁵² Many millions of these users find that their internet usage interferes with the normal function of their lives, leading to a growing body of clinical research into internet addiction and its treatment.⁴⁵³ For no small proportion of users, the internet has evolved from a place to shop into something that occupies more of their time and energy.

Though he did not live to see the dawn of the digital age, Theodor Adorno's contribution to a critical understanding of mass culture is helpful to get a sense of why the internet has become so friendly to corporate interests rather than one where empowering deliberation and mutual aid are the norms, with a focus on the relationship between consumers and corporate actors. Here, we'll begin with some of the more enlightening passages from his *Minima Moralia*, his reflections on capitalist culture as he saw it in the late 1940s. One of the continuous themes of the work, and a concern he shared with his contemporary Hannah Arendt,⁴⁵⁴ was the tendency of modern conditions to erode the inner life of the individual until there is nothing left aside from production

⁴⁵¹ LaFrance, Adrienne. 2015. "How Many Websites Are There?" The Atlantic, September 15. <https://www.theatlantic.com/technology/archive/2015/09/how-many-websites-are-there/408151/>.

⁴⁵² Manovich, Lev. 2011. "Trending: The Promises and the Challenges of Big Social Data." manovich.net.

⁴⁵³ Pan, Yuan-Chien, Chiu-Yu Chuah, and Yu-Hsuan Lin. 2020. "Systematic review and meta-analysis of epidemiology of internet addiction." *Neuroscience and Behavioral Reviews* 612-622.

⁴⁵⁴ Arendt, Hannah. 1998. *The Human Condition*. Chicago: The University of Chicago Press.

and consumption has reduced human life to a mere cog in a larger machine.⁴⁵⁵ With this degradation of inner life where contemplation and aesthetic beauty can be cultivated, one of the first things to go was any sense of tact.⁴⁵⁶ I would suggest that you venture to any YouTube video's comment section to see exactly the kind of tactless behavior that Adorno suggests people exhibit when, instead of an interior life of contemplation, we have the constant production of a commodity, in this case, the three-faceted commodity of data, profit, and content.

What we retain is a life of constant production and consumption.⁴⁵⁷ This is, at least in part, a temporal and practical matter. Given that most people spend most of their time either at work or in their sparse "free" time consuming through either shopping or staring at one screen or another (even though it is making us depressed),⁴⁵⁸ they give little time for reflection and contemplation. If this was the case in the 1940s when Adorno was writing, we have had several generations of people raised under those conditions since. Thus, even when Mass Man has the tools that make connecting to shared thoughts easier than it ever has been in human history, we should not be surprised that instead of participating in democratic thoughts and practices, he shares racist barbs in comments

⁴⁵⁵ Adorno, Theodor. 2020. *Minima Moralia*. London: Verso. Pg. 30.

⁴⁵⁶ Adorno 2020, pg. 40.

⁴⁵⁷ *Ibid*, 46.

⁴⁵⁸ Madhav, KC, Shardulendra Sherchand, and Samendra Serchand. 2017. "Association Between Screen Time and Depression Among US Adults." *Preventative Medicine Reports* 8: 67-71.

sections littered with ads for snake oil. We have forgotten if we ever learned how to act jointly with solidarity for one another on a human level.⁴⁵⁹

Filling the vacuum left by the slow degradation of the interior life via its griding away by near-constant production and consumption, Adorno finds that:

Yet since integral society does not so much take up individuals positively within itself as crush them into an amorphous and malleable mass... doing things and going places is an attempt by the sensorium to set up a kind of counter-irritant against a threatening collectivization, to get in training for it by using the hours apparently left to freedom to coach oneself as a member of the mass.⁴⁶⁰

Having not found the time within the Web 2.0, 1.0, or antecedent modern capitalist modes of living, it is the case that we have not, as Mass Men, learned how to deliberate, or articulate ourselves in ways other than those that parrot what we have already learned through repeated acts of production and consumption. Thus, to spit venom to “own the libs”⁴⁶¹ provides a similar sort of training that Adorno asserts is at the heart of the creation of thoughtless consumer culture. This training, I argue, makes Mass Man expertly trained as a producer and consumer,⁴⁶² and it does so in ways that bring people not only to follow along with the flow of the masses but also to recognize its horror. As Adorno further notes, “...even from every pictorial representation, he [Mass

⁴⁵⁹ Ibid, 55.

⁴⁶⁰ Ibid, 148.

⁴⁶¹ Longman, Martin. 2018. "“Owning the Libs” Has Always Been with Us." Washington Monthly, July 26: Online.

⁴⁶² Adorno 2020, Pg. 213.

Man] is assailed by the death sentence on the subject, which is implicit in the universal triumph of universal reason.”⁴⁶³ That mass culture totalizes in its search for profit at the expense of the expression of individual life, and turns quality into quantity, useful things into commodities, and thinking into content. What we have wrought, in the 20th and 21st centuries, is a paving over of difference, through the culture industry, to make profitable and efficient sameness. What we may well have lost in the process is the capability to formulate clear and meaningful thought that runs contra to the system. This process was already well underway when Adorno was writing seven decades ago: it has, if anything, accelerated with the new tools of the web. How these users, under Web 2.0, interact with one another, as well as with political life, is the main theme of discussion for the proceeding chapter, how mass man has become a user, and what he has done with the Web, has begun to have ramifications that run to the heart of the future of democracies.

Conclusion

This chapter has drawn a critical history of the internet from its commercialization, through the dot-com era and subsequent crash, and to roughly the present, Web 2.0 environment. In doing so, I focus on corporate actors, a critical agent in the construction of the actor-network that we now call the internet. The state, which had spent the latter third of the 20th century bankrolling the creation of ARPANET, NSFNET, and other precursors to the internet, established an actor-network in which the state had built a means of reifying and expanding its powers and capabilities, paving over, in the process, other possibilities. With the state ceding control over the internet, allowing for

⁴⁶³ Ibid, 151.

commercial use in the early 1990s, it is of no surprise that, in the dot-com era, corporate actors given free rein by the state used the internet to attempt to expand their power. Once persons outside of academic and defense industries began to gain access to the commercialized internet, they did so as users who consumed goods and services but also produced data that has become the major engine of corporate profits on the contemporary web. These users, in accessing the web, participate in an actor-network that, has been, since the World Wide Web in the early 1990s, then described as a global phenomenon. In evoking Deleuze's metaphor of a gas-like modality of power, it would be easy to assume, like gas in a container, that the web spreads evenly over the whole of the Earth. This is not quite the case, and a look at the physical distribution of the internet under Web 2.0 serves to highlight the paths along which power flows in this actor-network.

Before the dot-com crash in 2000, corporate actors, as a set of actors, pursued varying strategies in their attempts to survive and grow in the online space. This, I find, bears similarities to Habermas' retelling of early bourgeois politics in Europe: before the corporations took more full control of the internet, there was more room online for people to create communities that were outside of the interests of corporations, and they did so with some degree of success. The dot-com crash, though, was the catalyst for a change in the dynamics of power online. While many corporate actors found themselves unfit for survival in the crash and post-crash internet, those that did survive did so by adopting a shared strategy that has influenced the construction of the web in the year preceding the crash.

This strategy, the development of which was on full display in conferences where current leaders of corporate actors met to formulate it, called for a new conception of the

web, entitled Web 2.0. Under Web 2.0, companies would seek instead of creating sites of simple commerce to create platforms in which internet subscribers become users through their cooptation as producers of data, a new commodity for corporations. These users, spending more and more of their time on the platforms, would perform the digital labor of data creation. Corporations, in turn, use that data both to generate profit through its sale, as well as using it themselves to engineer ways in which to engage more users. The commodity of Web 2.0 became data, and the goal of the corporate actors became the capture of the users' time and participation in platforms to, in effect, mine data to sell. This has resulted in the growth of massive platforms that become near-monopolies online and control, thusly, the digital activities of growing proportions of the human population. This carving out of large digital territories, paving over the possibilities which had begun to emerge in the pre-crash internet structurally resembles the feudalization Habermas found in bourgeois political spheres two centuries ago. In creating Web 2.0 platforms as digital fiefdoms, corporate actors designed the actor-network of the internet in such a way that corporate power increases its hold on the internet and the everyday people who would use it, over time. These people, now users, have become, largely without their knowledge, the key source of both labor and the market for the consumption of the data that corporations thrive on in the Web 2.0 era. Corporations do not directly compensate users monetarily: the prosumer gets use of the platform and in exchange gives up their time and data in return. This time and data are far more valuable than the mere use of, for example, a social media platform. This relationship, in which the corporate actor has taken on a hegemonic role, places users at a disadvantage in terms of power: attempts to make use of the internet for non-corporate ends typically means engaging with corporate-

owned platforms, to begin with, or the adoption of similar tactics as corporate entities to survive in the actor-network.

This structuring of the network around corporate platforms empowered corporations to become wealthier and more powerful than they were before: the social media, web service providers, and online retailer corporations today have made most of us their workforce and their consumers, simultaneously. Unpaid labor by users, who typically pay a subscription to access the internet, accounts for much of the profit of contemporary digital companies. With our roles as simultaneous consumers and producers built so thoroughly into the actor-network, there may be little room left for users to make use of the web to empower themselves or each other to engage in activities other than production or consumption. Those same users, though their use of Web 2.0 platforms is necessary for the business models and survival of online corporate actors. They are, along with the state that helped to create but has been so reluctant to regulate that creation, constituent members of an actor-network that is constantly growing and changing in both its features and its impacts on all those actors, as well as those who do not engage online at all.

Through the lens of an adapted-ANT analysis that takes cues from new materialist descriptions of the effects of capitalism, the structuring of the web such that it empowers corporate actors should not be surprising. It would have been more shocking had those early efforts at mutual empowerment in the early days of the web become the norm; the programs of action of the contemporary internet had, at that point, been long set by corporate actors. Using the internet in ways that are not in line with corporate interests is increasingly difficult in its current, feudalized state: those corporate actors that represent

the top of this feudal hierarchy have done a thorough job in claiming power over much of the internet. The platforms that make up the web, on which we interact, took their formative structures from actors who had participated in recent corporate, capitalist history and the expansion of the modern state; it should not, thus, surprise us that those platforms seek, through the repetition of productive and consumptive acts, to constitute everyday people as users who act increasingly under corporate interests.

The three constituent actors of the internet are the state, corporations, and users. I have thus far covered two at length in this work as the foci of chapters. What remains, then, is a careful consideration of the role that users play in the shaping of the internet today, and what they have done with the digital platforms built by the state, and then overtaken by corporations. Thus, the following chapter takes up the task of mapping out the processes by which, through the platforms of Web 2.0, persons become users who, in that transformation, relate to one another, and to politics, differently than they did before the advent of the internet, sometimes to undemocratic ends.

Bibliography

Adorno, Theodor. 1991. *The Culture Industry*. New York: Routledge.

Ali, Saleem. 2014. "Social and Environmental Impact of the Rare Earth Industries." *Resources* 123-134.

Allen, Cara, and Nathan Alleman. 2019. "A Private Struggle at a Private Institution: Effects of Student Hunger on Social and Academic Experiences." *Journal of College Student Development* 52-69.

2018. *Amazon.com, Inc.* Form 10-K, Washington DC: United States Securities and Exchange Commission, 15.
<https://www.sec.gov/Archives/edgar/data/1018724/000101872419000004/amzn-20181231x10k.htm>.

- Ante, Spencer, and Catherine Holahan. 2008. "Generation Myspace is Getting Fed Up." *NBC News*, February 8. <https://www.nbcnews.com/id/wbna23073811>.
- Arendt, Hannah. 1958. *Men in Dark Times*. New York: Harcourt, Brace, And World.
- . 1958. *The Human Condition*. Chicago: University of Chicago Press.
- Aufderheide, Patricia. 2002. "Competition and COmmons: the Public Interest In and After the AOL-Time-Warner Merger." *Journal of Broadcasting and Electronic Media* 46: 515-531.
- Bates, Thomas. 1975. "Gramsci and the Theory of Hegemony ." *Journal of The History of Ideas* 351-366.
- Berlin, Isaiah. 1982. *Four Essays On Liberty*. Oxford: Oxford University Press.
- Bimber, Bruce. 2000. "Measuring the Gender Gap on the Internet." *Social Science Quarterly* 81 (3): 868-876.
- Black Lives Matter. n.d. *Black Lives Matter*. Accessed January 14, 2021. <https://blacklivesmatter.com/>.
- Bloom, Nicholas. 2020. *How Working From Home Works Out*. Policy Brief, Stanford: Stanford Institute for Economic Policy Research. <https://siepr.stanford.edu/research/publications/how-working-home-works-out>.
- Bunn, Austin. 1998. "Free for All." *The Village Voice*, January 20: <https://www.villagevoice.com/1998/01/20/free-for-all/>.
- Butler, Judith. 2011. *Bodies that Matter*. New York: Routledge.
- Calore, Michael. 2009. "A History of Microsoft Windows." *Wired*, December 10. <https://www.wired.com/2008/12/wiredphotos31/>.
- CBS News. 2014. "15 years ago: The Limited Edition Y2K assault rifle." *CBS News*, December 30. <https://www.cbsnews.com/news/flashback-the-limited-edition-y2k-assault-rifle/>.
- Choksi, Niraj. 2019. "Myspace, Once the King of Social Networks, Lost Years of Data From Its Heyday." *New York Times*, March 19. <https://www.nytimes.com/2019/03/19/business/myspace-user-data.html>.
- CNET. 2002. "NSI Makes Timely Change to Domain Payment Policy." *CNET*, Jan 2: <https://www.cnet.com/news/nsi-makes-timely-change-to-domain-payment-policy/>.

- Cnet News Staff. 2002. "AOL, Time Warner Address Merger Criticism ." *CNET*. January 2. Accessed February 11, 2022. <https://www.cnet.com/tech/services-and-software/aol-time-warner-address-merger-criticism/>.
- CNN Money. 2000. "NASDAQ Tumbles on Japan." *CNN*, March 13. https://money.cnn.com/2000/03/13/markets/markets_newyork/.
- Cochran, James, Ali Darrat, and Khaled Elkhal. 2006. "On The Bankruptcy of Internet Companies: An Empirical Inquiry." *Journal of Business Research* 1193-2000.
- Crain, Matthew. 2014. "Financial Markets and Online Advertising: Reevaluating the Dotcom Investment Bubble." *Information, Communication, and Society* 17: 317-384.
- Cuomo, S. 2007. *Technology and Culture in Greek and Roman Antiquity*. Cambridge: Cambridge University Press.
- Curlew, Abigail. 2019. "Doxxing, Vigilantes, and Transmisogyny." *Medium*, May 3. <https://medium.com/@digitaljusticelab/doxxing-vigilantes-and-transmisogyny-c2b8a6abb2b2>.
- Daniels, Jessie. 2009. "Cyberfeminism(s): Race, Gender, and Embodiment." *Women's Studies Quarterly* 101-104.
- David, Andrew. 2018. "At One Point, Amazon Lost More than 90% of Its Value. But Long-Term Investors Still Got Rich." *CNBC*, December 18. <https://www.cnbc.com/2018/12/18/dotcom-bubble-amazon-stock-lost-more-than-90percent-long-term-investors-still-got-rich.html>.
- Davies, Rob, and Dominic Rushe. 2019. "Facebook to pay \$5bn fine as regulator settles Cambridge Analytica complaint." *The Guardian*, July 24. <https://www.theguardian.com/technology/2019/jul/24/facebook-to-pay-5bn-fine-as-regulator-files-cambridge-analytica-complaint>.
- Deleuze, Gilles. 1994. *Difference and Repetition*. New York: Columbia University Press.
- Deleuze, Gilles. 1992. "Postscript on the Societies of Control." *October* 3-7.
- DiNucci, Darcy. 1999. "Fragmented Future." *Print*, April: 23, 221-222.
- Domain State. 2020. *Top Domain Registrars*. Technical Data, August. <https://www.domainstate.com/top-registrars.html>.
- Doorn, Niels Van. 2011. "Digital Spaces, Material Traces: How Matter Comes to Matter in Online Performances of Gender, Sexuality, and Embodiment." *Media, Culture, and Society* 531-547.

- Drosnin, Michael. 2004. *Citizen Hughes*. New York: Broadway Books.
- Eisenhower, Dwight. n.d. "Transcript of President Dwight D. Eisenhower's Farewell Address (1961)." *ourdocuments.gov*. Accessed January 19, 2021. <https://www.ourdocuments.gov/doc.php?flash=false&doc=90&page=transcript>.
- Elias, Jennifer, and Magdalena Petrova. 2019. "Google's Rocky Path to Email Domination." *CNBC*, October 26: <https://www.cnbc.com/2019/10/26/gmail-dominates-consumer-email-with-1point5-billion-users.html#:~:text=Google's%20Gmail%20is%20the%20dominant,1.5%20billion%20global%20active%20users>.
- Fashkin, Rand. 2018. "SparkToro." *New Jumpshot 2018 Data: Where Searches Happen on the Web (Google, Amazon, Facebook, & Beyond)*. April 4. Accessed January 26, 2021. <https://sparktoro.com/blog/new-jumpshot-2018-data-where-searches-happen-on-the-web-google-amazon-facebook-beyond/>.
- Federal Trade Commission. 2000. *In the Matter of America Online and Time Warner. Order To Hold Separate*, Washington DC: United States Federal Trade Commission.
- Ferreday, Debra. 1998. "Becoming Deer: Nonhuman Drag and Online Utopias." In *Meaning and Gender in Cyberspace: The Performance of Gender, Class, and Race Online*, by Kendall. Online.
- Forson, Cynthia, and Mustafa Ozbilgin. 2000. *Dotcom Women Entrepreneurs in the UK*. Working Paper, Hertfordshire: The University of Hertfordshire Business School.
- Foucault, Michel. 1995. *Discipline and Punish*. New York: Random House.
- Goodnight, Thomas, and Sandy Green. 2010. "Rhetoric, Risk, and Markets: the Dot-Com Bubble." *Quarterly Journal of Speech* 69 (2): 115-140.
- Green, Jeremy. 2016. "Anglo_American Development, the Euromarkets, and the Deeper Origins of Neoliberal Deregulation." *Review of International Studies* 42: 425-449.
- Grosswiler, Paul. 2001. "Jürgen Habermas: Media Ecologist?" *Proceedings of the Media Ecology Association*, 22-31.
- Group, The World Bank. 2019. "Individuals Using the Internet (% of Population)." *The World Bank*. Accessed February 3, 2021. https://data.worldbank.org/indicator/IT.NET.USER.ZS?most_recent_value_desc=true&view=chart.
- Habermas, Jurgen. 2001. *The Inclusion of the Other*. Cambridge: MIT Press.

- . 1991. *The Structural Transformation of the Public Sphere*. Cambridge: The MIT Press.
- Haraway, Donna. 1991. *Simians, Cyborgs, and Humans*. New York: Routledge.
2009. *We Live In Public*. Directed by Ondi Timoner. Performed by Josh Harris.
- Hohle, Randolph. 2012. "The Color of Neoliberalism: the "Modern Southern Businessman" and Postwar Alabama's Challenge to Racial Desegregation." *Sociological Forum* 27: 142-162.
- Hwang, Tim. 2020. *Subprime Attention Crisis*. New York: Farrar, Strauss, and Giroux.
- International Telecommunications Union. 2017. *ICT Facts and Figures 2017*. Geneva: International Telecommunications Union.
- Isaac, Mike. 2021. "Facebook's profit surges 101 percent on strong ad sales." *The New York Times*, July 28. <https://www.nytimes.com/2021/07/28/business/facebook-q2-earnings.html>.
- Katz, Richard. 1999. "Pseudo Programs Interacts With \$14 Mil Capital Infusion." *Variety*, June 17: <https://variety.com/1999/biz/news/pseudo-programs-interacts-with-14-mil-capital-infusion-1117503201/>.
- Kendall, Lori. 1998. "Meaning and Identity in Cyberspace." *Symbolic Interaction* 129-153.
- Koch, Nadine, and Eric H Shuckmann. 1998. "Democratizing Internet Access in the Lesbian, Gay, and Bisexual Communities." In *Cyberghetto or Cybertopia?*, edited by Bosah Ebo, 171-184. Westport: Praeger.
- Kushner, David. 2019. *Player's Ball*. New York: Simon and Schuster.
- Lafrance, Adrienne. 2015. "How Many Websites Are There?" *The Atlantic*, September 15. <https://www.theatlantic.com/technology/archive/2015/09/how-many-websites-are-there/408151/>.
- Lam, Patrick, Jens Dietrich, and David Pearce. 2008. "Putting the Semantics into Semantic Versioning." *arXiv*. <https://arxiv.org/pdf/2008.07069.pdf>.
- Latour, Bruno. 2005. *Reassembling the Social*. Oxford: Oxford University Press.
- Lenin, VI. 1966. "Imperialism, the Highest Stage of Capitalism." In *Essential Works of Lenin*, edited by Henry Christman, 177-364. New York: Dover.

- Lévi-Strauss, Claude. 1955. "The Structural Study of Myth." *The Journal of American Folklore* 428-444.
- Lopez, Sarah. 2003. "Evaluation of the AOL Time Warner Consent Decree's Ability to Prevent Antitrust Harm in the Cable Broadband ISP Market." *Journal of Civil Rights and Economic Development* 127-175.
- Madhav, KC, Shardulendra Sherchand, and Samendra Serchand. 2017. "Association Between Screen Time and Depression Among US Adults." *Preventative Medicine Reports* 8: 67-71.
- Manovich, Lev. 2011. "Trending: The Promises and the Challenges of Big Social Data." manovich.net.
- Marx, Carl. 1978. "The British Rule in India." In *The Marx- Engels Reader*, edited by Robert Tucker, 653-664. New York: WW Norton and Company.
- McIlwain, Charlton. 2020. *Black Software*. Oxford: Oxford.
- Medialive International; O'Reilly Media Inc. . 2004. "Web 2.0 Conference." June 02. Accessed January 27, 2021. web.archive.org/web/20040602111547/http://web2con.com/.
- Meltzer, Allan. 1988. "Economic Politics and Actions in the Regan Administration." *Journal of Post-Keynesian Economics* X (4): 528-540.
- Meta Platforms, Inc. 2022. *Meta Reports Fourth Quarter and Full Year 2021 Results*. Corporate Press Release, Menlo Park, California: Meta Platforms, Inc. <https://investor.fb.com/investor-news/press-release-details/2022/Meta-Reports-Fourth-Quarter-and-Full-Year-2021-Results/default.aspx>.
- Meta. 2022. "Terms of Service." *Facebook*. January 4. Accessed February 4, 2022. <https://www.facebook.com/terms.php?ref=pf>.
- Miles, Sam. 2018. "Still Getting It ON Online: Thirty Years of Queer Male Spaces Brokered Through Digital Technologies." *Geography Compass*. doi:10.1111/gec3.12407.
- Moschovitis, Christos, Hillary Poole, Tami Schuyler, and Theresa Senft. 1999. *History of the Internet: A Chronology, 1843 to the Present*. Santa Barbara: ABC-CLIO.
- Mouffe, Chantal. 1999. "Deliberative Democracy or Agonistic Pluralism ." *Prospects for Democracy* 745-758.
- Musser, John. 2007. *Web 2.0 Principles and Best Practices*. Sebastopol: O'Reilly Media Inc.

- Needleman, Sarah. 2021. "Facebook's Ad Business Drives Surge in Revenue, Following Google's Act." *The Wall Street Journal*, April 28.
<https://www.wsj.com/articles/facebook-fb-1q-earnings-report-2021-11619610405>.
- Neff, Gina. 2012. *Venture Labor*. Cambridge: The MIT Press.
- Network Working Group. 1984. *Domain Requirements*. October. Accessed December 15, 2020. <https://tools.ietf.org/html/rfc920#page-2>.
- OECD. 2018. *Bridging the Rural Digital Divide*. OECD Digital Economy Paper, OECD Publishing. <https://www.oecd-ilibrary.org/docserver/852bd3b9-en.pdf?expires=1612809683&id=id&accname=guest&checksum=B2001CE803665AA70EAB3E7178AE6667>.
- Olsen, Stefanie. 2004. "Mark Cuban Raises Specter of Dot-Com Redux." *Cnet*. October 2. Accessed January 26, 2022.
https://web.archive.org/web/20050316013930/http://news.com.com/Mark+Cuban+prompts+dot-com+redux/2100-1026_3-5400029.html?tag=nefd.top.
- O'Reilly Media. 2010. "Web 2.0 Summit 2010: Mark Zuckerberg, "A Conversation with Mark Zuckerberg"." *Youtube*. November 19. Accessed January 28, 2022.
<https://web.archive.org/web/20101206063625/http://www.youtube.com/watch?v=CRUOI03nZlc&p=2737D508F656CCF8>.
- O'Reilly, Tim. 2005. "What is Web 2.0." *O'Reilly Network*. August 30. Accessed January 27, 2021. <https://www.oreilly.com/lpt/a/1>.
- Pan, Yuan-Chien, Chiu- Yu Chuah, and Yu-Hsuan Lin. 2020. "Systematic review and meta-analysis of the epidemiology of internet addiction." *Neuroscience and Behavioral Reviews* 612-622.
- Petit, Philip. 2012. *On the People's Terms*. Cambridge: Cambridge University Press.
- Plato. 1993. *The Republic*. Translated by Robin Waterfield. New York: Oxford University Press.
- Poland, Bailey. 2016. *Haters*. Potomac Books.
- Poulsen, Kevin. 1998. "The Y2K Solution: Run for Your Life!!" *Wired*, January 1.
<https://www.wired.com/1998/08/y2k-2/>.
- Rawls, John. 2005. *A Theory of Justice*. Cambridge: Harvard University Press.
- . 2005. *Political Liberalism*. New York: Columbia University Press.

- Reddit. 2022. "Congressional Subpoena to Reddit." *Subpoena to Steven Huffman, CEO of Reddit*. Washington DC: One Hundred Seventeenth Congress Select Committee To Investigate the January 6th Attack on the United States Capitol, January 13. https://january6th.house.gov/sites/democrats.january6th.house.gov/files/2022-1-13.BGT%20Letter%20to%20Reddit%20-%20Cover%20Letter%20and%20Schedule_Redacted.pdf.
- . 2021. "Random Acts of Pizza-Restoring Faith in Humanity, One Slice at a Time." *Reddit*. February 2. Accessed February 2, 2021. https://www.reddit.com/r/Random_Acts_Of_Pizza.
- Ritter, Jay. 2014. "Google's IPO, 10 Years Later." *Forbes*, August 7. <https://www.forbes.com/sites/jayritter/2014/08/07/googles-ipo-10-years-later/?sh=4209a6292e6c>.
- Ritzer, George, and Jurgensen, Nathan. 2010. "Production, Consumption, and Prosumption." *Journal of Consumer Culture* 13-36.
- Robert, Reich. 2005. "The Lost Art of Democratic Narrative." *The New Republic*, March 21.
- Robinson, Brett. 2009. "E-waste: An Assessment of Global Production and Environmental Impacts." *Science of the Total Environment* 183-191.
- Rusche, Dominic. 2011. "Myspace sold for \$35m in spectacular fall from \$12bn heyday." *The Guardian*, June 30. <https://www.theguardian.com/technology/2011/jun/30/myspace-sold-35-million-news>.
- Russel, Ty. 2020. "Peaceful Miami Protest Temporarily Shutdown Lanes Of I-95 Sunday." *CBS4 Miami*, June 8. <https://miami.cbslocal.com/2020/06/08/peaceful-miami-protest-temporarily-shutdown-lanes-of-i-95-sunday/>.
- Salkin, Allen. 2009. "For Him, The Web Was No Safety Net." *The New York Times*, August 28: <https://www.nytimes.com/2009/08/30/fashion/30harris.html?ref=fashion&pagewanted=all>.
- Sastry, Anjuli, and Karen Grisby Bates. 2017. "When LA Erupted In Anger: A Look Back At The Rodney King Riots." *NPR*, April 26. <https://www.npr.org/2017/04/26/524744989/when-la-erupted-in-anger-a-look-back-at-the-rodney-king-riots>.
- Schorer, Mark. 1959. "The Necessity of Myth." *Daedalus* 360.

- Shinhal, John. 2005. "Netscape, the IPO That Launched an Era." *Marketwatch*, August 5. <https://www.marketwatch.com/story/netscape-ipo-ignited-the-boom-taught-some-hard-lessons-20058518550>.
- Smith, Andrew. 2012. *Totally Wired: The Rise and Fall of Josh Harris and the Great Dotcom Swindle*. New York: Black Cat.
- Steinberg, Daniel. 2004. "Making the Internet Useful for Computers." *O'Reilly Network Web 2.0 Conference Coverage*. October 6. Accessed January 27, 2022. <https://web.archive.org/web/20050605235218/http://www.oreillynet.com/pub/a/network/2004/10/06/bezos.html>.
- Teeter, Preston, and Jorgen Sandberg. 2017. "Cracking the Enigma of Asset Bubbles With Narratives." *Strategic Organization* 15: 91-99.
- The African American Literature Book Club. 2021. *The African American Literature Book Club*. February 2. Accessed February 2, 2021. <https://aalbc.com/aboutus.php>.
- The World Bank Group. 2018. "Access to Electricity (% of Population)." *The World Bank*. Accessed February 3, 2021. https://data.worldbank.org/indicator/EG.ELC.ACCS.ZS?most_recent_value_desc=true.
- The World Bank. n.d. "Individuals using the Internet (% of the population) - Ethiopia." *The World Bank*. Accessed December 7, 2020. <https://data.worldbank.org/indicator/IT.NET.USER.ZS?locations=ET>.
- . 2021. "World Bank Country and Lending Groups." *The World Bank*. Accessed February 3, 2021. <https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups>.
- Thornton, Jennifer, and Sunny Marche. 2003. "Sorting Through the Dot Bomb Rubble: How did the High-Profile E-Tailers Fail?" *International Journal of Information Management* 23 (2): 121-138.
- Torkjazi, Motjaba, Reza Rejaie, and Walter Willinger. 2009. "Hot today, gone tomorrow: on the migration of MySpace users." *Proceedings of the 2nd ACM workshop on Online Social Networks*. Association for Computing Machinery. 43-48.
- Unema, Francine. 2019. "20 Years Later, the Y2K Bug Seems Like a Joke—Because Those Behind the Scenes Took It Seriously." *Time*, December 30. <https://time.com/5752129/y2k-bug-history/>.

- Van Duyen, Aline, and Richard Waters. 2006. "Google in \$900m ad deal with MySpace." *Financial Times*, August 8. <https://www.ft.com/content/17e8e67e-2660-11db-afa1-0000779e2340>.
- Varma, Roli. 2010. "Why So Few Women Enroll in Computing? Gender and Ethnic Differences in Students' Perceptions." *Computer Science Education* 4: 301-316.
- Vetter, RJ, C Spell, and C Ward. 1994. "Mosaic and the World Wide Web." *Computer* 49-57.
- Virilio, Paul. 2006. *Speed and Politics*. Cambridge: Semiotext(e).
- Wagner, Kurt. 2017. "Reddit raised \$200 Million in Funding and is Now Valued at \$1.8 Billion." *Vox*, July 31. <https://www.vox.com/2017/7/31/16037126/reddit-funding-200-million-valuation-steve-huffman-alexis-ohanian>.
- Warren, Elizabeth. 2019. "Here's how we can break up Big Tech." *Here's How We Can Break Up Big Tech*, March 8. <https://medium.com/@teamwarren/heres-how-we-can-break-up-big-tech-9ad9e0da324c>.
- Warren, Mark. 1989. "Liberal Constitutionalism as Ideology: Marx and Habermas." *Political Theory* 519.
- WebMD. 1999. "Welcome to WebMD." *WebMD*. October 12. Accessed January 26, 20201. <https://web.archive.org/web/19991115232106/http://my.webmd.com/>.
- Weston, Lizz Pulliam. 2000. "Stock Options Add Wrinkle For Many Dot-Com Employees." *The Los Angeles Times*, December 22. <https://www.latimes.com/archives/la-xpm-2000-dec-22-fi-3328-story.html>.
- Young, Marion Iris. 2000. *Inclusion and Democracy*. Oxford: Oxford University Press.

Chapter Five: Compressed Political Temporalities in a Feudalized Internet as a Threat to Peaceful Democratic Participation

Introduction

Thus far in this work, I drew a critical history of the internet through the lens of an adapted ANT analysis influenced by the descriptive elements of new materialist thought. In so doing, I made the case that the contemporary internet, in its feudalized state, forecloses some deliberative possibilities through the deployment of capitalist programs of action by the corporations that own online platforms. This foreclosure represents a feudalization of digital politics that envisions the corporation as the actor with hegemony over much of digital life and inscribes people as producers and consumers to the detriment of a more potentially democratic digital life. In this chapter, I turn more closely to people's experiences with technologies that hasten flows of information and make the case that, in its current configuration, the speed at which the internet provides information to people as producers and consumers places people at the edge of their cognitive limits as human actors, making it more difficult to think and act critically to democratic ends.

In describing contemporary society's obsession with technological progress, French architectural and social theorist Paul Virilio comments:

That progress is nothing more than the progress of a deliriously bustling eagerness, not to say a collective rage, triggered by a sudden panic that's turned into a PANDEMIC. A pandemic that has everything to do with the reality effect of the acceleration of information and its sudden demands. For, the

INSTANTANIETY of the disarray of each one of us will soon contaminate the way of life of all.⁴⁶⁴

Though Virilio was making use of the word “pandemic” as a metaphor describing the realization of terror and deterritorialization of social and political life in the contemporary age, it has come to pass that we have faced a literal pandemic on a global scale. This pandemic has occurred on a similar scale, then, to the spread of the internet and its effects on human lives. The effect he describes, disarray, has taken hold of our political lives and its contamination has become apparent as the institutions of democracy have fallen under attack in recent years. This nearly prophetic statement by Virilio places its fingertip on the pulse of some of the most pressing and troubling aspects of digital political life, and they demand careful examination if we are to better understand how power functions in an increasingly digitized world in which a feudalized internet shapes how corporate actors, people, and the state interact.

In chapter two, I outlined that, in the years leading up to and directly after the commercialization of the internet, there were hopes for the internet as a space in which people could come together, empowering one another to participate in discourse that could lead to a more inclusive political life for a growing number of people across class, race, gender, and national origin. Those hopes occasionally do come to fruition: several websites, from both the pre- and post-dotcom crash eras of the internet, sought to do just

⁴⁶⁴ Virilio, Paul. 2012. *The Great Accelerator*. Malden: Polity Press. Pg. 61. The original French version came out in 2010. Capitalized words for emphasis are from the English translation of the text.

that,⁴⁶⁵ and some have met the aims of democratic theorists to at least some extent.⁴⁶⁶ These limited examples, I argue, are the exception rather than the rule. The internet, I argued in chapters three and four, is an actor-network consisting of the state, corporate actors, and persons related to one another through power-laden connections. In the pre-internet period of ARPANET, the state, cooperating with corporate actors developed these information systems to amplify the power of the state, along the lines of national security and defensive research. As of the early 1990s, the state has ceded much of its power to corporate actors, who, in the post-dotcom crash era, also called Web 2.0, have begun to feudalize the internet in such a way that it expands their power. In that feudalized internet, people have increasingly used the internet through large, corporate-run platforms. In so doing, we enter an actor-network in which corporate actors' programs of action developed and develop digital platforms meant to facilitate the generation of profit.

This chapter turns directly to developing an understanding of the processes by which user experiences on the feudalized internet erode people's ability to think critically and (therefore) participate in democratic politics. To do so, I focus, in this chapter, on the ways in which people experience time through technology. Making use of the work of Paul Virilio as a jumping-off point, I make the case that many aspects of the corporate-centric, feudalized internet cause users to experience task saturation. This task saturation, I further develop making use of the political implications of the psychological work of

⁴⁶⁵ Two examples: Opensecrets.org, which aims to provide nonpartisan political donor information, and Politifact, which fact-checks the statements of political figures and news outlets. By providing a common set of objective information, I claim, citizens can become empowered to make better decisions politically.

⁴⁶⁶ For example, in previous chapters I discuss the African American Book Club, as well as the Subreddit /r/randomactsofpizza as examples of empowering online spaces.

Daniel Kahneman, entrenches people in the modes of thinking that they previously inhabited and limits the users' ability to evaluate new information critically. Through this entrenchment, and in a state of nearly continual digital production and consumption in a feudalized web, I find that some participants in democracy face threats to their ability to carefully think through their actions, sometimes to disastrous results.

For some internet users, this has meant the acceptance of falsehoods which has begun to not only foreclose the possibility of democratic deliberation but spurs the transformation of some users into anti-democracy combatants. The existence of a feudalized internet, as I have developed in the previous chapters, does not adequately explain why some users have chosen, based on their online experiences, to try to overthrow their government through violent means. To further account for the increasing problem of the spread and acceptance of political falsehoods, I take up the effects of time on political reasoning. Through an analysis and expansion of the work of Paul Virilio, I make the case for considering spacetime as a vital dimension along which we can understand political behavior and that the temporal compression we experience through the contemporary internet disempowers users from some basic capabilities of democratic participation. Corporate platforms, the center of many users' digital lives, compress the experienced temporality of people who produce and consume data and content on those platforms. This compression, I argue, has made it such that users increasingly attach themselves to whatever sounds true based on what they already believe, while having less time to critically evaluate new information. This, I argue, reduces some people's capacity for deliberation while increasing their willingness to leave deliberation behind for a reflexive politics that has turned, in some cases, to violence. In short, the wells of power

in the actor-network of the contemporary internet serve as sites for radicalization and extreme politics. This radicalization has resulted in a destabilizing of the norms and institutions that are at the foundation of democracy by making it nearly impossible for users to take the time to think through their political choices and actions. As a main example of this, I walk through the spread of fake news to the point that it resulted in an attempted overthrow of the US government in January 2021. To develop this critique of digital politics, I begin by analyzing the work of Paul Virilio at his most directly political.

Speed as a Political Force

Paul Virilio, a French architect, cultural critic, and self-described urbanist,⁴⁶⁷ was one of a group of thinkers who were searching for explanations of power that would explain the speed and scale of the destruction wrought by states in the Second World War. Here, Virilio's intellectual circle overlapped with that of Michel Foucault, and he counted Gilles Deleuze, and to a lesser extent Felix Guattari, among his friends and collaborators both intellectually and politically. Virilio was present at the time and place of some of the most rigorous development of post-structuralism, though he often found himself at intellectual odds with Foucault and Baudrillard in particular.⁴⁶⁸ He found himself, then, as one of the cultural theorists who, like his contemporaries, sought to understand how power works and would work, in the postmodern world.

Virilio, admittedly, is at times frustrating if one is going out in search of a well-defined research agenda with clearly elucidated concepts. This is a relatively common critique from those looking for fleshed-out concepts over long periods from Virilio. For

⁴⁶⁷ Virilio, Paul. 1999. *Politics of the Very Worst*. New York: Semiotext(e). Pg. 39.

⁴⁶⁸ Armitage, John. 1999. "Paul Virilio, an Introduction." *Theory, Culture, and Society*. Pgs. 1-23.

example, Neal Leach finds as much in his critical contribution to a two-issue series from *Theory, Culture, and Society*, one of the more sustained scholarly engagements with Virilio's highly eclectic work.⁴⁶⁹

This is undoubtedly true, as even a single work, *The Art of the Motor*, for instance, glides from the subjects of cinema to automobiles, warfare, and speed without developing any one of those topics for more than a few pages. The same is true for the corpus of his work, as Verena Adermatt Conley identifies in an article attempting to place Virilio in a more manageable frame of reference than is to be found in the architect's works, focusing on his thematic engagement with disembodiment through the lens of gender.⁴⁷⁰ Despite the difficulties in gaining a single guiding question or subject matter in his corpus, there are several concepts that Virilio developed over his career that are germane to developing an understanding of the effects that the temporal dimension of the internet is having on the political lives of people who use it. The goal of my engagement with Virilio, then, is to identify those concepts that add to an understanding of the internet as an actor-network. His engagement with disembodiment and deterritorialization through the experience of speed inform an understanding of people who use the internet as people constituted not only in space but, vitally, in spacetime. This constitution in spacetime adds another dimension along which we can understand the empowerment of certain actors in the network and the disempowerment of others.

⁴⁶⁹ Leach, Neal. 1999. "Virilio and Architecture." *Theory, Culture, and Society* Pgs.72-84.

⁴⁷⁰ Conley, Verena Adermatt. 1999. "The Passenger: Paul Virilio and Feminism." *Theory, Culture, and Society* Pgs. 201-214.

To develop that understanding, I interpret some of the relevant passages offered by Virilio, offering expansions of concepts that Virilio himself left for us to develop as he moved on to different ideas and fields entirely. Bringing Virilio into conversation with other thinking on how technologies mediate people's interactions with one another, is more than worth the intellectual wrestling that Virilio sometimes demands, as the temporal dimension of our digital experiences is of vital importance to understanding the conditions under which people become not only prosumers but also political actors who have been left at a disadvantage when attempting to discern truth from lies that have led some of them to commit acts of violence against the state and their fellow countrymen. Among the concepts that most often appear in Virilio's work, and are most relevant to digital politics, is his understanding of speed. Having witnessed, as a child, the German Blitzkrieg, a lightning war that relied on surprise, rapid-fire attacks by overwhelming forces, Virilio devoted much of his work to the centrality of speed as an element of strategy. Speed, for Virilio, has always been a part of the military strategies taken up by combatants. For example, a castle's walls were not merely spatial elements, but temporal ones as well, meant to alter speed. Those walls slow down an attacker's ability to harm those inside the walls, making a siege a matter of speed: the victor will be the one best able to cope with the effects that the walls have on the rate at which supplies dwindle. Speed, thusly, is a concept inexorably tied to territory.

In the medieval world, the walls fixed the site of battle and slowed the tempo of battles, making them into sieges. This became inverted in the Second World War, Virilio argues, when the Germans used their new mechanized units to simply drive past France's impressive but immobile Maginot line: the speed of the warfare rendered the territory of

the walls useless. The offensive strategy of the Germans was to overcome the relative lack of manpower with sheer speed, and in so doing rendered the well-prepared but fixed defenses of the French obsolete.⁴⁷¹ Here, writing originally in 1977, Virilio stakes one of his main claims, that with the Second World War came a shift in the strategy of the state from a strategy that focused on territory to one that focused on time to overcome the physical limitations of that territory. Speed has been and continues to be a strategic tool by which states could attempt to achieve their objectives on physical territory. One can then read strategic history as one of temporality. What took months or years in the ancient and medieval world of sieges and days in the Clausewitzian horror of the Second World War would take minutes in the Cold War, and perhaps seconds in the not-so-distant future. When time became useful as a tool to compress space, territory became less of a focus in the formulation and accomplishment of strategic goals. The result, he describes, is that:

Progressively doing away with our awareness of distances (cognitive distances), speed, in its violent approach, distances us from sensible realities; the more rapidly we advance toward the terminus of our movement, the more we regress into speed become, in a certain way, a premature infirmity, a literal myopia. Where the ‘lookout machine’ [machine de guet](spyglass, observation tower) brought the horizon close by the domination of altitude or the optical properties of lenses, the ‘machine of war’ [machine de guerre](vehicles, various vectors), in propelling the passenger towards the horizon, separates him to the point of being

⁴⁷¹ Virilio, Paul. 2006. *Speed and Politics*. New York: Semiotext(e). Pgs. 151, 153.

in an adjacent world, so much that we could consider the play of the vehicular proximity to be a detaching, a recoiling, a literal retreat.⁴⁷²

From this passage, there are three major elements that, once unpacked and further explained, shed light on the effects of speed on digital politics more directly, namely who this “we” might be experiencing myopia induced by greater speeds and that recoiling that he finds to be the conclusion of an increased speed.

Much of Virilio’s work on speed, from *Speed and Politics* to *Pure War* focuses on the state as its central actor; he does, at times, turn to other sets of actors. Here I am concerned with the actor who eventually inherits this myopia he describes in the passage. To this end, his “passenger,” I surmise, is the group of people subjected to the accelerated actions of the state, and now corporate actors. Speed is only ever contextual: it is relative to a set of objects and observers. For instance, many learned of the speed of modern warfare once it came crashing through their village in May of 1940. We, those who are living through the feudalized age of the internet, are the passengers who experience myopia induced by speed.

The case for speed-induced loss of people’s vision is a well-established empirical phenomenon understood in two interrelated phenomena: reaction times and task saturation. The first, I hope, many readers will remember from their driver’s education courses: the faster one is going, the less time one has to react to an event a known or unknown fixed distance away. For example, at 100km/h, a driver has two seconds to react before reaching a point 200m down the road. At 200 km/h, it takes half the time to travel the same distance, necessitating longer follow-distances between vehicles as speed

⁴⁷² Virilio, Paul. 2007. *Negative Horizon*. New York: Continuum. Pgs. 113-114.

increases, assuming all the drivers value their own continued lives. Once prompted, drivers can hit the breaks in their car in around 3/4th of one second.⁴⁷³ That means that even before a driver takes corrective action, someone driving at 100km/h would have traversed about 75m, double that at double the speed. In this simple example, the relationship between the self, time, and territory is abundantly clear: the faster one is going, the less time, and less distance, one can react meaningfully to a change in one's environment. That same three-quarters of a second that our brains and bodies need to react gives us less time to think and react the faster we are traveling. But speed is not the only factor, as Virilio makes clear: we are often operating machines when we are in literal, spatial motion. When that is the case, another empirical phenomenon is at play: task saturation.

Conceptually Lt. Col James R Groff defines task saturation as "...the state of having too much to do with too little time to do it all."⁴⁷⁴ The concept is one, keeping in conversation with Virilio's above-quoted passage, tied to the increasingly complex machines of war that states develop and field. It is, in Virilio's terminology, one of the integral accidents of the age of machines: train derailments came with the advent of the train. Virilio aptly points out that with new technological advances also, inexorably, come, by accident, unintended consequences that often have ill effects on human beings.⁴⁷⁵ Speed, in part, facilitates these accidents and determines their severity. The difference between a major automobile accident and a small cosmetic scratch is a matter

⁴⁷³ Johansson, Gunnar; Rumar, Kare. 1971. "Drivers' Brake Reaction Times." *Human Factors* 23-27.

⁴⁷⁴ Groff, James R. 2006. "Task Saturation." *Combat Edge*, December.

⁴⁷⁵ Virilio 2012, *The Great Accelerator*. Pg. 46.

of speed. With greater speed comes more severe consequences from the accidents that we have produced with the invention of new technologies. Considering these accidents in terms that center on the human actor, task saturation is a type of accident that disempowers otherwise competent human beings from being able to accomplish the ends that they had set out to do. Virilio, taking a similar track, finds the following:

Temporal compression, as it is technically called, is an event that concretely modifies everyone's daily life at the same time. In this face of this acceleration of daily life, fear has become an environment, even in a time of peace. We are living in the accident of the globe, the accident of instantaneousness, simultaneity, and interactivity that have now gained the upper hand over ordinary activities.⁴⁷⁶

People often experience task saturation because of temporal compression, and one possible consequence of these phenomena is fear. When we experience our lives at an accelerated pace, Virilio argues, we become fearful. In that state of fear, we lose the ability to think clearly and make mistakes. Those mistakes, or accidents, override our otherwise normal activities with their consequences, sometimes making the continuation of normal life impossible.

Consequences of Task Saturation

Remaining for a moment with the operation of machines, examples are plentiful. First, from the field of military aviation, the Air Force found that medical transportation teams that seek to evacuate patients via helicopter and provide critical treatment before arrival at a medical facility are task-saturated by their missions, involving flying an aircraft and caring for a critically injured patient or patients, nearly half of the time,

⁴⁷⁶ Virilio, Paul. 2012. *The Administration of Fear*. Los Angeles: Semiotext(e). Pg. 45.

resulting in adverse outcomes for (thankfully, simulated) patients in nearly half of missions.⁴⁷⁷ These crews, well-trained aviators and medical practitioners, simply by the fact that the situations with which they are presented move too quickly, do their jobs worse than they should nearly half of the time. For their patients, this failure rate is unacceptable, and corrective training typically means learning to rigidly follow pre-made checklists to maintain standards of care and safety.⁴⁷⁸ The psychological conclusion is clear: there seems to be a point at which human beings cannot engage critically well enough to perform in fast-moving situations, and in those situations, they turn to already-known ways of behavior to cope with the speed of a given situation.

Another similar example of a situation that is high-stakes, fast-moving and accident-prone is the landing of an aircraft. In most cases, there are rigid checklists in place to ensure that the flight crew has the best chance of safely putting the machine, along with their passengers, on the ground. There are cases, however, such as a 2015 incident that killed the passengers and crew of a small flight, where two competent aircraft operators, flying a perfectly flyable aircraft in good weather conditions, landing a plane they were both trained on, managed to crash. The reason for this, the FAA finds, is simply that they chose to deviate from the checklist and reason through the landing, something either the captain or the first officer should have been able to do. They were, in simple terms, task saturated in a situation that moved too fast for their limited, human

⁴⁷⁷ Davis, Bradley, Katherine Welch, and Timothy Pritts. 2013. Enhanced Critical Care Air Transport Team Training for Mitigation of Task Saturation. Final Technical Report, Cincinnati: USAF School of Aerospace Medicine.

⁴⁷⁸ Ibid.

brains to process in logical ways.⁴⁷⁹ People, even highly trained ones who intend to complete difficult, complicated objectives experience task saturation when they become overwhelmed with too much information, too quickly for their brains to process with adequate evaluations of new and changing circumstances. When a situation confronts a person with too much information and a lack of time to critically think and process it, those persons, as these examples show, tend to fall back into patterns of behavior that they already know. The lesson, that even well-trained specialists such as pilots rely on ready-made heuristic devices such as checklists to do their high-stakes jobs in speed-compressed environments to combat task saturation that can result in negative outcomes, has begun to find its way into medicine, as well.⁴⁸⁰

Task saturation and speed-induced accidents are not the realms solely of specialists doing surgeries or flying aircraft: daily commutes provide more quotidian examples. Though the Centers for Disease Control does not couch the data in terms of speed and task saturation, “distracted driving,” where a driver who can both drive well enough to have a license and can use a cell phone, fails to both: about 3,000 Americans die every year combining otherwise easy tasks.⁴⁸¹ The empirical facts stand up well to Virilio’s general hypothesis, that speed induces a myopia of sorts. When an otherwise

⁴⁷⁹ National Transportation Safety Board. 2016. Crash During Nonprecision Instrument Approach to Landing Execufight Flight 1526. Aircraft Accident Report, National Transportation Safety Board.

⁴⁸⁰ Muller, Stig, and Hitendra RH Patel. 2012. "Lessons Learned from the Aviation Industry: Surgical Checklists." In *Simulation Training in Laparoscopy and Robotic Surgery*, by Patel H. and J Joseph., 1-6. Springer: London.

⁴⁸¹ Prevention, The Centers for Disease Control and. 2021. Distracted Driving. Technical Report, Washington DC: The Centers for Disease Control and Prevention.
https://www.cdc.gov/transportationsafety/distracted_driving/index.html#:~:text=In%20the%20U.S.%20in%202018,crashes%20involving%20a%20distracted%20driver.&text=About%201%20in%205%20of,or%20otherwise%20outside%20a%20vehicle.

normal situation (a trained pilot flying an aircraft, a surgical team performing an operation, or a motorist driving a car) speeds up, we lose sight of the fact that each of these tasks is well within our means to accomplish and, without the aid of some pre-made tool, fall prey to what is essentially a cognitive lockup. Of course, no reasonable pilot would crash their plane, nor would a surgeon leave a tool behind, nor would we rear-end someone at a stoplight: these accidents result from a person whose brain cannot adequately process and think through several tasks at once.

Digital Task Saturation

Of course, most internet users are not in a situation as immediately hazardous to human life as flying an aircraft or doing emergency medicine. These examples are at the edge of human performance. For people who are participating in the consumption of news, entertainment, and other information online, the immediate stakes are less grand, assuming the person is not doing so while driving. Instead, I suggest here that the same phenomena of task saturation and reliance on heuristics occur with users of online platforms: these platforms expose people to more information than they can critically evaluate at any one given time, and, thus, result in other political heuristics that offload the work of interpreting the meaning of information to some other actor. In so doing, users become disempowered from the democratically vital processes of critical evaluation of arguments and new information. In terms of the broader work, task saturation because of physical speed creates a situation of disempowerment for the person who has become task saturated. These people, who can normally do the activities in which they are participating at the time of the accidents from the examples, are at least ideally capable of

the critical thought necessary to think themselves and their charges through the situation presented to them.

That speed and task-saturation have human consequences is relatively clear: now, I turn to the more directly political consequences of these phenomena in the age of digital democracy. Here, Virilio offers some commentary that is a useful jumping-off point for further analysis:

In the speed of the movement, the voyeur-voyager finds himself in a situation that is contrary to that of the film viewer in the cinema, it is he who is projected, playing the role of both actor and spectator of the drama of the projection in the moment of the trajectory, his own end.⁴⁸²

Again, some clarification is necessary to bring the somewhat elusive Virilio to bear on the question of the political importance of speed. This “voyeur-voyager” is, in my interpretation, the driver of a given vehicle. One of the more important characteristics of a vehicle, in Virilio’s analysis, is the windshield or screen, about which he makes a cinematic comparison: on the windshield we see the world coming at us at high rates of speed, but we see it presented as a film in which we can only indirectly participate through the controls of the machines. What we see on the windshield, in the age of machines, is mediated by mechanical objects that put us at a distance from that which we are seeing unfold through the windscreen.⁴⁸³ When operating a vehicle and looking at the world through the mediation of the windshield or screen, “...the immediate proximity matters little, the only important thing is that which is held at a distance; in the continuum

⁴⁸² Virilio 2012, *The Great Accelerator*. Pg. 106.

⁴⁸³ Virilio 2012, *The Administration of Fear*. Pgs. 41-42.

of the trip, what is ahead governs the progress, the speed of propulsion produces its own horizon; the greater the speed, the more distant the horizon.”⁴⁸⁴ Here, Virilio comes to the same conclusion as that found in the examples I give, albeit from a different perspective. For the French urbanist, speed has the effect of making the immediate surroundings less and less relevant. He found this historically in his work on strategy: the speed of the German offensive rendered the more physically immediate geography of the French defensive positions less relevant and useful to their designed ends. In more quotidian examples, our operation of mechanical machines can, too, lead to disastrous consequences as in the cases of car crashes and the like caused, in part, by speed-induced task saturation. With the addition of speed we have, at the cognitive level, challenged and not frequently overcome the limitations of our human forms.

Virilio does not limit his concern around speed to the personal or the strategic realms, though both of those realms remain relevant throughout his work. Speed, for Virilio, is a concept that requires politicization:

We must politicize speed, whether it be metabolic speed (the speed of the living being, reflexes) or technological speed. We must politicize both because we are both: we are moved, and we move. To drive is also to be driven by its properties. There is thus feedback between the two kinds of speed: technological (the car) and metabolic (man). There is work to be done which is tied with the vehicle, with the politicization of conduct in the Latin meaning of *conducere*, “to drive,” as well as in the sense of social conduct, of the conducting of war, of the economy. Speed is not considered important. Wealth is talked about, not speed!

⁴⁸⁴ Virilio 2007. Pg. 111.

But speed is just as important as wealth in founding politics. Wealth is the hidden side of speed and speed the hidden side of wealth. The Two form an absolute couple. People say: “You are too rich,” but no one ever says: “You are too fast.” But they’re related. There’s a violence in wealth has been understood not so with speed.⁴⁸⁵

In this passage, Virilio makes the assertion that lies at the heart of the critical interrogation of his work that makes up much of this paper. When the metabolic speeds, represented by human reactions and behaviors, meet with technological speeds, the link between the two is clear and often consequential for human beings. It is along similar lines that, in previous chapters, I make the case for considering the internet as an actor-network in which the state, corporate actors, and people, interact through technological means with one another in ways that are consequential to the balance of power in the contemporary world. Virilio begins, in this passage, to not only call for the work of making apparent the role of speed in contemporary political life but adds it as an addendum to the commonly held social scientific and theoretical subject matter of wealth.

Adding speed to political economics, then, is the underlying methodological goal of this chapter: understanding how technological speed affects people when many of those technological tools are controlled, now, by corporate actors, is just as critical and intimately linked with, a political economy that focuses on wealth. A lack of focus on speed, and how it disempowers internet users by making full, or more than full, use of their limited cognitive resources, is a blind spot in the literature that I aim to address with this chapter.

⁴⁸⁵ Virilio, Paul. 2008. *Pure War*. Los Angeles: Semiotext(e). Pgs. 43-44.

Though Virilio, by both his admission and accusation of critics,⁴⁸⁶ does not develop an explicit political program, he does do more than call for a political economics of speed. Thus, I now turn to some of his commentaries that more directly focus on contemporary political life and its connection with digital technologies. Linking politics and the contemporary set of transportation technologies explicitly, Virilio proposes that: Already now, when you come back to Paris from Los Angeles or New York at certain times, you can see, through the window, passing over the pole, the setting sun, and the rising sun. You have dusk and dawn in a single window. These stereoscopic images show quite well the beyond of the geographical city and the advent of human concentration in travel-time. This city of the beyond is the City of Dead Time.⁴⁸⁷

Here he once again mentions the fact that, in the use of technological machines, we see much of the world through one piece of glass or another: he makes use of the word “window” here, but in other places deploys windshield or screen. The effect is the same regardless of which of these words he uses, that there is a barrier between human beings and the world that we experience through these machines. When sped up, our perception of geography, too, changes. Considering digital technologies in a similar light is neither much of an analytical leap nor is it novel. In an automobile or an aircraft, we see the world through a screen, detaching ourselves from the immediate physical proximity of our setting and, instead, re-cast ourselves as a different kind of subject, a “voyeur-voyager,” a person who both looks and travels, but is not rooted in a single

⁴⁸⁶ Der Derian, James. 1999. "The Conceptual Cosmology of Paul Virilio." *Theory, Culture, and Society* 215-227.

⁴⁸⁷ Virilio 2008. Pgs. 21-22.

place, but rather in a horizon that is ever-further out in front of them. Making use of a digital machine, a computer, or a smartphone, much the same thing happens. In driving a car or flying a plane, the passenger, driver, or pilot experiences the world through a screen: the machine mediates the person's experience through glass of some kind. When a person uses a smartphone or some other digital device, our experience of the world, once again, is through a screen. This time, though, the landscape we see is not a distant horizon coming at us at several hundred kilometers an hour as it is in an aircraft, it is information coming at us at the speed of light.

The political implications of this have been speculated not only by Virilio but also in James Rosenau's *Distant Proximities*, in which he predicts that not-insignificant portions of human populations will see the changes of the digital era with fear and will fall into tribalism and nationalism to cope with the world that is rapidly changing around them.⁴⁸⁸ People and groups have held ideas such as nationalism and tribalism as political heuristics since long before the dawn of the digital age. Following Rosenau's argument, but modifying it with the insights of Virilio, I argue that, when faced with too much information, especially information that might threaten simplistic explanations and worldviews such as those often found in nationalism and tribalism, some people resort to their old heuristics, and retreat into their smaller communities whenever and however they can.

That a speed-assisted disconnection from immediate geography aided by digital technologies would result, as it has in the events leading up to the attempted overthrow of the United States government in January of 2021, seems on its face a paradox. How could

⁴⁸⁸ Rosenau, James. 2003. *Distant Proximities*. Princeton: Princeton University Press.

making the state and its attachment to geography *less* important through speed result in *more* nationalism on the part of not only the state itself but people turned anti-democracy combatants?

For Virilio, the relevant group of ideas that concern themselves with speed is part of a study he calls “Dromology,” or the study of movement.⁴⁸⁹ Before proceeding with more specific dromotological insights on the internet’s effects on the ability of people to make sense of information, a few general principles can light the way forward for clearer analysis. Central among these is a reminder that we must keep in mind: speed, especially that generated by machines of any kind, is fundamentally and uniquely anthropocentric.⁴⁹⁰ In conversation with the broader purpose of the work, this means that the speed generated by the internet can be attributed to human actors who themselves have intents and purposes: this brings Dromology as a potential line of thinking along which Actor-Network Theory can be enriched.⁴⁹¹ In much the same way that a materialist-influenced adapted ANT expect asymmetry in terms of economic power, the asymmetries along which human being, algorithms, and computers interpret, experience, and generate data will express themselves through different affects on each of those actors.

Virilio himself indicates a similar understanding of information, though his digital history is less than thorough: he attributes the creation of the internet to the Pentagon.

⁴⁸⁹ Virilio 2012, *The Administration of Fear*.

⁴⁹⁰ Virilio 2007. Pg. 121.

⁴⁹¹ Some contextualization is necessary here. For now, at least, humans are the primary actors who experience speed digitally. With the advent of artificial intelligences that can act in digital actor-networks, it is entirely possible for those intelligences to conceive of and participate in speed-laden discourses as well, and their perception of speed will likely be different than those held by homo sapiens.

This is mostly true but does not tell the whole story. I do not intend to rehash that story here, but the short version is that, as Virilio recognizes, the American Department of Defense played a major role in the creation of ARPANET.⁴⁹² But, since the National Science Foundation allowed corporations to use the internet for commercial purposes in the early 1990s, the balance of power and control on the internet has shifted far in favor of corporate actors to the extent that I argue this is tantamount to a feudalization of the internet. Thus, Virilio's notions of speed are important to understanding the users' experience on a feudalized internet, but Virilio himself does not provide a complete mapping of digital power.

Integral Accidents

A second critical dromotological principle is that all technologies, whether the printing press, the car, or the internet, contained in their creation what Virilio refers to often as "integral accidents": with the invention of any technology that increases speed and involves human beings, the result for one kind of a crash or another is not only possible but made inevitable by the very creation of those technologies.⁴⁹³ The only way to prevent all car crashes, keeping with the logic of the integral accident, would be to un-invent the automobile. Furthermore, to understand any given technology is not only to understand its original purpose set by those actors who wrought it, but also to understand those integral accidents as well. Keeping these two dromotological principles, the anthropocentricity of speed and the integral accident, we can begin to interrogate

⁴⁹² Virilio 1999, Pg. 36.

⁴⁹³ Ibid, 12.

Virilio's thinking on contemporary technologies in keeping with those principles to cut down the subject matter in his far-reaching works.

In his study of speed in the contemporary era, Virilio identifies that these "new" technologies are not, perhaps, quite as new as those hoping for the promise of technology may have us believe. For example, drones have become one of the technologies most critiqued by those concerned with contemporary warfare. Here, Virilio marries that concern to his strategic analysis of the Second World War, indicating that the Germans' V1 rockets were the first robots used in large numbers in combat.⁴⁹⁴ That technology, which used the speed of flight to make the English Channel's geography, long key to British defensive strategy, less relevant when placed in a longer history when Virilio states:

I am convinced that just as speed led to the Germans' incredible domination over continental Europe in 1940, fear and its administration are now supported by the incredible speed of real-time technology, especially the new ICT or new information and communications technologies. This technological progress has been accompanied by real propaganda, notably in the way that the media covers the new creations presented by Steve Jobs, Apple's all-powerful CEO. This combination of techno-scientific domination and propaganda reproduces all of the characteristics of occupation, both physically and mentally.⁴⁹⁵

Some nuance is necessary to connect the dots that Virilio so well paints for us here. The key to the analysis I provide here is that, for Virilio, the strategic use of speed is not the

⁴⁹⁴ Ibid,31.

⁴⁹⁵ Virilio 2012 *The Great Accelerator*. Pg. 16.

sole domain of the state. In the digital age, the state is in a nearly perpetual siege: when confronted with the end of the Cold War, it entered into new, global wars and has developed the surveillance state to pursue its new strategic ends of control and total panopticons.⁴⁹⁶ In the above-quoted passage, however, Virilio draws the same link that I do in previous chapters—that the corporate actors make use of the same tools and strategies, in this case, speed as a tool, to empower themselves. This shift, I argue, is of vital importance to an understanding of power in the contemporary internet age. Second, of specific importance to this chapter is the idea that these corporate actors make deliberate use of propaganda to occupy “both physically and mentally.”

Here, Virilio seems to be leaning in the general direction taken by Foucault in *Discipline and Punish*, where the latter develops his theory of the modern state as an apparatus of control over the bodies and minds of people by circumscribing them in enclosures of surveillance.⁴⁹⁷ Virilio, as an architect by training, is, like Foucault, concerned with the composition and use of physical spaces in ways that reify and reinforce power.⁴⁹⁸ But Virilio’s analysis does not stop with Foucault’s findings, and the former is more concerned in his political moments with the movement through spaces rather than with spaces as static sites. For instance, he comments the following:

As a man of the ramparts, I spoke with Deleuze many years ago about my fears concerning security gates. Metal detectors appear to be open but, in fact, are worse than a wall. You have to go through them. In some airports, the security

⁴⁹⁶Virilio 2012, *The Great Accelerator*. Pgs. 21-22.

⁴⁹⁷ Foucault, Michel. 1995. *Discipline and Punish*. New York: Random House.

⁴⁹⁸ Virilio 2012, *The Great Accelerator* Pg. 36.

gate has become a hallway, an entirely separate space. When you have passed through the corridor, they know everything about you... My concern is that this hybridization will disorient politics and its historical, territorial foundations. After the deconstruction of the nation-states, we are entering the potential disorientation of the traditional guidelines for law and the unlawful, with the deconstruction of the rule of law soon leading to the disorientation of politics.⁴⁹⁹

In moving through the hallway that is between sites, in his example, an airport security checkpoint, the concern raised here is that through the technologies applied during that movement, people experience sometimes disempowering disruptions of their perceptions of time and space. A person, before entering the airport checkpoint, at least ideally has some mastery over her experience of time and space, assuming general freedom of movement, and from government interference. Upon entering the airport, the security apparatus deliberately disrupts the person's spatial and temporal experience: the human being sometimes stands in long lines, for arbitrary amounts of time, and becomes exposed to security checks, scans, and so on.

This disruption of an individual's general freedom of spatial and temporal movement is at the heart of his dromotological concern with the windshield: when we are moving at high speeds, we are never truly in any given spot for more than an instant. While this is true at any speed of movement, whether a car or an aircraft, it is vital here to remember that speed is a quantity: the faster that we move, the more pronounced its effects will be.

⁴⁹⁹ Virilio 2009, Pg. 91.

In the example of airport security, I argue, that both the state and the individual experience negative effects from a change in the perception of speed. For the individual, the negative effect may be at the very least inconvenient, and, in the case of missing a flight to an important event, might have long-lasting personal consequences in terms of social and economic life. For the state, on the other hand, the want to increase the speed at which the security apparatus can process people through security lines comes at the detriment of effectiveness at the stated goal. The American Transportation Security Administration, for instance, misses the vast majority of fake weapons that pass through its security checkpoints as part of internal evaluations.⁵⁰⁰

The internet, Virilio reminds us, is not likely to be different and will also come with its own set of integral accidents.⁵⁰¹ In the digital age, we do not experience politics at the speeds of cars or even jets, but at the speed of code being moved from one machine to another, which occurs very nearly at the speed of light.⁵⁰² If that is the speed of politics in the digital age, and speed is to be taken as a quantity, then the political effects of the web and its integral accidents can be expected, in a dromotological analysis, to be of the highest consequence possible. In inventing the internet, “we have reached the limits of instantaneity; the limits of human thought and time.”⁵⁰³ Thinking in terms of speed, I also consider the rate at which integral accidents may occur, and their severity. An accident involving horse-drawn carriages, for instance, is likely much less harmful than one

⁵⁰⁰ US Department of Homeland Security. 2017. Covert Testing of TSA's Screening Checkpoint Effectiveness. Unclassified Summary, Washington DC: US Department of Homeland Security.

⁵⁰¹ Virilio 1999, Pg. 91.

⁵⁰² Ibid, 82.

⁵⁰³ Virilio 2012, *The Great Accelerator*, Pg. 33.

involving cars: adding jet aircraft to the mix certainly increases the chance of a crash that will affect many more people, more severely, more quickly. More speed, weight, and size make crashes worse for those actors involved in them. If the speed at which information reaches human beings is the speed of light, then the integral accidents of the internet, including disempowering task saturation, too, occur at this high rate of speed.

With that severity of consequence, an analysis of political power in the digital age must include speed: it is the very speed of the internet that has generated the digital equivalent of car crashes. Those anthropogenic integral accidents, thus, are some of the defining features of politics in the age of the internet. In beginning to sketch those political features, Virilio finds that we have entered a new kind of politics, as he explains:

Transpolitics is the beginning of the disappearance of politics in the dwindling of the last commodity: duration. Democracy, consultation, the basis of politics, requires time. Duration is the proper of man; he is inscribed within it.⁵⁰⁴

Through his notion of Transpolitics, his more general observation is that increased speed has given people substantially less time to process political information. I need not hazard a guess at the stakes of this in Virilio's work, as he offers the following on the matter:

With the phenomena of instantaneous interaction that are now our lot, there has been a veritable reversal, destabilizing the relationship of human interactions and the time reserved for reflection in favor of the conditioned responses produced by emotion. Thus, the theoretical possibility of generalized panic.⁵⁰⁵

⁵⁰⁴ Virilio 2008, Pg. 42.

⁵⁰⁵ Virilio 2012, *The Great Accelerator*, Pg. 31.

Here, Virilio lays out more clearly the effects of the internet, of instant politics, on people who use contemporary technologies. These instantaneous interactions function much in the same way as the task saturation examples that I gave earlier in the piece. When we experience the temporal compression of digital politics, we lack the time to think and we are, in effect, task-saturated in the same way as pilots or drivers. Our conscious minds, which we used to reflect in political discourse, are not up to the task of doing so at the speed of light, and we thus rely on emotional responses, often panicked ones, as a poor substitute for the careful thought, reflection, and articulation necessary for democratic deliberation. It may not matter, then, that a platform allows for instantaneous sharing of ideas between people if the fact that it is instantaneous means that people cannot contemplate what they are consuming and react emotionally to it.

In much the same way that a driver may well crash their car when they are texting behind the wheel due to task saturation, I argue, someone may well believe a news story because they do not have time to react critically to the new information that their phone is presenting to them or that they spend so much time on the web consuming such “news” that there is less and less time to think about the presented information critically. If you were attempting to drink from a firehose, for example, would you have a moment to stop and consider the flavor of the water?

Wendy Brown, examining the American political landscape in the wake of the 2016 elections,⁵⁰⁶ reflects similarly to Virilio: the disorientation that some people feel in

⁵⁰⁶ Brown, Wendy. 2019. *In the Ruins of Neoliberalism*. New York: Columbia University Press. Chapters 3 and 5 are especially enlightening in considering the effects of digital politics on users who resort to violence, trolling, or harassment.

the neoliberal, increasingly feudal⁵⁰⁷ present leads some people, fueled by the rage that they find so ready for presumption on social media, to lash out in nihilistic violence.

What people experience in the age of instant politics certainly looks different than the direct, participatory democracy of the ancient world:

The city has always been a theatrical device with the agora, the church, the forum, the parade ground, etc. Simply put, it was a place where you could gather together, a public space. Today, however, the television set is replacing public space with public image, and the public image is decentralized from the city. The public image is no longer in the city, but rather in the “tele-città,” already a virtual city, in which we claim to co-habitate because we watch the evening news together... The propaganda about the Internet and the information superhighway aims to urbanize real time at a time when real space is being deurbanized.⁵⁰⁸

In this passage, Virilio offers his general prognosis of digital politics as he saw it in 1999: the polis has been, in his analysis, displaced from the agora into something more closely resembling the cinema. Public image, then, replaces public life. In making this comparison, Virilio invokes Arendt’s concern with the destruction of the public sphere. He does so more deliberately elsewhere, citing her directly in his agreement that the implementation of terror as part of political life depends wholly on movement.⁵⁰⁹ Where in Arendt’s work the focus of the movement is on behalf of the state, the movement that we see regulated in a digital democracy does not center on the state, but rather on

⁵⁰⁷ Brown refers to our current moment as the most centralized in terms of power since the feudal era on pg. 176.

⁵⁰⁸ Virilio 1999, Pg. 45.

⁵⁰⁹ Virilio 2012, *The Administration of Fear*, Pg. 21.

corporate actors who own and control the platforms from which we get our overwhelming amount of information. In *The Art of the Motor*, a work explicitly focused on propulsion and movement, Virilio is skeptical of the future of the state when he supposes, “in the destiny of the city-state depending on each person’s obligation to be where the others were, then for the victims of multiple solitude, the televised poll is now a mere pale simulation of the ancient rallying of citizens, of their movement to the urns and the final result.”⁵¹⁰ In this work, he applies some of the same dromotological thinking he attributes to the strategies of the state to our daily political lives: as we experience life more quickly through the consumption of information, the physical spaces of bodily presence matter less and less.⁵¹¹ The eventual result of this is along similar lines to Arendt’s thinking in *The Human Condition*, where the thinker grows concerned that modern economic life has come to erase the distinction between the public and the private, and along with that erasure our capabilities for action are thereby reduced to arguing over the terms of our work and labor.⁵¹² In Virilio’s terms, the concern is that, “Sooner or later, intimate perception of one’s gravimetric mass will lose all concrete evidence, and the classic distinction between ‘inside’ and ‘outside’ will go out the window with it.”⁵¹³

His concern goes beyond Arendt’s dismay at the destruction of the realms of the public and private, and further highlights the problem of physical space in the digital era:

⁵¹⁰ Virilio, Paul. 1996. *The Art of the Motor*. University of Minnesota Press: Minneapolis. Pg. 36

⁵¹¹ Ibid, 36, 106.

⁵¹² Arendt, Hannah. 1998. *The Human Condition*. Chicago: The University of Chicago Press.

⁵¹³ Virilio 1996, Pg. 107.

not only are our private lives increasingly social but every space with a screen is, thanks to the near-globality of the internet, increasingly seen from the perspective of a digital passenger looking at a far-off horizon. Physical place, and our very bodies, then, are being displayed on the screen and are experienced through task-saturated minds in digital space at the speed of light rather than in biological time and in physical space: this has altered contemporary politics into a reactionary form, rather than a reflective one.⁵¹⁴ Arendt considers a similar phenomenon in *The Human Condition*, where she diagnoses the modern industrial world and its behavioral sciences aiming “... to reduce man as a whole, in all his activities to the level of a conditioned and behaving animal.”⁵¹⁵ This final stage of a collapse of the public and private, both of which were necessary to empower ancient citizens with the time to think, contemplate, and act, results, in Arendt’s telling, in a state of affairs that renders human beings into animals, politically speaking.

It is this collapse of the private as a space where one has time to think even further through temporal compression that Virilio refers to as “the tyranny of real time;”⁵¹⁶ the characterization of this is, in effect, a description of Virilio’s prognosis of politics in the digital age where the users of these communications technologies increasingly engaged with screens, interacting with their world, in effect, through a windshield. This, in my view, has much the same deterritorializing effects as moving at high physical speeds: people experience the informational world at high dromotological speeds, which leaves them disconnected from their immediate surroundings. Thus, people

⁵¹⁴ Ibid, 114, 131-132.

⁵¹⁵ Arendt 1958, Pg. 45.

⁵¹⁶Virilio 2021. *Administration of Fear* Pg. 87.

cope with information coming at them at nearly the speed of light by resorting to ideas they already have, which may well include sexism, racism, and other forms of bigotry that endangers democratic political life both offline and online.

The Mechanization of Speed in Political Life

Though Arendt in *The Human Condition* does not take up technology as a central theme of the work, she does engage with technology in a way that speaks well to the later thinking of Virilio. For instance, and perhaps for literary effect as much as for analytical punch, Arendt begins the book with some marveling at the launch of Sputnik as a representation of the arrival, truly, of the age of *homo faber*, who attempts to escape the world through the manufacturing of comforting things, rather than engaging in the world as a political actor.⁵¹⁷ Read through Virilio, Arendt's comment that "...men everywhere are by no means slow to catch up and adjust to scientific discoveries and technical development, but that on the contrary, have outsped them by decades," her work can be read into a dromotological analysis. *Homo faber* does not fear technology; in fact, the use of technology is key to *homo faber's* relationship with his world. It is precisely by using "implements and tools" that homo faber remakes the world, working such that "everything is judged in terms of suitability and usefulness for the desired end, and nothing else."⁵¹⁸ Using technology to make raw materials useful ever more quickly, homo faber manufacturers the conditions of his political life:

The point is that *homo faber*, the builder of the world and the producer of things, can find his proper relationship to other people only by exchanging his products with

⁵¹⁷ Arendt 1958, Pgs. 1-4.

⁵¹⁸ Ibid, 153.

theirs, because these products themselves are always produced in isolation. The privacy which the early modern age demanded as the supreme right of each member of society was actually the guaranty of isolation, without which no work can be produced.... This isolation from others is the necessary life condition for every mastership which consists in being alone with the “idea,” the mental image of the thing to be.⁵¹⁹

This image of the worker in isolation is a curious one, considering the physical proximity necessary in most kinds of manufacturing labor, especially in the early-modern era. Arendt preempts this curiosity, pointing out that during work, the communication and physical proximity enable the accomplishment of work, not to “the specifically political forms of being together with others, acting in concert and speaking with each other.”⁵²⁰ A dromotological analysis of the state of labor leads to a similar conclusion. When people focus on work, there are only so many other things that we can effectively do. In worktime conversations, exchanging banalities about the weather and sporting events may well help the hours pass faster and build something like a friendship between workers, the level of conversation is substantively different from the “specifically political” conversation that Arendt holds key to a full political life. To have the time and the freedom to participate in politics, at least in the ancient world, meant having one’s time freed thanks to the (enforced) labor of others.⁵²¹ It is necessary, in a dromotological reading of the public realm as Arendt understands it, to have not only, as she states it, the

⁵¹⁹ Ibid, 160-161.

⁵²⁰ Ibid, 162.

⁵²¹ Ibid, 30-1.

physical proximity to one another that enables political speech,⁵²² but also the available time to dedicate to the contemplation, listening, and responding that is necessary for action. Activity without the necessary time for reflection, judgment, and contemplation is, for Arendt, at best, mere behavior-oriented at survival rather than politics between persons who recognize one another as equal citizens.⁵²³ Becoming empowered to deliberate, then, requires available time in which we can apply our intellectual faculties to deliberately political speech, not merely conversation to pass the day at work. Instead, as I develop further, people may well be prosuming the conditions in which they become disempowered from having the free time necessary to think and deliberate.

For Arendt, certain technologies are the core of the world of *homo faber*. Central to understanding the centrality of those tools to political life, however, is her view on both machines and tools. Before explaining that view, however, definitions are, indeed, important here considering that Arendt uses “tool” and “machine” as distinct terms. For Arendt, as we find in *The Human Condition*, a tool is something that helps a person accomplish an instance of labor or work that he already intended to do by “strengthen[ing] and multiply[ing] human strength.”⁵²⁴ This specific formulation of the concept of the tool limits tools to a set of objects that magnify human effort in terms of speed or force. Machines, for Arendt, are different than tools. While tools seek to help people do the labor they already intended to do, machines, ultimately, “guide the body’s

⁵²² Ibid, 201.

⁵²³ Ibid, 289-294, 41-42, 45.

⁵²⁴ Ibid, 121-122.

labor, and eventually replaces it altogether.”⁵²⁵ Thus, the machine relates to men, ultimately, by replacing them from the equation of labor altogether.⁵²⁶ This relationship within *Human Condition* means one of two things. The first, a positive one in terms of Arendt’s nearly romantic conception of action, which requires freedom from labor and work, would hold that machines replacing people have vast emancipatory potential.

Arendt illuminates further:

Man cannot be free if he does not know that he is subject to necessity, because his freedom is always won in his never wholly successful attempts to liberate himself from necessity.⁵²⁷

Necessity, in Arendt’s analysis, is tied to activities intended to sustain human life, which require the products of labor and work to maintain bare life. Where tools *ease* that labor and work by multiplying the application of human strength, machines do the same and, importantly, eventually *replace* that labor or work done by humans.

The interpretation Arendt offers, that machines will increasingly displace human laborers, holds that in a capitalist society the displacement of increasingly large parts of the labor force will result in political crises.⁵²⁸ Here, Virilio’s diagnosis of our use of machines in the modern world adds to Arendt’s earlier findings. Arendt points out two phenomena in the analysis presented above: the loneliness of the modern worker, as well

⁵²⁵ Ibid, 147.

⁵²⁶ Ibid, 145.

⁵²⁷ Ibid, 121

⁵²⁸ Ibid, 296, 297

as his continuous interaction with machines. Virilio, observing the increasing mechanization of the modern world, observes similarly:

For, the acceleration of common reality swiftly makes practical life, everyday life and not just social or family life, impossible. This has recently resulted in the atomization, the sudden ‘fractionalization’ of social units which, beyond the risks of ‘communitarianism’ entails the incomparably more serious risks of an emotional SYNCHRONIZATION that will lead to a ‘communism of affects’ on the sale of a planet reduced to nothing where the real time of ‘cyber’ instantaneity will, this time, finally overtake the real space of the time differences and time distances involved in our indispensable relationship with the road. Desocialization will thereby extend people’s current mental and emotional disorientation.⁵²⁹

This evokes the same conditions as his earlier-cited thinking on the airplane and the automobile: when we use machines that create speed, we feel not only displaced geographically from any one specific place but from our temporal experience as well such that we become increasingly disoriented in our ability to think through our thoughts and emotions.

Reading Arendt through Virilio, this is another way to examine the creation of the modern social sphere: *homo faber* lives a life at increasingly high speeds, determined first by the pace of the factory, then the car and the airplane, and now, in the 21st century, of the internet. The result, which Virilio refers to as “desocialization,” is akin to Arendt’s notion of the destruction of the capability for action: in living under conditions where we have to cope with the increased speed included by machines, whether used for commerce,

⁵²⁹ Ibid, 32-33.

war, or entertainment, the time that we possess to make use of our cognitive abilities to reflect, think, and deliberate is drastically diminished. With continuous disuse of our reflective, thinking, and deliberative abilities as individuals and in groups, those abilities may well degrade over time.

Thinking in a structurally similar way to Arendt, Ivan Illich's *Tools for Conviviality* enriches distinctions between the kinds of relationships that people living under capitalism can have with technologies. Where Arendt views tools and machines as something fundamentally different, one assisting in labor, the other replacing it, Illich collapses that distinction, less concerned with the intention behind the object at hand and more concerned with the relationship between people and the objects at the moment of interaction between human and machine. For Illich, there are two primary ways in which human beings relate to technologies, which he terms watersheds. In the first watershed, technologies function similarly to Arendt's understanding of a tool; people use technology instrumentally to accomplish a pre-determined end. This moment is important in the use of any given technology for Illich in that at the first watershed tools "allow the user to express his meaning in action."⁵³⁰ This expression of already-held intent on the part of the user of the tool is central to Illich's conception of tools. Doing so is critical to Illich's hopes for a brighter future, which is clear when he states that "People need new tools to work with rather than tools that 'work' for them. They need technology to make the most of energy and imagination each has, rather than more well-programmed energy slaves."⁵³¹ In an ideal world, we would build what he calls a convivial society, which,

⁵³⁰ Illich, Ivan. 2009. *Tools for Conviviality*. London: Marian Boyers.

⁵³¹ *Ibid*, 10.

“guarantee[s] for each member the most ample and free access to the tools of the community and limit this freedom only in favor of another member’s equal freedom.”⁵³²

In invoking this conception of relationships with tools, Illich brings clearly to mind the vision of Rawls, who hopes that a reasonable person in the original position would devise a system of rules that would be fair to everyone in terms of access to opportunities and resources.

Rawls’ insistence on an accessible system of rules also speaks to Arendt’s conception of the person capable of action: to be *zoon politikon* is to have had energy expended such that the person can spend their day doing politics rather than performing labor or work. A convivial society, in this context, would be one in which people would spend their energy not fighting for access to technology and resources, but using technology and resources to pursue their ends, which may well include deliberation on the issues of the day. It is important to keep in mind that there are also people whose ends are not to empower themselves and others to participate in democratic deliberation: jerks, trolls, and the like have long been part of our human family, and they are likely to remain so in the future even if we begin to use technologies to more empowering ends. But, in Illich’s estimation, this society has not come to pass, as he explains in his conception of a second watershed.

The second watershed, having in common an alienating connotation with Arendt’s conception of tools, is a situation in which we relate to the tools in such a way that the tools supply the ends. Tools past the second watershed are instrumentalized to the

⁵³² Ibid, 12.

predetermined ends of the tool (or the owner of the tool), resulting in what Illich calls “the amorphousness and meaninglessness that plague contemporary society.”⁵³³

Working with machines past the second watershed represents an inversion that, in the analyses of Illich, alienates us from our work, ourselves, and each other. People’s interactions with machines past the second watershed are, I argue, an inversion of the sort of cyborg forwarded by Donna Haraway.

Where, for Haraway, homo sapiens interrogate and change identities and realities with technology,⁵³⁴ Illich sees, aptly, homo sapiens facing integration into larger, mechanized systems that propose and enforce identities as consumers and producers. What we see past the second watershed is a shift, as reading Arendt through Illich has made apparent, in the relationship between individuals and the means of production that disempowers persons from being able to participate in anything but work and labor.

If, for instance, the carpenter makes use of tools to craft, and add value to, a home that is not his own, he does not own it once he labors upon it. Instead, the property owner rather than the craftspeople who did the work owns the value generated. The laborer uses tools, in this case, to actively generate profit for the actual owners of the means of production of value rather than directly for his means of fulfilling necessity: contractors and other laborers do not own the homes they work on. Assuming a bank owns the mortgage on a home, neither do the eventual residents: both the laborers and the residents work, using tools, to produce value for banking institutions. Alienated labor past the

⁵³³ Ibid, 24.

⁵³⁴ Haraway, Donna. 1991. *Simians, Cyborgs, and Humans*. New York: Routledge.

second watershed has the holders of the tools working to survive, while the owners of the tools gain profit with which they can do whatever they wish.

The contemporary internet presents a similar pattern. With the feudalized internet that I described in the previous chapter, people become users using digital platforms. Users, further, relate to those platforms as tools beyond the second watershed: people produce and consume the data that generate profit for those corporate actors to expand their potential digital power and profits. This casts the user in a disempowered light vis-a-vis the corporate actors who own the platforms: adding in the effects of task saturation on the users' ability to critically evaluate information critically and the result, I argue is one in which the user has little cognitive resources or time left available with which to participate in online life to ends other than production and consumption. Technologies that are not convivial to the ends of people are then, deployed directly against the people who work at those machines to empower them only as producers and consumers and disempower them from using those technologies to relate to one another through deliberation. That capitalists deploy technologies to profit rather than toward human needs is not a solely Marxist finding. Graeber, writing more than a century after Marx, comes to similar conclusions in his *Utopia of Rules*. There, Graeber states plainly what Illich, Arendt, and Marx develop at greater length:

And if we're going to actually come up with robots that will do our laundry or tidy up the kitchen, we're going to have to make sure that whatever replaces capitalism is based on a far more egalitarian distribution of wealth and power—one that no longer contains either the super-rich or the desperately poor people

willing to do their homework. Only then will technology being to be marshaled toward human needs.⁵³⁵

Here, I again turn to Virilio's dromotological thinking to gain leverage on the importance of the temporal relationships people develop with technology. Certain uses of technologies foreclose possibilities for people to do activities other than production and consumption. The dromotological problem is twofold in a condition of technologies that are beyond the second watershed. First is that the use of these technologies, by the virtue of being past the second watershed, demands that their users act following ends that are not their own: this robs the user of the time that Arendt finds so necessary for contemplation, speaking, and, ultimately, political action to be possible. Second, in the case of the internet, there is a problem with too much information. Finite human beings have only so much time and so many cognitive resources with which to think at all: far less when there is a nearly infinite source of information at our fingertips. So, not only do we have less of our own time to think and deliberate but there is also much more information to consume in even less time.

If the internet remains, as I claim, in a feudalized corporate state, it is a technology that is beyond the second watershed which disempowers people in its current usage from being able to participate in deliberative democracy by placing increased strain on our temporal experience: we are, in effect, using the internet in a condition of compressed temporality and task saturation that makes it increasingly difficult to make the time to think and deliberate.

⁵³⁵ Graber, David. 2015. *The Utopia of Rules*. New York: Melville House.

I do not suggest that if people were free from a feudalized internet that they would, or even should, spend their time contemplating politics and acting in an Arendtian sense. Instead, I offer here that users, operating under task saturation on a feudalized internet have their capacity to contemplate politics or participate in democratic political life reduced by their participation in a feudalized internet that favors corporate actors. One can imagine that, after the day's tasks of formal production and consumption under a capitalist mode of life, a person could choose to garden, go for a walk, or sit to play a board game with friends. Any of these activities could, in Arendtian terms, come at the expense of time devoted to political contemplation and action. But though hobbies may detract from political time, they do not infringe on the quality of politics in the same way that participation in a feudalized, corporate internet does. Where gardening, walking, or playing with friends may not have explicitly politicized content, the feudalized web does. Gardening does not masquerade as political participation, whereas sharing a fake news story does. This masquerade is more difficult to see through when the sharer and reader of fake news may well share and read the piece under limited, task-saturated cognitive resources, and, thus, will go on to negatively affect their abilities to think critically and participate in politics as thoughtful democratic citizens.

This diminishing of available time and the disempowerment from the demanding cognitive activities that deliberative democracy demands are psychological phenomena, which I have thus far referred to through temporal compression and task saturation. I hypothesize that as human beings have more to do and less time in which to do it, our ability to do so deteriorates. That condition is not only applicable to the driving of cars and the flying of planes, but, I argue, applies just as well politically: conditions of

temporal compression in the political realm result in a task saturation that disempowers us from being able to use our abilities of thought, reflection, and deliberation effectively.

Thinking Politically Through Digital Task Saturation

Psychologist and economist Daniel Kahneman spent much of his career studying how, exactly, human beings make decisions in the complex conditions of modernity. His work *Thinking, Fast and Slow* summarizes decades of empirical research on human beings' attention spans, and how people handle overwhelming feelings and tasks. In Kahneman's analysis, our minds process thoughts in two systems:

System 1 operates automatically and quickly, with little or no effort and no sense of voluntary control.

System 2 allocates attention to the effortful mental activities that demand it, including complex computations. The operations of System 2 are often associated with the subjective experience of agency, choice, and concentration.⁵³⁶

These two systems of thought, though they occupy the same physical brain, operate at different levels of effort on our part. System 1 thinking takes care of simple information and occurs without our conscious effort. One example provided is the same one that I used in beginning to explain task saturation: driving a car in good conditions.⁵³⁷ System 1 is generally capable of getting us through the mundane and routine actions of the day, but

⁵³⁶ Kahneman, Daniel. 2011. *Thinking, Fast and Slow*. New York: Farrar, Strauss, and Ciroux. Pg. 29

⁵³⁷ *Ibid*, 30.

it has some serious downsides that lead to poor judgments and decision-making on our part. Because system 1 thinking is done mostly on the subconscious level, it is vulnerable to “priming,” where ideas can be placed in a context to sound one way or another, or “anchoring,” where we make estimations on existing, but irrelevant data.⁵³⁸ This means, in effect, that we feel as though we are making decisions without prior thought, we are reacting with previous information in mind even if that information is not directly at the forefront of our conscious minds. In other words, we do not make our subconscious decisions with a blank mental slate but come loaded with pre-processed information. Rawls struggles with this very problem, that it does not feel like we have preconceptions when we do: his insistence on the veil of ignorance to arrive at an original position that has any hope of creating policies based on reason and fairness can, in light of Kahneman’s work, be interpreted as the need to clear out all of the anchoring and priming information to reveal the base reasonableness of a given person without imperfect information that cannot help but sway out subconscious thinking.⁵³⁹ That our system 1 thinking is itself conditioned by prior events, anchoring, and priming, is disbelieved by most persons, who would strongly prefer that their thoughts and actions come from something internal to themselves, rather than as a series of learned and conditioned responses to the world in which we find ourselves.⁵⁴⁰

The political ramifications for the use of system 1 thinking in terms of the capability to deliberate thoughtfully are clear: system 1 thinking is something like our

⁵³⁸ Ibid, 163-4.

⁵³⁹ Rawls, John. 2005. *A Theory of Justice*. Cambridge: Harvard University Press. Pgs. 18-20.

⁵⁴⁰ Kahneman 2001, Pgs. 77-78.

intellectual autopilot that allows us to focus more consciously on other things. This relegation of system 1 thought to the intellectual background makes it susceptible to fault along several important lines. First, because it is simpler in its thought processes and actions, simple information is handled and retained by system 1: a slick slogan is more likely to stick in the back of your mind and be interpreted as the truth than a complex idea if you are in system 1 thinking.⁵⁴¹

Aside from favoring simplicity, system 1 also makes note of information that makes the individual feel threatened, cataloging that information to react in ways that attempt to resolve that threat, real or perceived: this lends people to react to threats with attempts to control or end the perceived threat with violence or force rather than discourse.⁵⁴² Further, since system 1 is responsible for actions that do not require much conscious thought, it is not a system that carefully judges; skepticism is a much harder process and, thus, saved for system 2 thinking, upon which I will elaborate in a moment.⁵⁴³ Instead, system 1 quickly accepts that which it thinks to be true and discards other information. System 1 thought processes rely on heuristics; this makes system 1 less costly in terms of the resources it takes up to process information but leads it to fast judgment and imprecision: this is a useful trait when, for instance, one must take quick action to avoid an accident.⁵⁴⁴ While heuristics and the information that we maintain from priming and anchoring are highly useful when, for example, one needs to drive a car

⁵⁴¹ Ibid, 87.

⁵⁴² Ibid, 77.

⁵⁴³ Ibid, 111-112.

⁵⁴⁴ Ibid, 135.

down the road, it is a system of thinking that relegates its subject matter to the subconscious. When that subconscious attention does not consider and think critically through information, accidents can occur. Task-saturated crashes in planes and cars are, I find, an example of system 1 not being able to cope with a complicated situation. Given Kahneman's analysis of system 1, I conclude that it is a system that would not serve people well in terms of democratic deliberation: relying on anchoring, priming, and heuristics places the difficult intellectual work of thinking, judging, and discoursing into a part of the mind that is more suited to helping you find your way around your home in the dark than it is to thoughtful deliberation or consideration of complex information. As an example of system 1 thinking at work in digital political life, and an attempt to encourage people to slow down and consider information more carefully, Meta introduced a new feature in 2021. If a user attempts to share an article to their feeds without reading it, the user sees a prompt asking if they would like to read it before sharing it. This is, in Meta's view, an attempt to "promote more informed sharing of news articles."⁵⁴⁵

If system 1 thinking is the autopilot to our minds, then system 2 is something like an afterburner. System 2 is better for more complex tasks and is where much of our critical thought lies. This is more than a heuristic metaphor: the general mechanics of an afterburner apply here as well: to gain more speed and capabilities, a pilot can add additional fuel to a jet's propulsion systems, and get that increased speed and performance at the cost of immense heat, higher fuel consumption, and wear on the

⁵⁴⁵ Meta Newsroom. 2021. "Meta Newsroom Twitter." Twitter. May 10. Accessed February 23, 2022. <https://twitter.com/MetaNewsroom/status/1391816265891778560>.

engine.⁵⁴⁶ Much the same happens when we use system 2 thinking: our brains burn more fuel (in this case, glucose) to perform better in tasks that are more complex and require more focus.⁵⁴⁷ As Kahneman summarizes the relevant research:

The nervous system consumes more glucose than most other parts of the body, and effortful mental activity appears to be especially expensive in the currency of glucose. When you are actively involved in difficult cognitive reasoning or engage in a task that requires self-control, your blood glucose level drops. The effect is analogous to a runner who draws upon glucose stored in her muscles during a sprint.⁵⁴⁸

To conserve this glucose for the more difficult tasks, our brains delegate as many tasks as possible to system 1, saving the energy for brief bursts of system 2 activity that takes more energy.⁵⁴⁹ This is not always a bad thing: in fact, Kahneman surmises that intelligence is, at least in part, an effect of a brain that is efficient in delegating appropriate tasks to system 1, reserving system 2 for more effective use when needed.⁵⁵⁰ The effects of system 2 running low on glucose are familiar to quite a few of us: the feeling of being tired after a lot of intellectual activity, reading or participating in a class, or, in the case of musicians, performing for a live crowd, with its attendant loss of

⁵⁴⁶ Purdue School of Aeronautics and Astronautics. n.d. Propulsion Web Page. Accessed April 29, 2021. <https://engineering.purdue.edu/~propulsi/propulsion/jets/basics/afterburner.html>.

⁵⁴⁷ Kahneman 2011, Pg. 77.

⁵⁴⁸ Ibid, 59.

⁵⁴⁹ Ibid, 60-63.

⁵⁵⁰ Ibid, 64.

cognitive ability and need to refuel with food and sleep demonstrate what happens on a quotidian level when system 2 runs our brains low on glucose.

These two systems operate in our brain simultaneously: system 1 manages the tasks our brains perceive as simpler and easier to handle, while system 2 tackles the problems and tasks that require conscious thought, finesse, or higher levels of abstraction beyond those that our heuristics and background knowledge provide. But, speaking to actor-network theory and its insistence that materiality plays a role in a person's agency,⁵⁵¹ these two systems interacting contribute to the thinking and behaviors of human beings through the management of a finite pool of focused attention, dependent on the presence of reserve glucose in the brain. Kahneman's findings explain the plane, automobile, and surgical accidents that I discuss in terms of temporal compression and task saturation. While people can do both simple and complex tasks simultaneously, making use of the symbiosis of systems 1 and 2, doing so burns our reserve glucose quickly, leaving our minds running on system 1 alone. That is when system 2 cannot muster the energy necessary to deal with further complications. So, when system 2, in the case of the plane crash, cannot deal with a deviation from a pre-determined checklist for landing, system 1 takes over and follows the checklist straight into the countryside at a high rate of speed. Generally, when our brains cannot adequately cope with new, complex information through system 2, we revert to the information and ideas that were previously primed and anchored into our system 1 modes of thought.

Kahneman's estimation of the political implications of an over-reliance on system 1 thinking tack in the direction of a major theorist of digital politics, Cass Sunstein.

⁵⁵¹ Latour, Bruno. 2005. *Reassembling the Social*. Oxford: Oxford University Press. Pgs. 70-74.

Kahneman agrees with Sunstein that people often make their political decisions not based on a system 2 analysis of expertise and relevant facts, but using system 1 types of thinking, making use of available heuristic devices such as party identification.⁵⁵² The heuristics we use in making political decisions, such as voting or contacting our representatives, are not ideologically neutral. There are what Sunstein calls “availability cascades,” which represent the fact that our imperfect biases to system 1 thinking, primes, and anchors our thoughts such that some ideas appear at the fore of our decision-making while others are in the background.⁵⁵³ These availability cascades are themselves often steered by “availability entrepreneurs, who “...work to ensure the continuous flow of worrying news. The danger [availability entrepreneurs present] is increasingly exaggerated as the media compete for attention-grabbing headlines.”⁵⁵⁴ This, Kahneman summarizes, results in a scenario in which the aforementioned entrepreneurs make increasingly wild claims to keep themselves in business while dismissing anyone who disagrees with them in an increasingly hostile manner.⁵⁵⁵ The link between a politics based on sensationalized and untrue ideas that simply reinforce each other and our psychology, then, is that we believe that politics when our system 1 minds have been primed to accept those ideas, and only those ideas as the truth while rejecting everything else out of principle.

⁵⁵² Kahneman 2011, Pgs. 197-198.

⁵⁵³ Ibid, 192-3.

⁵⁵⁴ Ibid, 193- 194.

⁵⁵⁵ Ibid

Bringing Kahneman's work more explicitly to politics, I claim that there are elements of political identity that are readily available for use in system 1 thinking: party, class, and racial identities come immediately to mind here. When availability entrepreneurs exploit people's system 1 thinking with the aforementioned continuous flow of worrying news, they are likely to do so along the lines of thinking that people are already primed to accept through their system 1 thinking: sharing a story that expresses worry about some other identified in terms of class, race, nationality, or gender is an act that uses system 1 thinking, and further keeps the sharer thinking in system 1 since the flow of such information is continuous by design.

In terms of the ability of individuals to become empowered to deliberate with one another, the findings of Kahneman are troubling. Given that deliberation requires enough time that, as Arendt develops in her telling of the ancient world, a life of labor precludes one from a fully political life, then these availability cascades, which drain glucose necessary for sustained system 2 thinking, place another barrier to political participation. If politics, through these availability cascades, is left to system 2 thinking, then we are not only excluded from a robust digital public in terms of structure but in terms of the mental ability to engage with it.

Sunstein describes the structures that Kahneman finds concerning in modern media in a series of books, all similarly entitled, culminating in 2017's *#Republic*.⁵⁵⁶ In it, Sunstein outlines his position that deliberative democracy depends, informationally, on two things. First, "people should be exposed to materials that they would have not chosen

⁵⁵⁶ The first editions, *Republic.com*, came out in 2002. The Second, *Republic.com 2.0* in 2007. They are the same book, effectively updated with new chapters and references each time.

in advance,” and second, “many or most citizens should have a wide range of common experiences.”⁵⁵⁷ The main crux of his argument is that this is not actually the case, and instead the web because it is so customizable, becomes tailed for each user’s preferences. Sunstein focuses on the individual as a consumer of information and describes the state of a consumer who has completely tailored her flow of information along the lines of preferences, be they party, religion, taste, etc. as a situation in which she gets her information in a hypothetical condition Sunstein calls “the daily Me,” a newspaper written for the preferences of a single individual. He bases this tailoring of a source of information consumption in the freedom of choice that the internet offers between varying sources of information, as well as the “power to filter,” in which people not only choose what they do see, but what they do not see online.⁵⁵⁸ Since the initial publication of Sunstein’s work, Facebook, Instagram, and Twitter have become much as Sunstein describes, allowing users to customize the content with which they interact, and the platforms themselves suggest similar content intended to keep the user engaged for as long as possible.

In groups, this filtering results in what Sunstein refers to as “cybercascades,” which occur when groups of people online come together to share similar ideas, and in so doing often convince themselves and each other that their viewpoints are simply true while leading one another to increasingly extreme versions of the same views they already had. People do not, in his line of thinking, do this consciously: we filter because

⁵⁵⁷ Sunstein, Cass. 2017. *#Republic*. Princeton: Princeton University Press.

⁵⁵⁸ *Ibid*, 22.

our resources of attention are scarce.⁵⁵⁹ This is in keeping with Kahneman’s findings, that we can only do so much difficult or specific thinking. Rather than system 2 thinking, we make use of heuristics, such as our existing preferences to decide where to go and what to look for online. In Sunstein’s view, people engaging in this behavior aid in the creation of cybercascades. When persons become members of these cybercascades, Sunstein finds: There are dangers for each of us individuals; constant exposure to one set of views is likely to lead to errors and confusions, sometimes as a result of cybercascades. And to the extent that the process entrenches existing views, spreads falsehood, promotes extremism, and makes people less able to work cooperatively on shared problems, there are dangers for society as a whole.⁵⁶⁰

Sunstein wavers in his consideration of cybercascades as a threat to democracy: at some points, he refers to their structure as a “Balkanization” of the internet, and even devotes an entire chapter to the discussion of cybercascades as a powerful recruiting tool for terror groups.⁵⁶¹ In light of the gravity of cybercascades being used as a means by which terrorists can be recruited, it is puzzling that Sunstein’s solutions remain relatively hands-off: instituting the fairness doctrine from the television broadcast industry’s past, increasing funding for government websites, and hoping companies will self-regulate their platforms.⁵⁶²

⁵⁵⁹ Ibid, 25.

⁵⁶⁰ Ibid, 118.

⁵⁶¹ Ibid, 61, and Chapter 10.

⁵⁶² Ibid, Ch 9.

In terms of understanding people's experiences online consisting of cybercascades, Sunstein's general argument stands the test of time: a growing body of evidence on the consumption and spread of fake news, some of which I explore in the proceeding pages, indicates that people do indeed tend to agree with, become more extreme in that agreement, and sometimes act on information that they get from highly filtered spaces. There are, however, serious limitations to Sunstein's arguments. The first is that his work fails to update his policy proposals: as Aaron Timms notes, writing a review of another of Sunstein's works, *How Change Happens*, the latter has been making the same policy prescriptions for several decades.⁵⁶³ In an especially critical moment, Timms writes:

The most pressing political questions today will not yield to merely administrative solutions; the dysfunction of liberal capitalism calls for a more active public sphere, for a radical reimagining of the state and its relationship to productive forces, rather than a retreat to the consolations of private life and bureaucracy.⁵⁶⁴

By 2019, the year of *How Change Happens*' publication, the United States Government was already under an executive who was, to borrow a term from the book, a "norm entrepreneur" who sought to convince his followers of his version of reality. The White House had become, in effect, the central node of a series of cybercascades that encouraged participants to not only believe in but also actively promote its version of events to bolster the popularity and power of the regime.⁵⁶⁵ Making a more accurate

⁵⁶³ Timms, Aaron. 2019. "The Sameness of Cass Sunstein." *New Republic*, June 20. <https://newrepublic.com/article/154236/sameness-cass-sunstein>.

⁵⁶⁴ *Ibid.*

⁵⁶⁵ For example, then President Trump's press secretary denounced the activities of the Jan 6 insurrection officially on Jan 7, 2021, despite Trump giving a speech of over 10,000 words inciting it the day before.

account than the one Sunstein has been writing in both book⁵⁶⁶ and article⁵⁶⁷ form for two decades requires more attention to both digital structures of power and the role of people as participants in the creation of those structures: the solutions that ask the state to regulate more of the internet, I contend, stand to make little impact in a feudalized internet in which people act not as rational consumers, but as prosumers who struggle to critically evaluate the information with which they are faced.

Sunstein, in *#Republic*, does not seem overly concerned about the activities of corporations online, stating simply that “Facebook can do better” at doing their bit to expose people to views that are different from their own, and thus to make shared digital experiences more possible: he asks Facebook to do better in the same paragraph where he recognizes that Facebook’s responsibility is, as a business, to its shareholders and not to the creation of digital deliberative democracy.⁵⁶⁸ This, Gerry Mackie argues, is insufficient, as the internet is a space where there is a lot of discussion among people who agree with one another⁵⁶⁹ rather than a forum for genuine political deliberation, and those spaces of discussion are vulnerable to astroturfing by actors that can afford to buy the

Here, I cite the denunciation and a transcript of the speech, respectively.
The Associated Press. 2021. "Transcript of Trump's Speech at Rally Before US Capitol Riot." *US News And World Report*. January 13. Accessed June 28, 2021. (The White House 2021)
The White House. 2021. "Remarks by Press Secretary Kayleigh McEnany." The White House. January 7. Accessed June 28, 2021. <https://trumpwhitehouse.archives.gov/briefings-statements/remarks-press-secretary-kayleigh-mcenany/>.

⁵⁶⁶ The Republic series in its various titles.

⁵⁶⁷ Sunstein, Cass. 2004. "Democracy and Filtering." *Communications of the ACM*, 57-59.

⁵⁶⁸ Sunstein 2017, Pgs. 13-14.

⁵⁶⁹ Which is not always a bad thing, he notes: academic disciplines are discussions among people who, at the very least, have some common experiences.

attention of others.⁵⁷⁰ The internet that Sunstein hoped would exist in the early versions of his *Republic* series is not the one that we have, and instead, “as the borderless internet became bordered, it came more under the control of territorial states.”⁵⁷¹ While the work that Mackie cites⁵⁷² is more concerned with the claim that nation-states have taken greater control of the internet, I find that there are actors who have control over large swaths of the web, and those are often corporate or other nonstate actors acting with a profit motive. This makes them less likely, I argue, to enact the nation-state-focused, liberal, technocratic reforms that Sunstein hopes for.

In real-time politics, we remain, at least structurally, in much the same position as the voyeur-voyager watching the horizon in their automobile’s windscreen, but because the speed of travel is the speed of light, the temporal compression and task saturation have further altered our relationship with the physical spaces around us. Instead of, for example, having several seconds to contemplate an object half a kilometer down the road in front of us, making our relationship with our current position fleeting (imagine, for example, trying to notice a single flower on the side of the road while driving at highway speeds), information confronts people at light speed. This is what Virilio terms the “anachronistic instant.”⁵⁷³ Because we are moving so fast at any one given instant, notions of past, present, and future become dilated and we, as individuals bound by human bodies and used to biological conceptions of time, lose our orientation both

⁵⁷⁰ Mackie, Gerry. 2009. "Astroturfing Infotopia." *Theoria* 30-56.

⁵⁷¹ *Ibid*, 52

⁵⁷² Goldsmith, Jack, and Tim Wu. 2006. *Who Controls the Internet?* New York: Oxford University Press.

⁵⁷³ Virilio 2012, *The Great Accelerator*, Pgs. 10-11.

physically and temporally. This physical disorientation, which Rosenau develops in *Distant Proximities*, is enough to cause some to retrench into tribalism as a reaction to the fear that they feel from the perception of the world is much larger than it was pre-internet: add to that the dromotological effects, and, I argue, we have created in digital politics a person who may lack the skills or the perspective with which to interrogate the claims of others for validity, relying wholly on a heuristic device to make some attempt to interpret the horizons in front of them. When faced with a temporal horizon that we cannot adequately comprehend, some people react in a way that is like task saturation or system 1 thinking, and some of their heuristic devices are sexism, racism, and, in some cases, political violence.

Sunstein's understanding of the structure of the internet poses that most people encounter the internet as consumers of goods, services, and information. These consumers find their way into cybercascades through their choices as such; a consumer chooses to read articles, blogs, etc. that they like. Those articles and blogs typically feature links to other, similar pieces that the reader might find worth a click. This is an important component of how people participate in the digital world, but Sunstein's reliance on the consumer aspect of digital participation ignores a vital aspect of a feudalized internet, that these same consumers are also the producers of the content and contexts that they consume and inhabit. The idea that a person can be simultaneously a producer and a consumer is not new—Alvin Toffler coined the term prosumer to describe exactly this in 1980.⁵⁷⁴ Over the decades since then, prosumers engaged in a widening set of activities that, with the emergence of digital prosumption, create a relationship

⁵⁷⁴ Ahulwalia, Pal, and Toby Miller. 2014. "The Prosumer." *Social Identities* 20 (4-5): 259-261.

between prosumers and corporations that leave the former increasingly unlikely to have the time or mental energy to devote to the careful listening, thinking, and responding that is so central to democratic deliberation.

Pre-digital prosumption focused on the ability of a consumer to choose or customize products to fit their wants and needs while simultaneously cutting the labor costs on behalf of the producer: choosing one's produce from a supermarket shelf was a presumptive innovation over older models of the general store, where a clerk would provide the customer with goods at the counter.⁵⁷⁵ Similarly, allowing drivers to pump their gasoline was billed to both save drivers time and the stations money on staff, the savings of which could be passed down to customers. Now, prosumption has become a central element of life under capitalism—we pick our food at farms, bus our tables at restaurants, and happily assemble furniture with frustratingly minimalist pictorial instructions. These non-digital acts of prosumption share a common theme: the prosumer gets a physical product that they have chosen to fit their desires. From this perspective, early proponents of prosumerism such as Toffler saw it as a mechanism by which people could democratize economic participation by having a meaningful say in the making of the products that they would use in daily life, while producers would see reduced costs in terms of labor.⁵⁷⁶

Some of this optimism remains in scholarship on digital presumption. A recent study of middle-class Chinese women makes the case that through the presumption of fashion selling sites and blogs, these women create and fund new facets of their identities

⁵⁷⁵ Ibid.

⁵⁷⁶ Banks, Eric. 1998. "The Prosumer and the Productivity Paradox." *Social Policy* 28 (4): 10-14.

in ways that would not have been possible without the sales generated by their websites. In the cases studied, the women were able to experiment with fashion styles as a means of self-expression because they profited from their purchases by selling the same styles, using images of themselves as the models for their websites.⁵⁷⁷ Not all prosumption is so empowering, though. The cybercascades that Sunstein describes do not exist in a vacuum; instead, they are elements of platforms owned by companies that operate for a profit, such as Facebook and Twitter. The makeup of these platforms depends on people acting as prosumers: prosumers like, share, and often write what other prosumers like and share. In this regard digital prosumption differs from its offline precursors: your next trip to the grocery store does not depend on a previous customer to put the bananas on their display. Because of this dependence of online platforms on people acting as prosumers, considering those people as prosumers is vital to a clear understanding of the power dynamics at play in cybercascades.

People who come to believe fake news typically encounter it when someone in their digital social sphere shares it. Without prosumers to platform fake news by sharing it social media platforms lose the content and interactivity that make them different from a simple blog. Reading some of Sunstein's conceptions of the cybercascade with the prosumer at the center of the analysis, a clearer image of the spread and persistence of fake news emerges. A cybercascade populated by prosumers is an environment that is in constant creation and reinforcement by its members: more than a group of likeminded consumers who understand one another as people who are united by shared tastes (as one

⁵⁷⁷ Zhang, Lin. 2017. "Fashioning the feminine self in "prosumer capitalism": Women's work and the transnational reselling of Western luxury online." *Journal of Consumer Culture* 17 (2): 184-204.

would find, for instance, in a line at a salad bar), digital prosumers are the co-creators of a shared digital environment. Some of these prosumers are prodigious in their efforts. As Andrew Guess, Jonathan Nagler, and Joshua Tucker found in their study of Facebook users, just under ten percent of accounts share fake news, but those ten percent are responsible for sharing more than 75% of fake news links.⁵⁷⁸ In the context of pre-digital consumerism, this is cause for concern in terms of potentially misleading people: claims that a household cleaner, if injected, is a replacement for vaccines, if repeated often enough and from a well-liked member of a community might cause someone to make poor health choices, such as ingesting household cleaners in an attempt to treat a respiratory virus.⁵⁷⁹

Within the more directly political context of a cybercascades made up of prosumers, this sharing of fake news is more troubling. When people participate in a cybercascade, the product of that participation in the cybercascade is more links and other content that keep those people, and others, engaged within that cybercascade: this is core to the business model of social media platforms, which depend on their users to not only consume content including ads but to make much of that content for each other to see. Thus, fake news and other forms of information give the cybercascade its character and meaning for those who exist within it. In acting as a prosumer in a cybercascade, people create, recreate, and reinforce the ideas that they like, share, and follow. Much of the fake

⁵⁷⁸ Guess, Andrew, Jonathan Nagler, and Joshua Tucker. 2019. "Less than you think: Prevalance and predictors of fake news dissemination of Facebook." *Science Advances* (5).

⁵⁷⁹ Kluger, Jeffrey. 2020. "Accidental Poisonings Increased After President Trump's Disinfectant Comments." *Time*, May 18. <https://time.com/5835244/accidental-poisonings-trump/>.

news shared thus far in the American context centers around political figures.⁵⁸⁰ In sharing political content, truthful or not, people make cybercascades into politically relevant spaces in their presumption of that cybercascade. The thing presumed, then, is a political space where members come together to share the love, or loathing, of people and events that they hold in common. Vitaly, new empirical work finds that people share fake news with which they generally agree, and do not take much time to fact check it.⁵⁸¹

In light of the temporal and psychological thinking, I have covered thus far in this chapter, I argue that this sharing of fake news with which people agree is because the sharers rely on heuristics such as liking or trusting a source of information, allowing their system 1 thinking to take over without a need for critical thought. In the context of cybercascades and other epistemic bubbles, this also insulates people from a difference in terms of background and points of view which would require some more careful, and resource-intensive thought to evaluate critically. Prosumers do not share news to debate its facticity, or to deepen discussion: they share news, in effect, to reinforce an individual's membership in the community of people with whom they agree and have found a common space online. Engaging in communities and platforms in which one is already a member takes less time and effort than seeking out new communities, especially ones with which one disagrees. Users who are task saturated and operating within mostly system 1 thinking, I argue, are likely prosumers of fake news even if they

⁵⁸⁰ Tsfati, Yariv, G H Boomgarderen, J Stromback, J Vliegthart, A Damstra, and E Lingren. 2020. "Causes and consequences of mainstream media dissemination of fake news: literature review and synthesis." *Annals of the International Communication Association* 40 (2): 157-173.

⁵⁸¹ Geeng, Christine, Savannah Yee, and Fransizka Roesner. 2020. "Fake News on Facebook and Twitter: Investigating How People (Don't) Investigate." *Conference on Human Factors in Computing Systems*. Honolulu: Association for Computing Machinery. Paper 655.

do not share lies intentionally: they so do because it is an action made easier by the programs of action built into corporate internet platforms, and within those programs of action, users run short on the cognitive resources necessary to critically evaluate information before prosuming it.

Under pre-digital modes of prosumption, the result was a product—a physical object that the prosumer had made, picked, or customized. This can be empowering, as it brings to the fore the agency of the prosumer, as Kacper Szulecki puts it in the context of people who prosume electricity:

This new prosumer-citizen is characterized by a set of virtues reminiscent of the Tocquevillian citizen in the nineteenth century. They are informed and conscious both of the way that the energy system functions, the impacts it has, and their role in it. They are involved, in the way the participatory democratic imagination envisages, translating their action into political engagement, both direct (political action in prosumer associations and political parties) and indirect (by becoming part of the energy system).⁵⁸²

In the context of energy, prosumption can be democratizing and empowering: by producing electricity and navigating the governmental and economic hurdles to doing so, people directly engage with each other, government, and corporate interests with the expressed aim of empowering themselves both politically and quite literally.⁵⁸³

⁵⁸² Szulecki, Kacper. 2018. "Conceptualizing energy democracy." *Environmental politics* 27 (1): 21-41. See Pg. 32.

⁵⁸³ *Ibid.*

This is, vitally, an “informed and conscious”⁵⁸⁴ process: it is there where the cybercascades of the feudalized web shift to disempowerment. Prosumption in social media platforms, especially considering Sunstein's formulation of cybercascades, may well be disempowering people from democratic participation because people encounter those cybercascades, not on an informed and conscious level more in line with system 2 thinking, but less consciously, using their system 1 thinking. Sunstein, in an article that aims at explaining social cascades, published before his work on cybercascades, points out an important phenomenon: people are willing to accept information that is not factual or change their minds to fit perceived group preferences, even when they know and can articulate privately in interviews that they know the information or opinions are not the ones that they believe.⁵⁸⁵ People, Sunstein asserts, will likely conform to the prevailing views in a group, in part to retain feelings of membership and inclusion in that group, regardless of the validity or factual bases for those views.⁵⁸⁶

This mechanism is unsurprising given Kahneman's work. Recall that most of the time, people operate with system 1 thinking for easier tasks, reserving the more demanding system 2 thinking for complicated tasks. Thus, we make most of our decisions nearly instantly, operating on prior information, and heuristics such as shared social norms and ideological agreement. If, then, someone who a person already likes shares a fake article about a candidate that both people abhor, the second person is more

⁵⁸⁴ Ibid, 32

⁵⁸⁵ Sunstein, Cass. 2000. "Deliberative Trouble? Why Groups Go to Extremes." *The Yale Law Journal* 71-119.

⁵⁸⁶ Sunstein, Cass. 2002. *Conformity and Dissent*. Public Law and Legal Theory Working Paper No. 34, Chicago: The Law School University of Chicago.

likely to simply assume it is true and spread it. This is quick, easy, and generates a feeling of having participated in a community which, as Sunstein notes in his work, is a key element of people remaining in, and believing the information presented within, cascades both online and off.⁵⁸⁷ It is also, I argue, a mechanism by which people are prosuming a cybercascade that is directly political and disempowers its members from engaging in critical debates around the meaning of facts. Instead of seeing news, fake or real, as a set of facts about which debate can occur, the fact that people prosume news they like generates an emotional attachment to the story and sentiment shared in the fake news. Because people are doing the prosuming, which takes time, they become emotionally invested in the narratives of fake news if, for no other reason, it is easier for us to continue to do the things we already do than it is to change. This presumption, which, I find, is a program of action baked into online platforms by corporations, conditions several categories of activity undertaken by users. Some users, such as those who spend sometimes years “researching” conspiracy theories work remarkably hard through countless hours of prosumption. The lazier prosumers, then, may simply uncritically read and sometimes share the falsehoods prosumed by their more industrious counterparts.

Because people are laboring in, and not simply consuming their cybercascades, I find it even more plausible that abandoning cybercascades, and fact-checking the content there, will get less likely over time and with more participation. There is some empirical evidence that suggests this to be the case: even after a multitude of challenges to the 2020 election were thrown out of courts across the country, after so-called audits were conducted with no evidence of systematic voter fraud, lawyers for Trump suffered clear

⁵⁸⁷ Here, The Republic books are of use, as is “Conformity and Dissent.”

and losses in courts, around a third of Trump supporters as of June 2021 still believed a recent piece of fake news, namely that he would be, by some means, "reinstated" as president by August 2021.⁵⁸⁸ Participating in cybercascades and fake news is easy, and the emotional attractions of both are simple to understand: A person has but to open up their smartphone, scroll to something on a social network, and tap "share." In just a few seconds, the person validates their views, and spreads fake news, they feel more welcome and entrenched in a political ideology that has just had one more falsehood woven into its fabric. Prosumers make their entrenchment all the easier through the unfriend and block features on these platforms: prosumers silence opposing views from interfering with cybercascades.

The undemocratic potential of this prosumption is one of the elements of contemporary capitalism online that is most concerning to Shoshana Zuboff, who, in writing *The Age of Surveillance Capitalism*, expresses deep concern that the growing amounts of data that users prosumer, but do not themselves control, are put to use by corporate actors that are willing to subvert not only deliberative democratic norms, but also to influence electoral outcomes in the name of increased profit and centralization of digital power.⁵⁸⁹

The ideological component of the phenomenon is that constructing and playing in a reality founded on untruth has been a staple in conservative media for decades. In the cable news era, Bill O'Reilly exemplifies this well. Through his show, O'Reilly

⁵⁸⁸ Morning Consult and Politico. 2021. National Tracking Poll #210636. Political Opinion Poll, Morning Consult and Politico. https://assets.morningconsult.com/wp-uploads/2021/06/09050746/210636_crosstabs_POLITICO_RVs_v1_LM.pdf.

⁵⁸⁹ Zuboff, Shoshana. 2019. *The Age of Surveillance Capitalism*. New York: PublicAffairs.

constructed a persona and ideology focused on the evils of liberalism as long-standing performance art turned propaganda believed by viewers.⁵⁹⁰ This same line of reasoning has deepened and evolved in the digital space. For instance, far-right pundit and activist Alex Jones has argued that his show is absurd and should be viewed as performance art done by a character with whom he happens to share a name, likeness, and political views.⁵⁹¹

A range of conservative pundits and political actors, including Tucker Carlson,⁵⁹² Alex Jones,⁵⁹³ and the former president's former attorney Sidney Powell,⁵⁹⁴ have argued, sometimes in court, that the lies they tell are entertainment, not news, and that no reasonable person would believe their claims to be fact. And, to that end they are correct. No reasonable person would believe, for instance, that Hillary Clinton ran a satanic cult in the basement of a pizza parlor, or that former president Trump would be "re-instated" in August of 2021. But, a person who had been a daily consumer of dubiously-factual information (in the pre-internet, cable TV era after the fairness doctrine expired in

⁵⁹⁰ Baym, Geoffrey. 2009. "Stephen Colbert's Parody of the Postmodern." In *Satire TV*, by Jonathan Gray, Jeffery Jones, and Ethan Thompson, 126-130. New York: NYU Press.

⁵⁹¹ Rhodan, Maya. 2017. "President Trump's Favorite Conspiracy Theorist Is Just 'Playing a Character,' His Lawyer Says." *Time*, April 17. <https://time.com/4743025/alex-jones-infowars-divorce-donald-trump/>.

⁵⁹² Folkenfink, David. 2020. "You Literally Can't Believe the Facts Tucker Carlson Tells You. So, Say Fox's Lawyers." *NPR*, September 29. <https://www.npr.org/2020/09/29/917747123/you-literally-cant-believe-the-facts-tucker-carlson-tells-you-so-say-fox-s-lawye>.

⁵⁹³ Smith, Allan. 2017. "'It's performance art': Lawyer for Alex Jones says InfoWars founder is 'playing a character'." *Business Insider*, April 17.

⁵⁹⁴ Weiss, Debra Cassens. 2020. "Sidney Powell lawyers argue no reasonable person would have accepted her stolen election claims as fact." *American Bar Association Journal*, March 23. <https://www.abajournal.com/news/article/sidney-powell-lawyers-argue-no-reasonable-person-would-have-accepted-her-stolen-election-claims-as-fact>.

1987⁵⁹⁵) ,became a prosumer in the feudalized internet. These consumers-turned-prosumers have been exposed to three decades shifting falsehoods which made them concerned that some big other, whether, immigrants, women, communists, or another, coming to destroy their prosumed version of American culture. With several decades of such exposure, especially with limited cognitive resources being pushed beyond critically important limits, some people may begin to believe some outlandish claims. Over time, Sunstein finds, these presumptive practices of sharing agreements and silencing disagreements lead to increasingly extreme versions of political ideologies finding persistent homes online.⁵⁹⁶

With an analysis centering on presumption, this is all the less surprising; people have actively produced the cybercascades that they inhabit one like, comment, and share at a time. Though much presumption of cybercascades consists of low-demand system 1 thinking, the cumulative temporal investment that prosumers make out of their digital habits means that they have built their presumption of a particular cybercascade as one of the heuristics that they use to determine the legitimacy of information that they see. As this temporal investment builds up over time, as Kahneman notes, the patterns that the prosumers have developed are harder to break, and it would require more effort to break into system 2 thinking to critically evaluate things that these prosumers see in spaces that they have spent, in some cases, years helping to develop.⁵⁹⁷

⁵⁹⁵ Pickard, Victor. 2018. The Strange Life and Death of the Fairness Doctrine. Departmental Paper, Philadelphia: Communication Commons.
https://repository.upenn.edu/cgi/viewcontent.cgi?article=1770&context=asc_papers.

⁵⁹⁶ Sunstein 2017. See chapters three and ten specifically.

⁵⁹⁷ Kahneman 2001, Pgs. 77-78.

One major concern for the disempowerment of individuals aside from the speed at which the information comes to the prosumer, to which I will return shortly, is the total amount of time that people under late capitalism spend producing. While we do, indeed, have a great ability to customize consumer goods and cybercascades, there is, I argue, a critique of prosumerism that considers political temporality as an element of disempowerment. As John Crary develops in *24/7*, Toffler was half right in thinking that prosumerism would be highly inclusive and empowering. In broad terms, Crary updates Lenin's argument from "Imperialism, The Highest Stage of Capitalism": the 1918 version of the argument posits that capitalism will continue its geographical expansion until the whole planet carries on with production, consumption, or both.⁵⁹⁸ Crary updates this for the 21st century, making the case that the newest frontier for capitalist expansion is not only geographic but also temporal. Time spent asleep in the digital age of capitalism is a missed opportunity, from the perspective of those seeking profit. Seeing sleep first as a necessary evil, Crary notes, states began serious attempts to eliminate sleep to forward the destructive ends of warfare.⁵⁹⁹ Here, Crary speaks well to Virilio's shared focus on the industrialization of war at high speed in the Second World War. In that conflict, belligerents on both sides of the conflict took what we would now call methamphetamine to make long flights and infantry advances possible.⁶⁰⁰

⁵⁹⁸ Lenin, VI. 1966. "Imperialism, the Highest Stage of Capitalism." In *Essential Works of Lenin*, edited by Henry Christman, 177-364. New York: Dover.

⁵⁹⁹ Crary, Jonathan. 2014. *24/7*. New York: Verso Press.

⁶⁰⁰ Andreas, Peter. 2020. "How Methamphetamine Became a Key Part of Nazi Military Strategy." *Time*, January 7. <https://time.com/5752114/nazi-military-drugs/>.

With the use of these drugs to temporarily relieve soldiers' need for sleep, the state aimed at an increase in the production of death and destruction. Later, the United States weaponized sleep in its prison in Guantanamo Bay: one torture technique involved keeping detainees awake for extended periods by exposing them to loud and aggressive music, lights, and uncomfortable conditions. The result was a severe degradation in the cognitive abilities of detainees who are likely to suffer long-lasting physical and psychological trauma.⁶⁰¹ The shared trend between these examples in relation to sleep is the same: those at the controls of the state sought to deliberately use sleep, or lack thereof, to further the ends of the state. The same, Crary argues, occurs in the corporate-led capitalism of the 21st century, as well.⁶⁰²

As I developed in the chapters that drew a critical history of the internet, technologies, and methods developed by the state to make war often find uses in the hands of corporate agents. Quite the same, Crary notes, has occurred in the context of developing technologies that erode sleep in favor of increased economic participation.⁶⁰³ These technologies, I argue, are increasingly presumptive as well. One such example is email. For many workers today, email is a primary tool of business communication, long having supplanted office mailboxes, phones, and faxes. In addition to the convenience and efficiency of streamlining several prior technologies' uses into one, there are presumptive aspects to email in the vein of Toffler's optimism: your email can filter spam or change the font to be more legible to you, and, importantly, you can (at least

⁶⁰¹ Miles, Steven. 2007. "Medical Ethics and the Interrogation of Guantanamo 063." *The American Journal of Bioethics* 7 (4): 5-11.

⁶⁰² Crary 2014, particularly chapter 3.

⁶⁰³ *Ibid.*

ideally) choose when (or if) you respond to a message. The result could well be a more convivial workplace that should free up more of a user's time to do other things: production, consumption, or, in line with the normative hopes of this work, pursue one of many empowering, democratic activities, such as engaging in the ancient tradition of going for a walk to have a good think. But the reality of many people's email usage is less about freeing up time than it is about devoting even more time to work. One recent psychological study found that left to their own devices, people check their emails about fifteen times a day, and restricting those number of times also reduces reported stress.⁶⁰⁴

This has been seen by some, such as Crary, as a reduction in the time spent away from work and an expansion of productive time into unpaid personal time, which results in feelings of alienation, depression, and distress.⁶⁰⁵ It has become such an issue in the eyes of some that, for instance, France has now disallowed employers from disciplining employees for disconnecting from work emails and phone calls under normal circumstances.⁶⁰⁶ The commonplace practice of responding to work emails from non-work spaces, for Crary, demonstrates a broader shift in power dynamics: it is capitalist colonization of times and spaces previously demarcated as non-working spaces. This colonization comes at the cost of the ability of people to do non-working activities.

When our time is increasingly encroached upon with work emails, advertising, and pressures to constantly produce, we have more compressed amounts of time left for

⁶⁰⁴ Kushlev, Kostadin, and Elizabeth Dunn. 2014. "Checking email less frequently reduces stress." *Computers in Human Behavior* 43: 220-228.

⁶⁰⁵ Crary 2014 pgs. 108, 124.

⁶⁰⁶ Beardsley, Eleanor. 2017. "For French Law on Right To 'Disconnect,' Much Support — And A Few Doubts." NPR. January 3. Accessed June 30, 2021.

anything else, including empowering ourselves and one another to participate in democratic politics. Further, this temporal compression, as shown by the psychological effects found in both Crary's work and the psychological findings of the Guantanamo torture victims, makes it more difficult for people to make thoughtful, considered decisions.

I would add to Crary's apt analysis by engaging with the presumptive aspects of the temporal intrusion of capitalist behaviors into our lives through digital technologies. When we email for work, it often creates more work for others, whether in the need to reply or in delegating tasks to others. We then not only work at the workplace from home via email but also produce the remote workplace for others in that same act of reading and responding to emails. Setting aside the temporal dimension and its disempowerment of individuals for a moment, the mere act of emailing to make more emails is, Graber finds, one of the core components of what he terms a growing set of "bullshit jobs" in which people do work that they full-well know are doing no good in the world and, thus, people begin to feel increasingly despondent, depressed, and purposeless as the 21st century drags on.⁶⁰⁷ Email, I offer, in its current state, is a site of presumption in that we act in ways that serve to make more emails, that take up increasing amounts of our time. Emailing outside of work hours serves the interests of capital if it is, I argue, unpaid labor that exploits the worker.

⁶⁰⁷ Graeber, David. 2018. *Bullshit Jobs*. New York: Simon and Schuster.

Confirming the general premise of Crary's concerns about digital capitalism's effects, by 2016 Americans spent ten hours per day interacting with screens.⁶⁰⁸ This is more than double the time Americans spent watching television in 1949, and several hours per day more than they did in the 1980s, just before the launch of the commercialized internet.⁶⁰⁹ Simultaneously, over a third of Americans, as of 2014, were sleeping less than seven hours a night.⁶¹⁰ Given that, as Crary notes, sleep deprivation and overstimulation are used as torture methods, the effects of less sleep and more screen time are not good: Throughout 2020 when just under half of the American workforce worked remotely during the COVID 19 pandemic,⁶¹¹ rates of anxiety, depression, alcoholism, insomnia, and divorce have all risen.⁶¹² My conclusion is that many people are, in effect, experiencing low-grade versions of the effects of sleep deprivation and overstimulation torture and that the devices of that torture are the phones, tablets, and computers with which they are surrounded and the content that we presume most waking hours of the day.

⁶⁰⁸ The Nielsen Company. 2016. The Nielsen Total Audience Report Q1 2016. Market Report, The Nielsen Company. <https://www.nielsen.com/us/en/insights/report/2016/the-total-audience-report-q1-2016/#>.

⁶⁰⁹ Madrigal, Alexis. 2018. "When Did TV Watching Peak?" The Atlantic, May 30. <https://www.theatlantic.com/technology/archive/2018/05/when-did-tv-watching-peak/561464/>.

⁶¹⁰ The Centers for Disease Control. 2014. Short Sleep Duration Among US Adults. Government Data, Washington DC: The Centers for Disease Control. https://www.cdc.gov/sleep/data_statistics.html.

⁶¹¹ Bloom, Nicholas. 2020. How working from home works out. Policy Brief, Stanford: Stanford Institute for Economic Policy Research. <https://siepr.stanford.edu/research/publications/how-working-home-works-out>.

⁶¹² Czeisler MÉ, Lane RI, Petrosky E, et al. Mental Health, Substance Use, and Suicidal Ideation During the COVID-19 Pandemic — United States, June 24–30, 2020. *MMWR Morb Mortal Wkly Rep* 2020; 69:1049–1057. <https://www.cdc.gov/mmwr/volumes/69/wr/mm6932a1.htm#suggestedcitation>

For the time being, this trend towards prosumption only appears to be strengthening, with corporate actors vying to colonize even more of our time and space. Take, for example, Amazon's new Sidewalk program⁶¹³: any Amazon user within range could use the devices to access Amazon's goods or services. It will link together all Amazon devices, including cameras that users have placed in and around their homes. Now anyone with one of the interactive speakers sold by the company prosumes one of the largest companies in the world, effectively making many homes into storefronts. This increasing trend toward prosumption disempowers people from participating actively in democratic politics and leaves them vulnerable to fake news because they are operating under task-saturated thinking that makes it harder to critically evaluate information: in light of the psychological discussion earlier in the chapter, people who have more information, less time, and less sleep with which to muster cognitive resources to critically think, are likely to fall back into using heuristic devices like party identification rather than fact-checking the news that they like and share. Keeping in mind the Habermasian ideal that I outline in chapter two, as well as the incidents of corporate blocking and censoring of platforms, the encroaching of corporate-controlled devices into user's homes allows those corporate actors to influence and constrain behavior in ways that are instrumental, not communicative as we would prefer in an empowered democratic public. Bringing Kahneman into conversation with Crary, the expansion of production and consumption into increasing amounts of people's time must drain the cognitive reserves that complex, system 2 thinking that democratic politics requires of its

⁶¹³ Amazon. n.d. "Welcome to Amazon Sidewalk." Amazon. Accessed June 31, 2021. <https://www.amazon.com/Amazon-Sidewalk/b?ots=1&slotNum=1&imprToken=40bd2f55-3d94-ac0f-861&tag=arstech20-20&linkCode=w50&node=21328123011>.

participants. With those resources stretched thin and our time for reflection, rest, and thought compressed into fleeting moments, people are likely to slip into system 1 thinking, which is more likely to entrench them into presumed cybercascades that sometimes contain and spread fake news.

The January 6 Uprising as an Integral Accident of Task-Saturated Politics

When people who are already set in their ways and feel overwhelmed, anxious, and poorly equipped to lean on the critical faculties of system 2 thinking encounter lies and untruths that confirm their pre-existing views and beliefs, they react in the ways that Virilio feared, in an instantaneous politics of reactivity that leaves little time for thinking and reflection at all. The results of cybercascades, prosumed by people operating under conditions of task saturation and temporal compression, using tools that empower corporate actors to increase their access to the daily lives of people came to the public fore on January 6, 2021, when a mass of several thousand Trump supporters stormed the Capitol of the United States of America, signaling their intent to murder elected officials in an attempt to stop the count of Electoral College votes that would cement their chosen candidate's loss in the recent election.⁶¹⁴⁶¹⁵ Composed, rational debate did occur after the election: there have been lawsuits and recounts, all of which have, through legal and civil means, reaffirmed that Donald Trump lost the 2020 election,⁶¹⁶ which Trump himself has

⁶¹⁴ Crump, James. 2021. "Donald Trump Says, 'We Didn't Win' in 2020 'But Let's See What Happens'." Newsweek, June 17. <https://www.newsweek.com/donald-trump-presidential-election-2020-says-didnt-win-1601455>.

⁶¹⁵ The Associated Press. 2021. "Video shows Capitol 'mob calling for the death of the vice president,' Plaskett says." PBS News Hour, February 10. <https://www.pbs.org/newshour/politics/watch-video-shows-capitol-mob-calling-for-the-death-of-the-vice-president-plaskett-says>.

⁶¹⁶ Ballotpedia. 2021. Ballotpedia's 2020 Election Help Desk: Tracking election disputes, lawsuits, and recounts. Accessed July 3, 2021.

since admitted publicly.⁶¹⁷ What we saw on January 6th, however, was exactly what Virilio had feared: politics at the speed of light as a state of thinking panic, and reaction, spread by machines of our own making, which pitted finite human capabilities against lies spread at nearly infinite speeds from the cybercascades that the people who stormed the Capitol had themselves helped to create. Virilio again gives some insight into the processes which occurred in this feudalized actor-network of cybercascades leading up to the attempted overthrow of the American government on January 6, 2021. Speaking to the consequences of political life lived at near-light speeds, Virilio finds “emotional synchronization” and a “communism of affects.” These people, dissuaded from use of their fuller critical thinking capabilities by the presumptive programs of action built into feudalized online platforms, engaged in political violence. It was a moment, I argue, that cannot help but be one of the integral accidents of politics in the digital age: with politics reduced to a politics of the instant that people experience in “nanochronologies,”⁶¹⁸ people abandoned careful thought for political reflex taught into the insurrectionists for years beforehand.

The fact that the insurrectionists committed their acts without reasonable thought, and instead acted on reflexes based on absurd lies,⁶¹⁹ is not merely speculation of mine or

https://ballotpedia.org/Ballotpedia%27s_2020_Election_Help_Desk:_Tracking_election_disputes,_lawsuits,_and_recounts.

⁶¹⁷ Solender, Andrew. 2021. "Trump Says He 'Didn't Win' The 2020 Election and Wants Biden to 'Do Well'." *Forbes*, June 17.

⁶¹⁸ *Ibid*, 71-2.

⁶¹⁹ Jacob Chansley, also known as the “QAnon Shaman” and his defense attorney have argued that Chansley could have only acted as he did on that January day in the throes of his “schizotypal personality disorder, anxiety, and depression” that would preclude him from rational thought. Reilly, Ryan. 2021. "'QAnon Shaman' Jacob Chansley, A Capitol Riot 'Flag-Bearer,' Sentenced to Prison."

Virilio's. Some of those who fomented the insurrection and its antecedent ideology, including Alex Jones⁶²⁰ and Sidney Powell,⁶²¹ have argued, in courts of law, that no reasonable person would believe the clear lies that they tell.

Again, this is correct: no reasonable person *would* believe that the Democratic Party, whose leadership is supposedly running a sex cult out of a pizza parlor,⁶²² managed to rig an election by counting all the votes. Some of the key ideological figures, such as the CEO of a pillow company, claim that. "We [The United States] were attacked by China, and they flipped this election and down-tickets to the tune of tens of millions [of votes]."⁶²³ One of the aforementioned performance artists who happened to serve as one of Trump's lawyers claimed that several agencies of the federal government had cooperated with universities to develop secret voting servers that weighed votes against the then head of that federal government less than the votes for Joe Biden.⁶²⁴

Huff Post, November 17. https://www.huffpost.com/entry/qanon-shaman-sentenced-trump-capitol-riot_n_618d4779e4b04e5bdfccfad.

⁶²⁰ Borchers, Callum. 2017. "Alex Jones should not be taken seriously, according to Alex Jones's lawyers." The Washington Post, April 17. <https://www.washingtonpost.com/news/the-fix/wp/2017/04/17/trump-called-alex-jones-amazing-joness-own-lawyer-calls-him-a-performance-artist/>.

⁶²¹ Polantz, Katelyn. 2021. "Sidney Powell argues in new court filing that no reasonable people would believe her election fraud claims." CNN Politics, March 23. <https://www.cnn.com/2021/03/22/politics/sidney-powell-dominion-lawsuit-election-fraud/index.html>.

⁶²² The New York Times. 2021. Search for "Pizzagate." April 14. Accessed April 14, 2021. <https://www.nytimes.com/search?query=Pizzagate>.

⁶²³ Wade, Peter. 2021. "This MyPillow Guy Meltdown Would Be Funny If It Weren't So Dangerous." Rolling Stone, August 14. <https://www.rollingstone.com/politics/politics-news/mypillow-guy-meltdown-lindell-1212379/>.

⁶²⁴ Villareal, Daniel. 2021. "Sidney Powell Claims All Votes Go to a Secret Server So People Can Manipulate Them." Newsweek, October 11. <https://www.newsweek.com/sidney-powell-claims-all-votes-go-secret-server-so-people-can-manipulate-them-1637840>.

The very same day as the attack, another popular figure in far-right cybercascades, Georgia Congresswoman Marjorie Taylor Greene, Tweeted, “The American people deserve elections they can trust. Thousands of sworn affidavits (at risk of JAIL TIME) were submitted confirming MASSIVE fraud. The evidence is clear. It’s the duty of Congress to OBJECT to fraudulent electoral votes. Today, I will fight for our country.”⁶²⁵

All these claims are outlandish. None of these claims have borne out, whether through lawsuits, congressional investigations, or publication of empirical evidence to suggest that China, Venezuela, the federal government, universities, or any other group aside from the voting public of the United States of America affected the outcome of the 2020 presidential election. How, then, could thousands of people have been so thoroughly convinced of such outlandish claims that they would take the time to travel to Washington DC to challenge the election and attempt to kill sitting members of the government?

The January 6 insurrectionists, I argue, are the result of a long process by which people, participating under conditions of task saturation on a feudalized internet that encourages their continuous participation to generate more profits and data, incorporate increasingly outlandish political beliefs as part of their political heuristics.

That Trump won the election was not a matter of facts, it became, through incorporation over time into the insurrectionists’ system 1 thinking, a part of their political identities which they chose to defend at all costs. The insurrections accepted

⁶²⁵ Taylor-Greene, Marjorie. 2021. "Rep Marjorie Taylor Greene Twitter Account." Twitter. January 6. Accessed February 24, 2022. https://twitter.com/RepMTG?ref_src=twsrc%5Egoogle%7Ctwcamp%5Eserp%7Ctwgr%5Eauthor.

“facts” such as the lies mentioned in the previous paragraph as a matter of course: to the task-saturated mind,⁶²⁶ new information that fits old patterns and heuristics fits into existing frames of mind without burning valuable cognitive resources. For some internet users, Christopher Bail and others find in a study of social media’s effects on political polarization, exposure to information proposes opposing views to that of an individual user is not seen, as Habermas would hope, as an opportunity for deliberation, but as a chance to become more extreme in one’s own ideology having rejected the opposing view entirely.⁶²⁷ After several years of incorporating falsehoods and lies as key elements of their political identities, the January 6 insurrection was, I argue, the result of minds altered over time to believe in and hold dear a political unreality that, in the eyes of those insurrectionists, was under grave and existential threat. The insurrectionists thought, in this moment of unreality, that they had to meet these threats with force if their way of life were to continue. The defense, that these users have been disabused of their conscious powers, has become a popular one among those now facing the consequences of their political reflexes.⁶²⁸

These people acted on reflex, I argue, because they were operating, for years, under a situation of task saturation and compressed temporality such that their current

⁶²⁶ Here, cases like Jacob Chansley’s are of great interest. When given time free from an internet connection, for example when in custody, some of the accused insurrectionists seem to have the time to more critically re-evaluate the claims that they acted upon in the insurrection.

⁶²⁷ Bail, Christopher, Lisa Argyle, Taylor Brown, John Bumpus, Haohan Chen, MB Fallin Hunzaker, Jaemin Lee, MARcus Mann, Freidolin Merhout, and Alexander Volfovsky. 2018. "Exposure to Opposing Views on Social Media Can Increase Political Polarization." *Proceedings of the National Academy of Sciences* 9216-9221.

⁶²⁸ The United States Attorney's Office District of Columbia. n.d. *Capitol Breach Cases*. Accessed April 14, 2021. <https://www.justice.gov/usao-dc/capitol-breach-cases>.

view of themselves and the world was a constant state of siege by perceived enemies: entire historical narratives could be, and were, crafted whole cloth by corporations and ideologies and sold to them through “news” sites and digital platforms. As Bail further develops in his illuminating work *Breaking The Social Media Prism*, the internet users that become political extremists spend much of their time (and, I add, cognitive resources), feeding and participating in cybercascades that distort their perception of reality to the point that they feel as though the world around them is in need of radical change.⁶²⁹ The January 6 insurrectionists chose, in their task-saturated state, to take part in the movement of a political machine that had been moving at the speed of light, and who were holding onto an a-historical instant⁶³⁰ for dear life⁶³¹: it is when one views their political lives under task saturation and temporal compression that their actions can begin to make some perverse form of sense. These were people disempowered from thought and empowered as not only users of social media platforms as prosumers, but also, in that moment, combatants willing to kill and face the potential for death for their chosen leaders, who had been telling these users for years that their culture would face erasure⁶³² by those who were committing the grand sin of counting votes in an election. These were

⁶²⁹ Bail, Chris. 2021. *Breaking the Social Media Prism*. Princeton: Princeton University Press. Chapters 4 and 5 are especially relevant to the processes by which users’ perceptions of reality change for the more extreme on social media platforms.

⁶³⁰ An alternative reality in which Donald Trump would retain the presidency, now and forever.

⁶³¹ Virilio 1999, Pg. 13.

⁶³² Pengelly, Martin. 2021. "Lachlan Murdoch backs Tucker Carlson in ‘white replacement’ furor." *The Guardian*, April 13. <https://www.theguardian.com/media/2021/apr/13/tucker-carlson-fox-news-murdoch-anti-defamation-league>.

reactive persons fighting against what they saw, though the fogged screen of task saturation, as a temporal erasure of everything they held dear.

I conclude here with a moment in which Virilio speaks almost prophetically to the events of January 6 and the lead-up to them, which is an answer he gave when asked about the possibility of digital democracy:

The tyranny of real time is not very different from classical tyranny, because it tends to destroy the reflection of the citizen in favor of a reflex action. Democracy is based on solidarity, not solitude, and man has to reflect before acting. Now, real time and the world present demand a reflex from the television viewer that is really a kind of manipulation. The tyranny of real time is tantamount to a subjugation of the television viewer. The temporality of democracy is threatened because the expectation of a judgment tends to be eliminated.... Live democracy, or automatic democracy, eliminates this reflection and replaces it with a reflex.⁶³³

This is, I argue, exactly what we witnessed on January 6, 2021. The integral accident of digital politics has been the replacing of reflection and thought with reflex. The insurrectionists pulled from the ranks of people who were acting following corporate political punditry that took the myopia of the contemporary moment and weaponized it for profit. As a result, prosumers turned into insurrectionists and became so task-saturated by the compressed temporality of politics at light speed that it has become increasingly difficult for them to think rather than to react along lines learned and accepted by their system 1 thought processes, aided by cybercascades rife with untruths. Thus, the compressed temporality of digital politics has become a means by which some people

⁶³³ Virilio 1999, Pgs. 19-20.

have become increasingly disempowered from using their powers of reason, turning them into reactionary subjects working towards the ends of others. In terms of power in the digital landscape, this set of phenomena, I claim, tilts the balance of power towards those who own the corporate platforms on the feudalized internet who made a profit from ad revenues while these people were acting as prosumers of digital cybercascades, and from the viewership engendered by the world watching with rapt attention as the American Capitol came under siege for the first time in two centuries.

In this chapter, I examined the experiences of people who use the internet in its current, feudalized form that favors corporate actors' profit-seeking agendas. Using the works of Paul Virilio as a guiding commentary, I develop the case that people, in using the feudalized internet, are likely to become disempowered from the complex and logistically more costly system of thinking necessary, for instance, to make informed and deliberate political choices. Instead, to cope with the task saturation induced by the compressed temporalities people experience through the feudalized internet, these people turn to other means by which to maintain a grasp on political life. People find that grasp in cybercascades, in which some people, especially the older and more conservative, find themselves as prosumers of political spaces that privilege easy-to-share lies, memes, and tweets over hard-to-prove truths. These falsehoods spread and take psychological root among task-saturated individuals in corporate-controlled platforms that facilitate and encourage constant prosumption, in an instant. The latter often takes months of legal processes to finalize and share with the public. By so actively and often participating in the former, some people have become so disempowered from their abilities to reason

carefully that they not only believe lies denounced publicly by those who tell them but are willing to become violent actors against the democratic state.

In terms of the overall analysis of this work, the adoption of fake news by people who use the feudalized internet has disempowered some people from being able to participate in democratic life more fully: they instead have become increasingly attached to corporate-owned cybercascades. Once entrenched into said cybercascades, people's type 1 thinking leads them to prosume spaces where extreme ideologies can, and have, developed away from the shared body of basic facts and narratives that make up a democracy. In short, these cybercascades, while they enrich corporations, have proven to be threats to the continued lives and democratic participation of individuals, as well as the stability of the state, as evidenced by the January 6th insurrection in the United States. An adapted-ANT analysis with materialist explanations for the behavior of corporations expects the behaviors seen on January 6, 2021: the programs of action baked into the designs of corporately owned digital platforms cast the user as a prosumer to the ends of profit but allows the user freedom to prosume whatever content keeps the user engaged as a prosumer. To return to Latour's speeding metaphor: there are few speedbumps slowing down users' prosumption of fake news and, in fact, there are cognitive green lights to doing so. These green lights, in some instances, lead users to participate in online conspiracies that have led to political violence. Users of the feudalized internet, traveling so quickly down the information superhighway, may well be going too fast to see the warning signs that their behaviors threaten democratic processes.

Bibliography

Ahulwalia, Pal, and Toby Miller. 2014. "The Prosumer." *Social Identities* 20 (4-5): 259-261.

Amazon. n.d. "Welcome to Amazon Sidewalk." *Amazon*. Accessed June 31, 2021.
<https://www.amazon.com/Amazon-Sidewalk/b?ots=1&slotNum=1&imprToken=40bd2f55-3d94-ac0f-861&tag=arstech20-20&linkCode=w50&node=21328123011>.

Andreas, Peter. 2020. "How Methamphetamine Became a Key Part of Nazi Military Strategy." *Time*, January 7. <https://time.com/5752114/nazi-military-drugs/>.

Arendt, Hannah. 1958. *Men in Dark Times*. New York: Harcourt, Brace, And World.
—. 1958. *The Human Condition*. Chicago: University of Chicago Press.

Armitage, John. 1999. "Paul Virilio, an Introduction." *Theory, Culture, and Society* 1-23.

Bail, Chris. 2021. *Breaking the Social Media Prism*. Princeton: Princeton University Press.

Bail, Christopher, Lisa Argyle, Taylor Brown, John Bumpus, Haohan Chen, MB Fallin Hunzaker, Jaemin Lee, MARcus Mann, Freidolin Merhout, and Alexander Volfovsky. 2018. "Exposure to Opposing Views on Social Media Can Increase Political Polarization." *Proceedings of the National Academy of Sciences* 9216-9221.

Ballotpedia. 2021. *Ballotpedia's 2020 Election Help Desk: Tracking election disputes, lawsuits, and recounts*. Accessed July 3, 2021.
https://ballotpedia.org/Ballotpedia%27s_2020_Election_Help_Desk:_Tracking_election_disputes,_lawsuits,_and_recounts.

Banks, Eric. 1998. "The Prosumer and the Productivity Paradox." *Social Policy* 28 (4): 10-14.

Baym, Geoffery. 2009. "Stephen Colbert's Parody of the Postmodern." In *Satire TV*, by Jonathan Gray, Jeffery Jones, and Ethan Thompson, 126-130. New York: NYU Press.

Beardsley, Eleanor. 2017. "For French Law on Right To 'Disconnect,' Much Support — And A Few Doubts." *NPR*. January 3. Accessed June 30, 2021.
<https://www.npr.org/sections/parallels/2017/01/03/508028703/for-french-law-on-right-to-disconnect-much-support-and-a-few-doubts>.

Bloom, Nicholas. 2020. *How working from home works out*. Policy Brief, Stanford: Stanford Institute for Economic Policy Research.
<https://siepr.stanford.edu/research/publications/how-working-home-works-out>.

- Borchers, Callum. 2017. "Alex Jones should not be taken seriously, according to Alex Jones's lawyers." *The Washington Post*, April 17.
<https://www.washingtonpost.com/news/the-fix/wp/2017/04/17/trump-called-alex-jones-amazing-joness-own-lawyer-calls-him-a-performance-artist/>.
- Brown, Wendy. 2019. *In the Ruins of Neoliberalism*. New York: Columbia University Press.
- Butler, Judith. 2011. *Bodies that Matter*. New York: Routledge.
- Conley, Verena Adermatt. 1999. "The Passenger: Paul Virilio and Feminism." *Theory, Culture, and Society* 201-214.
- Crary, Jonathan. 2014. *24/7*. New York: Verso Press.
- Crump, James. 2021. "Donald Trump Says, 'We Didn't Win' in 2020 'But Let's See What Happens'." *Newsweek*, June 17. <https://www.newsweek.com/donald-trump-presidential-election-2020-says-didnt-win-1601455>.
- Cuomo, S. 2007. *Technology and Culture in Greek and Roman Antiquity*. Cambridge: Cambridge University Press.
- Daniels, Jessie. 2009. "Cyberfeminism(s): Race, Gender, and Embodiment." *Women's Studies Quarterly* 101-104.
- Davis, Bradley, Katherine Welch, and Timmothy Pritts. 2013. *Enhanced Critical Care Air Transport Team Training for Mitigation of Task Saturation*. Final Technical Report, Cincinnati: USAF School of Aerospace Medicine.
- Der Derian, James. 1999. "The Conceptual Cosmology of Paul Virilio." *Theory, Culture, and Society* 215-227.
- Doorn, Niels Van. 2011. "Digital Spaces, Material Traces: How Matter Comes to Matter in Online Performances of Gender, Sexuality, and Embodiment." *Media, Culture, and Society* 531-547.
- Ferreday, Debra. 1998. "Becoming Deer: Nonhuman Drag and Online Utopias." In *Meaning and Gender in Cyberspace: The Performance of Gender, Class, and Race Online*, by Kendall. Online.
- Folkenfink, David. 2020. "You Literally Can't Believe the Facts Tucker Carlson Tells You. So, Say Fox's Lawyers." *NPR*, September 29.
<https://www.npr.org/2020/09/29/917747123/you-literally-cant-believe-the-facts-tucker-carlson-tells-you-so-say-fox-s-lawyer>.
- Foucault, Michel. 1995. *Discipline and Punish*. New York: Random House.

- Geeng, Christine, Savannah Yee, and Fransizka Roesner. 2020. "Fake New of Facebook and Twitter: Investigating How People (Don't) Investigate." *Conference on Human Factors in Computing Systems*. Honolulu: Association for Computing Machinery. Paper 655.
- Goldsmith, Jack, and Tim Wu. 2006. *Who Controls the Internet?* New York: Oxford University Press.
- Graber, David. 2015. *The Utopia of Rules*. New York: Melville House.
- Graeber, David. 2018. *Bullshit Jobs*. New York: Simon and Schuster.
- Groff, James R. 2006. "Task Saturation." *Combat Edge*, December.
- Guess, Andrew, Jonathan Nagler, and Joshua Tucker. 2019. "Less than you think: Prevalence and predictors of fake news dissemination of Facebook." *Science Advances* (5).
- Habermas, Jurgen. 2001. *The Inclusion of the Other*. Cambridge: MIT Press.
- Haraway, Donna. 1991. *Simians, Cyborgs, and Humans*. New York: Routledge.
- Illich, Ivan. 2009. *Tools for Conviviality*. London: Marian Boyers.
- Jackson, John, and Charles Franklin. 1983. "The Dynamics of Party Identification." *American Political Science Review* 957-973.
- Johannson, Gunnar; Rumar, Kare. 1971. "Drivers' Brake Reaction Times." *Human Factors* 23-27.
- John, Rawls. 1971. *A Theory of Justice*. Cambridge: Harvard University Press.
- Kahneman, Daniel. 2011. *Thinking, Fast and Slow*. New York: Farrar, Strauss, and Ciroux.
- Kendall, Lori. 1998. "Meaning and Identity in Cyberspace." *Symbolic Interaction* 129-153.
- Klepper, David. 2021. "<https://apnews.com/article/dc-wire-donald-trump-health-coronavirus-pandemic-election-2020-b7e929bb8d49b77d0922eae7ad3794b7>." *Associated Press News*, May 29. <https://apnews.com/article/dc-wire-donald-trump-health-coronavirus-pandemic-election-2020-b7e929bb8d49b77d0922eae7ad3794b7>.

- Kluger, Jeffrey. 2020. "Accidental Poisonings Increased After President Trump's Disinfectant Comments." *Time*, May 18. <https://time.com/5835244/accidental-poisonings-trump/>.
- Kushlev, Kostadin, and Elizabeth Dunn. 2014. "Checking email less frequently reduces stress." *Computers in Human Behavior* 43: 220-228.
- Latour, Bruno. 2005. *Reassembling the Social*. Oxford: Oxford University Press.
- Leach, Neal. 1999. "Virilio and Architecture." *Theory, Culture, and Society* 72-84.
- Lenin, VI. 1966. "Imperialism, the Highest Stage of Capitalism." In *Essential Works of Lenin*, edited by Henry Christman, 177-364. New York: Dover.
- Lévi-Strauss, Claude. 1955. "The Structural Study of Myth." *The Journal of American Folklore* 428-444.
- Mackie, Gerry. 2009. "Astroturfing Inforopia." *Theoria* 30-56.
- Madrigal, Alexis. 2018. "When Did TV Watching Peak?" *The Atlantic*, May 30. <https://www.theatlantic.com/technology/archive/2018/05/when-did-tv-watching-peak/561464/>.
- Meta Newsroom. 2021. "Meta Newsroom Twitter." *Twitter*. May 10. Accessed February 23, 2022. <https://twitter.com/MetaNewsroom/status/1391816265891778560>.
- Miles, Steven. 2007. "Medical Ethics and the Interrogation of Guantanamo 063." *The American Journal of Bioethics* 7 (4): 5-11.
- Morning Consult and Politico. 2021. *National Tracking Poll #210636*. Political Opinion Poll, Morning Consult, and Politico. https://assets.morningconsult.com/wp-uploads/2021/06/09050746/210636_crosstabs_POLITICO_RVs_v1_LM.pdf.
- Muller, Stig, and Hitendra RH Parel. 2012. "Lessons Learned from the Aviation Industry: Surgical Checklists." In *Simulation Training in Laparoscopy and Robotic Surgery*, by Patel H. and J Joseph., 1-6. Springer: London.
- National Transportation Safety Board. 2016. *Crash During Nonprecision Instrument Approach to Landing Execufight Flight 1526*. Aircraft Accident Report, National Transportation Safety Board. <https://www.nts.gov/investigations/AccidentReports/Reports/AAR1603.pdf>.
- Pengelly, Martin. 2021. "Lachlan Murdoch backs Tucker Carlson in 'white replacement' furor." *The Guardian*, April 13. <https://www.theguardian.com/media/2021/apr/13/tucker-carlson-fox-news-murdoch-anti-defamation-league>.

Peterson, Jonathan, Kevin Smith, and John Hibbing. 2020. "Do People Really Become More Conservative?" *The Journal of Politics* 82 (2): 601-611.

Pickard, Victor. 2018. *The Strange Life and Death of the Fairness Doctrine*. Departmental Paper, Philadelphia: Communication Commons.
https://repository.upenn.edu/cgi/viewcontent.cgi?article=1770&context=asc_papers.
Plato. 1993. *The Republic*. Translated by Robin Waterfield. New York: Oxford University Press.

Poland, Bailey. 2016. *Haters*. Potomac Books.

Polantz, Katelyn. 2021. "Sidney Powell argues in new court filing that no reasonable people would believe her election fraud claims." *CNN Politics*, March 23.
<https://www.cnn.com/2021/03/22/politics/sidney-powell-dominion-lawsuit-election-fraud/index.html>.

Prevention, The Centers for Disease Control and. 2021. *Distracted Driving*. Technical Report, Washington DC: The Centers for Disease Control and Prevention.
https://www.cdc.gov/transportationsafety/distracted_driving/index.html#:~:text=In%20the%20U.S.%20in%202018,crashes%20involving%20a%20distracted%20driver.&text=About%201%20in%205%20of,or%20otherwise%20outside%20a%20vehicle.
Purdue School of Aeronautics and Astronautics. n.d. *Propulsion Web Page*. Accessed April 29, 2021.
<https://engineering.purdue.edu/~propulsi/propulsion/jets/basics/afterburner.html>.

Rawls, John. 2005. *A Theory of Justice*. Cambridge: Harvard University Press.
—. 2005. *Political Liberalism*. New York: Columbia University Press.

Reilly, Ryan. 2021. "'QAnon Shaman' Jacob Chansley, A Capitol Riot 'Flag-Bearer,' Sentenced to Prison." *Huff Post*, November 17. https://www.huffpost.com/entry/qanon-shaman-sentenced-trump-capitol-riot_n_618d4779e4b04e5bdfccfad.

Rhodan, Maya. 2017. "President Trump's Favorite Conspiracy Theorist Is Just 'Playing a Character,' His Lawyer Says." *Time*, April 17. <https://time.com/4743025/alex-jones-infowars-divorce-donald-trump/>.

Ritzer, George, and Jurgensen, Nathan. 2010. "Production, Consumption, and Prosumption." *Journal of Consumer Culture* 13-36.

Rosenau, James. 2003. *Distant Proximities*. Princeton: Princeton University Press.
Schorer, Mark. 1959. "The Necessity of Myth." *Daedalus* 360.

Smith, Allan. 2017. "'It's performance art': Lawyer for Alex Jones says InfoWars founder is 'playing a character.'" *Business Insider*, April 17.

<https://www.businessinsider.com/lawyer-alex-jones-infowars-playing-character-acting-2017-4>.

Solender, Andrew. 2021. "Trump Says He 'Didn't Win' The 2020 Election and Wants Biden to 'Do Well'." *Forbes*, June 17.

<https://www.forbes.com/sites/andrewsolender/2021/06/17/trump-says-he-didnt-win-the-2020-election-and-wants-biden-to-do-well/?sh=40cfd6f8403c>.

Sunstein, Cass. 2017. *#Republic*. Princeton: Princeton University Press.

—. 2004. "Democracy and Filtering." *Communications of the ACM*, 57-59.

Sunstein, Cass. 2002. *Conformity and Dissent*. Public Law and Legal Theory Working Paper No. 34, Chicago: The Law School University of Chicago.

Sunstein, Cass. 2000. "Deliberative Trouble? Why Groups Go to Extremes." *The Yale Law Journal* 71-119.

Szulecki, Kacper. 2018. "Conceptualizing energy democracy." *Environmental Politics* 27 (1): 21-41.

Taylor-Greene, Marjorie. 2021. "Rep Marjorie Taylor Greene Twitter Account." *Twitter*. January 6. Accessed February 24, 2022.

https://twitter.com/RepMTG?ref_src=twsrc%5Egoogle%7Ctwcamp%5Eserp%7Ctwgr%5Eauthor.

The Associated Press. 2021. "Video shows Capitol 'mob calling for the death of the vice president,' Plaskett says." *PBS News Hour*, February 10.

<https://www.pbs.org/newshour/politics/watch-video-shows-capitol-mob-calling-for-the-death-of-the-vice-president-plaskett-says>.

—. 2021. "Transcript of Trump's Speech at Rally Before US Capitol Riot." *US News and World Report*. January 13. Accessed June 28, 2021.

<https://www.usnews.com/news/politics/articles/2021-01-13/transcript-of-trumps-speech-at-rally-before-us-capitol-riot>.

The Centers for Disease Control. 2014. *Short Sleep Duration Among US Adults*.

Government Data, Washington DC: The Centers for Disease Control.

https://www.cdc.gov/sleep/data_statistics.html.

The New York Times. 2021. *Search for Pizzagate*. April 14. Accessed April 14, 2021.

<https://www.nytimes.com/search?query=Pizzagate>.

The Nielson Company. 2016. *The Nielsen Total Audience Report Q1 2016*. Market

Report, The Nielsen Company. <https://www.nielsen.com/us/en/insights/report/2016/the-total-audience-report-q1-2016/#>.

The United States Attorney's Office District of Columbia. n.d. *Capitol Breach Cases*. Accessed April 14, 2021. <https://www.justice.gov/usao-dc/capitol-breach-cases>.

The White House. 2021. "Remarks by Press Secretary Kayleigh McEnany." *The White House*. January 7. Accessed June 28, 2021. <https://trumpwhitehouse.archives.gov/briefings-statements/remarks-press-secretary-kayleigh-mcenany/>.

Timms, Aaron. 2019. "The Sameness of Cass Sunstein." *New Republic*, June 20. <https://newrepublic.com/article/154236/sameness-cass-sunstein>.

Tsfati, Yariv, G H Boomgard, J Stromback, J Vliegthart, A Damstra, and E Lingren. 2020. "Causes and consequences of mainstream media dissemination of fake news: literature review and synthesis." *Annals of the International Communication Association* 40 (2): 157-173.

US Department of Homeland Security. 2017. *Covert Testing of TSA's Screening Checkpoint Effectiveness*. Unclassified Summary, Washington DC: US Department of Homeland Security.

Villareal, Daniel. 2021. "Sidney Powell Claims All Votes Go to a Secret Server So People Can Manipulate Them." *Newsweek*, October 11. <https://www.newsweek.com/sidney-powell-claims-all-votes-go-secret-server-so-people-can-manipulate-them-1637840>.

Virilio, Paul. 2007. *Negative Horizon*. New York: Continuum.

—. 1999. *Politics of the Very Worst*. New York: Semiotext(e).

—. 2008. *Pure War*. Los Angeles: Semiotext(e).

—. 2006. *Speed and Politics*. Cambridge: Semiotext(e).

—. 2005. *Speed and Politics*. New York: Semiotext(e).

—. 2012. *The Administration of Fear*. Los Angeles: Semiotext(e).

—. 1996. *The Art of the Motor*. University of Minnesota Press: Minneapolis.

—. 2012. *The Great Accelerator*. Malden: Polity Press.

Vosoughi, Soroush, Deb Roy, and Sinran Aral. 2018. "The spread of true and false news online." *Science* (359): 1146-1151.

Wade, Peter. 2021. "This MyPillow Guy Meltdown Would Be Funny If It Weren't So Dangerous." *Rolling Stone*, August 14. <https://www.rollingstone.com/politics/politics-news/my-pillow-guy-meltdown-lindell-1212379/>.

Weiss, Debra Cassens. 2021. "Sidney Powell lawyers argue no reasonable person would have accepted her stolen election claims as fact." *American Bar Association Journal*, March 23. <https://www.abajournal.com/news/article/sidney-powell-lawyers-argue-no-reasonable-person-would-have-accepted-her-stolen-election-claims-as-fact>.

Zhang, Lin. 2017. "Fashioning the feminine self in "prosumer capitalism": Women's work and the transactional reselling of Western luxury online." *Journal of Consumer Culture* 17 (2): 184-204.

Zuboff, Shoshana. 2019. *The Age of Surveillance Capitalism*. New York: PublicAffairs.

Conclusion

To finish this work's discussion of digital power dynamics, I begin by revisiting the three vignettes with which the work begins. I do so to reflect on those stories and the broader trends that they highlight considering the critical digital history that I drew in the preceding chapters. Some of the more worrying trends and events that these vignettes bring to light, I find, remain deeply entrenched in the feudalizing internet, and are unlikely to end soon. Then, I briefly revisit each chapter's overarching themes to tie each chapter to the Habermasian ideal that I set forth in chapter two. I conclude this summary with a diagnosis of the state of power dynamics on the contemporary internet in terms of its relative (in)hospitality to the empowerment of people who are capable of, and willing to, participate in democratic political processes. Finally, I situate the work within an emerging debate within political theory on the analytical utility for considering the contemporary internet's power dynamics in feudal terms, as well as making some suggestions for future work.

First Vignette Revisited: Gamergate

For Anita Sarkeesian, the game developer who became the object of longstanding threats and harassment first by an ex-boyfriend, and then many angry misogynist trolls, the incident did not spell an end to her life online. The experience appears to have taken her career in an activist direction. Sarkeesian now runs Feminist Frequency, a nonprofit organization dedicated to combatting the same sexism, racism, and misogyny that many had flung in Sarkeesian's direction. Aside from raising awareness and hosting a longstanding series of podcasts and videos covering various aspects of contemporary feminist praxis, Feminist Frequency launched a text and phone hotline in 2020 aimed at

guiding people towards relevant resources when they face harassment in the online gaming community.⁶³⁴

Given the misery that sexist, misogynist posters and trolls wrought upon Sarkeesian, the decision to face it head-on by founding and continuing to work in a nonprofit that directly attempts to alleviate that suffering and encourage people to engage with one another in kinder, more caring, and inclusive terms is admirable not only personally, but politically as well. Feminist Frequency is an excellent example of the kinds of digital platforms that seek to empower people, in this case, women, to participate more fully in online life, and to seek aid from a broader community when other actors threaten that participation. In terms of the normative hopes for this work, Sarkeesian's story thus far both illustrates some of the lines along which digital disempowerment has occurred and provides an encouraging example that leads me, as both a scholar and an activist, to conclude that positive progress towards more empowering digital spaces is possible, even in a world where sexism and misogyny are still practiced by users and institutionally ingrained within corporate platforms.

Notably, Feminist Frequency's existence does not depend on a radical reconfiguration of digital power such as the subversion or toppling of corporate-owned and maintained domains, servers, etc. Sarkeesian's nonprofit operates through a WordPress site: this is a subscription-based platform that operates for profit.⁶³⁵

Although, as previous chapters make clear, I am more than slightly skeptical of a

⁶³⁴ Feminist Frequency. (2022). About Us. Retrieved from Feminist Frequency: <https://feministfrequency.com/about/>

⁶³⁵ WordPress. (2022). Plans and Pricing. Retrieved from WordPress: <https://wordpress.com/pricing/>

corporate-dominated internet's friendliness to empowering spaces and discourses, Feminist Frequency's existence through a corporate-owned web hosting and design service allows for some level of measured optimism: it is possible, even on a corporate-dominated internet, for people to do work that empowers others to participate despite sexism, and to actively work against sexism and misogyny in parts of online life. This is good news considering the moral aim of this work: there are still people and organizations working actively to make the internet a more open and inclusive network for actors who wish to participate in digital life on equal terms with other persons.

This relative optimism, however, intersects with some pessimism of the intellect, as sexism and racism still exist on digital platforms. For instance, the Metaverse, Facebook's newest platform and the reason for the company's name change to Meta, have a persistent problem with sexist and racist harassment occurring on the platform between users, facilitated by Meta's construction of a virtual reality in which people's avatars can interact within that reality. As journalist Breigha Adeyemo aptly notes, "Ensuring that the metaverse is inclusive and promotes democratic values rather than threatens democracy requires design justice and social media regulation."⁶³⁶ The sexism that Sarkeesian experienced beginning in 2014 still presents a distinct avenue along which people experience harassment, which results in them feeling excluded and disempowered from living fuller digital lives is ongoing through corporate-owned and operated platforms that are in their infancy as of this writing. I concur with Adeyemo's

⁶³⁶ Adeyemo, B. (2021, December 15). I'm a Black woman and the metaverse scares me – here's how to make the next iteration of the internet inclusive. *The Conversation*. Retrieved from <https://theconversation.com/im-a-black-woman-and-the-metaverse-scaries-me-heres-how-to-make-the-next-iteration-of-the-internet-inclusive-173310>.

sentiment: if the future of the internet is to be less sexist and racist, it will require careful design and regulation of platforms in ways that are deliberately anti-sexist and anti-racist. Further, Louise Richardson Self finds in *Hate Speech Against Women Online* that the contemporary internet does not function as a democratic public for women in no small part because the “dominant social imaginary” in many online spaces relies on an exercise of social power that involves hate speech and trolling against women: this social power disempowers women and constructs a sexist imaginary that persists not only online, but offline as well.⁶³⁷ Online sexism is a persistent problem that affects not only the experience of women online, but is a troubling, persistent line along which people affect one another’s experiences and agency along disempowering lines.

Second Vignette Revisited: Pizzagate

The Pizzagate conspiracy, which alleged that an ever-evolving cast of people including Hillary Clinton were members of a satanic cult which practiced blood rituals in the basement of a pizza parlor ended with much less fanfare than true believers of the conspiracy would have hoped.⁶³⁸ As I mentioned at the beginning of the work, on December 14, 2016, Edgar Welch entered Comet Ping Pong in Washington DC, only to find no signs of Secretary Clinton, nor a cult, nor even a basement in which to conduct blood rites to appease a deity.⁶³⁹ After his subsequent arrest at the scene, Welch faced several charges related, mostly, to his crossing state lines in possession of a firearm, and

⁶³⁷ Richardson-Self, Louise. 2021. *Hate Speech Against Women Online*. Lanham: Rowman and Littlefield.

⁶³⁹ Slotkin, J. (2016, December 13). 'Pizzagate' Suspect Planned 'Possibly' Violent Raid, Investigators Say. *The Two Way*. Retrieved from <https://www.npr.org/sections/thetwo-way/2016/12/13/505424283/pizzagate-suspect-faces-federal-charge>.

was eventually sentenced to four years in prison.⁶⁴⁰ As of the time of this writing, Welch is free. Though Welch's actions as a result of his belief in the conspiracy, thankfully, had few consequences aside from his time in federal prison, the conspiracy itself lives on: in the runup to the 2020 elections, Pizzagate resurged on TikTok, a video sharing platform that was, at the time, a newly released platform frequented by a younger audience than Twitter.⁶⁴¹ Pizzagate's reemergence is troubling in two regards, both of which confirm the fears expressed by Cass Sunstein in the *Republic* series of books. First, it seems as though, once committed to an idea, certain members of cybercascades remain committed to that idea regardless of clear and public refutation of the premises or implications of that idea, which, in cases like Welch's, lead to people carrying out extremist acts in service to an ideology based in falsehoods.⁶⁴² Additionally, cybercascades and their extremism-engendering content evolve over time and to new audiences, leading to remarkable and troublesome persistence of ideas that do not stand up to democratic hopes for the unforced force of better arguments.⁶⁴³

Understood as a conspiracy founded in misinformation spread online which came to have offline effects, conspiracies beyond Pizzagate follow a similar and concerning trend: many of the same sources of information, namely the somewhat amorphous Q-

⁶⁴⁰ Kennedy, M. (2017, June 22). 'Pizzagate' Gunman Sentenced To 4 Years in Prison. *The Two Way*. Retrieved from <https://www.npr.org/sections/thetwo-way/2017/06/22/533941689/pizzagate-gunman-sentenced-to-4-years-in-prison>.

⁶⁴¹ Kang, C., & Frenkel, S. (2020, July 14). 'PizzaGate' Conspiracy Theory Thrives Anew in the TikTok Era. *The New York Times*. Retrieved from <https://www.nytimes.com/2020/06/27/technology/pizzagate-justin-bieber-qanon-tiktok.html>.

⁶⁴² Sunstein, C. (2018). *#Republic*. Princeton: Princeton University Press. See Chapters 4-5.

⁶⁴³ *Ibid.* See also chapters 1-3.

Anon movement, have not only convinced people to take a rifle into Comet Ping Pong, but to assault the capitol of the United States of America on January 6, 2021, and are, as of this writing, regularly encouraging people to engage in extremist politics.⁶⁴⁴ The pattern, of online misinformation eventually resulting in offline violence, is a troubling one considering the normative hopes expressed in the first chapter of this work. As I argue in chapters four and five, the current, corporate-dominated digital landscape gives conspiracy mongers and followers platforms in corporate-controlled spaces that may well tolerate lies and misinformation as long as profits continue to flow into corporate coffers and leaves people somewhat disempowered from making use of their faculties for critical evaluation of information, thanks to persistent conditions of task saturation and temporal compression that eat away at our finite cognitive resources.

In some instances, corporate-owned platforms at least publish written policies against the posting of misinformation⁶⁴⁵ that may lead people to harm one another or themselves, but these policies have neither stopped the spread of such misinformation nor does the enforcement of these policies aid in the establishing of a shared body of understood truths that is so necessary to peaceful democratic life. Misinformation, I fear, is likely to remain a major source of political violence in the future.

⁶⁴⁴ Cruz, F. (2021). White Nationalists, Jan. 6 Protesters and QAnon: What You Need to Know About Border Vigilantes Along the Border. Montgomery: Southern Poverty Law Center. Retrieved from <https://www.splcenter.org/hatewatch/2021/12/02/white-nationalists-jan-6-protesters-and-qanon-what-you-need-know-about-border-vigilantes>.

⁶⁴⁵ YouTube. (2022). Misinformation Policies. Retrieved from YouTube: <https://support.google.com/youtube/answer/10834785?hl=en#zippy=%2Charmful-remedies-and-cures>.

Third Vignette Revisited: Pro-Democracy Hong-Kong Protests

Of the three vignettes with which I open this work, the Hong-Kong protests are ones that most clearly illustrate the contestation of digital power relationships that I refer to as feudalization, and best exemplify the need for flexible methods such as ANT to provide for a changing set of actors that come to influence the balance of power in each actor-network.

The most fevered period of the protests, from roughly May to November 2019, saw not only in-person protests but also the use of digital space as an arena in which protesters and the state vied for power and used the internet as a tool to further their ends. As Chinese police began to use facial-recognition software to identify protesters for arrest, the protesters took to camouflaging their faces, including the use of face masks⁶⁴⁶: here, the state used digital tools to enforce their power over citizens. Protesters shared this tactic, as well as coordinating the protests, through various social media channels: the same internet that the state used to arrest nearly 8,000 protesters by November 2020 was the tool preferred by protesters to keep their movement alive and difficult to track. Of course, these tactics came with drawbacks, as Heike Holbig notes:

...while the wide and innovative use of digital media helped to sustain the protest campaigns over time and space, it might have contributed to the movement's fragmentation and made it difficult for protesters to articulate common causes and developing coherent strategies vis-à-vis Hong Kong and Beijing power holders.⁶⁴⁷

⁶⁴⁶ Holbig, H. (2020). Be Water, My Friend: Hong Kong's 2019 Anti-Extradition Protests. *International Journal of Sociology*. Retrieved from <https://www.tandfonline.com/doi/full/10.1080/00207659.2020.1802556>.

⁶⁴⁷ Ibid.

There is contestation in the relationship between the protesters and the feudalized corporate platforms of the contemporary internet: the former using the latter as a tool that both enables and limits the effectiveness of protests demonstrates a moment of potential feudalization. In the contestation between the state and the protesters, the internet served as a battleground between those actors.

Those very same surgical masks that protesters first wore to thwart the state's attempts at facial recognition would come to much greater importance as the protests evolved past the 2019 Hong Kong elections, and into 2020, the year when Covid19 most strongly affected all our lives. A new actor, in this case, a virus, added a new dimension to the contestation between the state and protesters, and, in the case of the HK protests, gave the state a new avenue along which to exercise control over congregations of people in public. Though the then newly-election HK government did little to stop the pandemic early on, it did eventually close HK's borders, as well as many public venues, which, combined with people's fears over catching the virus, effectively ended the protests by the spring of 2020: eventually, police enforced a limit on gatherings to only four persons, making protesting in any form nearly impossible without swift reprisals from the state.⁶⁴⁸ As COVID swept the globe, many of the protest organizers, reacting to a lack of response from the HK government, took it upon themselves to use the networks that had built during the previous years' protests to aid folks in finding or making masks to attempt to

⁶⁴⁸ Lau, C. (2020, May 2). Hong Kong protests: police issued 18 penalty tickets for breach of social-distancing rules over Labour Day demonstrations. *The South China Morning Post*. Retrieved from <https://www.scmp.com/news/hong-kong/law-and-crime/article/3082578/hong-kong-protests-police-issued-18-penalty-tickets>.

slow the spread of the virus.⁶⁴⁹ In the case of the HK protests, I find an example of usage of the internet made possible via feudalization: the state's ability to use facial recognition, then COVID restrictions to effectively suppress democratic protests indicates a digital actor-network that is favorable to exercises of state power over the democratic ends of the protesters. Such cases, I fear, are likely to continue well into the future.

Major Takeaway Points from Chapters Two Through Five

Chapter Two functions to set a normative benchmark for evaluating power dynamics on the contemporary internet in light of optimistic thinking surrounding the possibility for the internet to be a tool by which democratic deliberation, in something resembling Habermas' ideal speech situation, can be achieved. To those ends, I propose a reformulation of Habermas' requirements for ideal speech, tailored to the analytical context of the internet. I reiterate them here:

- (e) inclusivity: no one who could make a relevant contribution may be prevented from participating;
- (f) equal distribution of communicative freedoms: everyone has an equal opportunity to make contributions;
- (g) truthfulness: the participants must mean what they say; and
- (h) absence of contingent external constraints or constraints inherent to the structure of communication: the yes/no positions of participants on criticizable

⁶⁴⁹ Kwok, K. (2021). Narrativizing the Face Mask as the Design of Dissent at the Intersection of Protest and Pandemic. *Design and Culture*. Retrieved from <https://www.tandfonline.com/doi/full/10.1080/17547075.2021.1872008>.

validity claims should be motivated only by the power of cogent reasons to convince.

Chapter three makes the case for mapping digital history through an adapted-ANT analysis influenced by materialist explanations of capitalist effects as they relate to the programs of action built into actor-networks by corporations. This sets the stage for considering digital power dynamics in terms of the interplay between the state, corporate actors, and internet users. The chapter begins a critical digital history that focuses on the development of ARPANET, a precursor to the internet. In this era, the state was the dominant actor, as corporations had a limited role, mostly as contractors, and ordinary citizens had little to no access to ARPANET at all. Evaluating this early era of the internet in terms of the ideals from chapter two, the first two requirements are far from being met. Since ordinary people could not participate in conversations on ARPANET, nor were they given an opportunity to, the early, pre-commercial internet was not a space in which an ideal speech situation could have been achieved.

I continue sketching a critical digital history in chapter four: once the internet commercialized in the early 1990s, corporate actors began to carve our digital fiefdoms, in search of means by which to profit prior to the dot-com crash of 1999-2000. After that crash, the processes of feudalization accelerated, and corporations re-considered the role of ordinary persons, whose agencies are influenced by the profit-oriented programs of actions built into the internet by corporations. In this era, commonly called Web 2.0, corporate actors allowed people to participate on their platform not only as consumers, but as prosumers, who not only bought products and services, but, vitally, were

themselves producers of data which corporate actors sell to make enormous profits. This era, which runs roughly to the present, presents major challenges to all four of the requirements for an ideal digital speech situation. Since most digital platforms are owned by corporations, those corporations can, have, and will likely continue, to censor and block people from participating on those digital platforms for various reasons. Since the user often has little to no say, and little to no recourse, this means that corporate-owned digital platforms are places where people can be prevented from participating, their opportunities to participate are unequal, and they feature structural constraints outside from participants' powers to convince one another of validity claims. Given that corporations have effective hegemony over much of digital space in the Web 2.0 era, it cannot be counted upon that those participants means what they say: there are structural incentives to forgo truth and authenticity for profit. This highly instrumental internet is, I argue in chapter four, a far cry from a setting in which the ideal speech situation can be achieved.

Chapter five examines the experience of the user on the contemporary internet using the work of Paul Virilio. I make the case that the sheer speed at which users on the feudalized internet encounter information puts immense strain on the user's cognitive resource, placing many of them in conditions of task saturation and temporal compression. Under such conditions, human beings have great difficulty in critically evaluating information. These conditions place users of the feudalized internet afoul of the third and fourth requirements for an ideal speech situation. If persons do not, as evidenced in some of the cases surrounding the January 6 insurrection, believe the claims that they make in public or online, then they are not exhibiting behaviors consistent with

ideal speech. Similarly, the actions that some task-saturated and temporally compressed users have taken, such as deliberate political violence, certainly are not efforts to convince through validity claims.

All in all, then, the feudalized internet is one in which the profit-oriented programs of action that corporations imbedded in the internet after its commercialization affects the agency of internet users in casting them as prosumers who sometimes become antidemocratic actors spurred on by lies and conspiracies. The users prosume these lies and conspiracies at high rates of speed, that both generate increasingly concentrated corporate profits, but also conditions for task saturation and a running out of the cognitive resources necessary for deliberative or critical thought. The integral accident of the advent of the corporate internet, I argue, is the user as prosumer who, in some instances, has their cognitive resources and critical faculties so drained by their presumption, that they are willing to travel great distances, undergo legal and personal risk, and, ultimately, to commit acts of violence in an attempt to stop democratic processes. Thus far, the internet has seen the age of the state, and the age of the corporation. The balance of power on the web, Joshua Tucker and his co-authors note, is in contestation: users, states, and corporations make use of their digital relationships to one another to make democracy more possible for some, less possible for others, and to generate profit.⁶⁵⁰ This contestation, I argue in keeping with the adapted version of ANT I deploy in this work, is a marker that this actor-network is not a fixed one, and change is not only possible, but nearly inevitable. If we are to steer it towards the age of the empowered user capable of

⁶⁵⁰ Tucker, Joshua, Yannis Theocharis, Margaret Roberts, and Paolo Barbera. 2017. "From Liberation to Turmoil: Social Media and Democracy." *Journal of Democracy* 46-59.

ideal speech not only theoretically, but practically, current, feudalized dynamics of digital power will need to be reconfigured. Such reconfigurations could, Jack Balkin notes, come from a reassertion of state power on behalf of the people: should the state more rigorously enforce antitrust, consumer privacy, and liability laws that already exist, the corporate monopolies that make up the centers of contemporary digital power could be broken into a wider cast of actors that may more closely track towards becoming digital publics.⁶⁵¹

Situation in Current Debate and Avenues for Future Work

In this work, I make the case that the internet as of 2022 is in a feudalized state, in which corporations have control over much of the digital landscape, casting persons as prosumers who are increasingly disempowered from making use of critical thinking skills and cognitive resources to engage in democratic political practices. This is unsurprising given my adapted-ANT analysis with materialist elements, which notes that the capitalist effects that corporations pursue online came with the introduction of programs of action that privilege profit over all else, including the achievement of a Habermasian ideal speech situation. In sketching the history of that feudalization, I hope to make the point that this feudalization is a contingent one, and things need not remain as they are. Early hopes for the internet held that it could become a set of tools for empowering people to learn about the world and one another, form communities, and cooperate to peaceful, democratic ends.

⁶⁵¹ Balkin, Jack. 2022. "To Reform Social Media, Reform Informational Capitalism." In *Social Media, Freedom of Speech, and the Future of Our Democracy*, edited by Lee Bollinger and Geoffrey Stone, 233-254. Oxford: Oxford University Press.

At the time of this writing, there is an emerging academic debate around the utility of using feudalization as a term to describe current digital economic and power dynamics. Though this debate is multi-faceted, making brief mention of it here is worthwhile to the ends of participating in that debate, and to situate this work in immediately relevant scholarly literature. Thus, I will consider the arguments of two short pieces here, before offering some critiques and my stance on the matter. Theorist of technology Evgeny Morozov, writing recently in *The New Left Review*, is highly critical of the use of feudalism⁶⁵² to describe economic and political dynamics on the contemporary internet.⁶⁵³ Morozov presents the general argument of those deploying “feudal reason” as:

...features of the current capitalist system—prolonged stagnation, politically driven upward redistribution of wealth, ostentatious consumption by the elites combined with increasing immiseration of the masses—recall aspects of its feudal predecessor, even if capitalism still very much rules the day.⁶⁵⁴

If that were the crux of the argument, Morozov would seem to have very little critique, and I would consider it to be a reasonable analysis of the power dynamics that I have presented in this work. Morozov, however, sees major flaws in some of the claims that digital power may “recall aspects of its feudal predecessor,” for example that feudalism

⁶⁵² In the piece he critiques various permutations of the terminology, including “neo feudal,” “techno feudal”, “refeudal” with equal derision.

⁶⁵³ Morozov, E. (2022, April). Critique of Techno-Feudal Reason. *New Left Review*, 89-126. Retrieved from <https://newleftreview.org/issues/ii133/articles/evgeny-morozov-critique-of-techno-feudal-reason.pdf>

⁶⁵⁴ *Ibid*, 91.

harbored no illusions of freedom on the part of exploited serfs, but that capitalisms, including digital capitalism, depend on the illusion of freedom held by exploited workers.⁶⁵⁵ I do not fundamentally disagree with this claim, but would remind Morozov of his thinking two pages prior: using terms surrounding “feudalism” to describe digital power *recalls* feudalism.

In using the language of feudalism, I do not claim that the feudalism I observe in digital platforms is a mode of production that will be dialectically challenged by, and replace with, another. Such an argument would presuppose an elementary understanding of Marxist thought as it existed over a century ago. Instead, through the lens of an adapted ANT and new materialism, I simply suggest that, as Habermas finds in his analyses of the re-feudalization of publics, the power dynamics that developed over the last half century privilege corporate profits over communicative action. Morozov views the same phenomenon, increasing corporate dominance on the internet, and, with his interpretation of Habermas, presents it as an innovation on the forms and methods of neoliberal privatization.⁶⁵⁶ This dispossession of labor from the labors, Morozov finds, is common to many forms of economic life, including both capitalism and feudalism.⁶⁵⁷ Again, I do not fundamentally disagree, and the presence of dispossessed labor and value are in keeping with the Marxist traditions of critical theory in which I find much of the theoretical grounding for the analyses of this work. He is correct in his implicit assumption that we are not currently witnessing the death of capitalism and its

⁶⁵⁵ Ibid, 93-4.

⁶⁵⁶ Ibid, 96-7.

⁶⁵⁷ Ibid, 103.

replacement by some form of feudalism that will totally remake economic and political relations of power. I do not agree, however, that in analyzing current digital power “...there is no great difficulty in treating it⁶⁵⁸ as a regular capitalist firm, engaged in normal capitalist production.”⁶⁵⁹

Here, Morozov would benefit from the analyses presented in this work, especially those oriented through ANT. Google, Meta, and other capitalist firms clearly have the instrumental capitalist motive to generate profit. Where a critical digital history adds some “difficulty” in treating the last several decades as “normal capitalist” production is a consideration of the user as prosumer. I would argue that, especially looking at the critiques begun by Adorno and Arendt, which I examine in chapter two, the ways in which contemporary capitalist programs of action affect the agency of persons has been changing for some time. It is vital to combat any notions of teleology: an assumption that “Capitalism is moving in the same direction it always has been, leveraging whatever resources it can mobilize- the cheaper the better,” paints with brushstrokes that are, in my view, far too broad to develop sophisticated analyses, and would lead to new theoretical works, such as this one and the ones Morozov critiques, being written off without the consideration that, perhaps, what we are witnessing is a reconfiguration of capitalism that borrows structural similarities in terms of power, from older feudalism. The waning of regulatory power of the state began, in the contemporary era, with postwar neoliberalism to be sure. But the waning of the state vis-a-vis corporate actors in the digital era, especially in light of the intrusion of digital corporate-owned digital platforms as a means

⁶⁵⁸ Google.

⁶⁵⁹ Ibid, 120.

to work, play, socialize, communicate, and consume during the COVID-19 pandemic, when the state system, in my view, was waning in its ability to regulate commerce or travel, and administer public health, will require theory that recognizes the contingency of power dynamics.

I disagree with Morozov: what we are currently witnessing is not capitalist business as usual, it is already always changing in novel directions. I use the term feudalized here as a descriptive one: it highlights the rise in private, corporate influence over the lives of individuals, where corporate power is waxing in the relative waning of state power. I intend it to be a description of power dynamics as I see them in my analyses here, not as a predictor of the future. The work of critical theory beyond Marx, I would offer to Morozov, is to better understand the changes of power that we are witness to, and to work towards a world in which people find greater political and economic emancipation. In deploying the language of feudalization here, I aim to map centralizing power dynamics on the internet, and also, in sketching the shift to a more feudalized internet, highlight the contingency of digital power. I hope, then, that my description of digital power can be useful to those ends, and more theorizing needs to be done. Some, such as Yochai Benkler, also map centralizing digital power dynamics without the language of feudalization, and highlight that internet users could deploy some technologies⁶⁶⁰ to ends that could shift the balance of power once again.⁶⁶¹ Bryan Ford expresses his concern that "...established democracies fail to protect their citizens from private coercion or feudal rent-seeking structures," deploying the feudal metaphor as a

⁶⁶⁰ Benkler highlights the blockchain, among others.

⁶⁶¹ Benkler, Yochai. 2016. "Degrees of Freedom, Dimensions of Power." *Daedalus*.

foil against his idealized version of digital deliberative democracy based in the thinking of Robert Dahl,⁶⁶² I find it likely that, with more time, observation, and analysis, I and other scholars will refine and re-define the phenomena we now describe as feudal in the contemporary era.

Studying digital power is the work of a lifetime, and more. Moving beyond this project, future work would do well to examine people's experiences under a feudalized internet in terms of (dis)empowerment. Specifically, work that would tackle specific platforms' and services' handling of issues of race, class, and gender, especially as they relate to the handling of abuse, harassment, and political censorship, would be illustrative. Such work should shed light on structures of digital power in the 21st century as they relate to the actors involved with constituting contemporary work conditions, community building, the persistence and growth of bigotry and hate crimes, as well as people's everyday, lived, social experiences.

Immediately, the emergence of cryptocurrencies, as well as the wider adoption of Virtual Reality devices and services, are likely to see shifts in the structure and flow of digital power, and thus these technologies need to be adequately theorized in terms of power as it relates to the (dis)empowerment of persons to participate in democratic political life.

From an activist perspective, it is immediately vital to do what we can to make technologies more inclusive and to advocate for continuing discourse and dialogue as answers to the more violent, polarized political moments that have emerged in the last

⁶⁶² Ford, Bryan. 2021. "Technologizing Democracy or Democratizing Technology? A Layered-Architecture Perspective on Potentials and Challenges." In *Digital Technology and Democratic Theory*, edited by Lucy Bernholz, Helene Landemore and Rob Reich, 274-308. Chicago: University of Chicago Press.

several years. Despite the relatively pessimistic analyses of the contemporary internet in terms of its relative inhospitality to empowering ideal speech situations, states, users, and corporate actors can take steps that may make the internet more hospitable to deliberative democratic practices, such as fact checking, promoting digital literacy to guard against misinformation, and making sources of news more transparent.⁶⁶³

The descriptive mapping that I forward in this project limits its analyses to the state, corporations, and internet users. Further work, keeping with the epistemological attitudes of an analysis informed by ANT, should also consider other actors as important in the power-laden relationship that make up digital political life. For instance, as Davide Panagia begins to consider, political theory concerning the internet should interrogate algorithms that make relatively autonomous decisions as more than mere instruments made and used by whomever coded them.⁶⁶⁴

The story of the internet, so far, has been one in which the role of the state waned, and that of the corporation has waxed. In mapping a brief history of digital power through an analysis that focuses on the state, corporations, and users as key actors, I make the case that the current power-laden relationships of the internet make it a space that is relatively inhospitable to democratic deliberation in the style of a Habermasian ideal speech situation. I do not, in that mapping, provide a list for potential reforms to remake the internet into something more closely resembling an ideal deliberative public space. Instead, I aim to recognize that, as the internet develops and changes, we, the internet

⁶⁶³ Persily, Nathaniel. 2019. *The Internet's Challenge to Democracy: Framing the Problem and Assessing Reforms*. Nonprofit Foundation Publication, Stanford: Kofi Anan Foundation.

⁶⁶⁴ Panagia, Davide. 2021. "On the Possibilities of a Political Theory of Algorithms." *Political Theory* 109-133.

users, change with it⁶⁶⁵ and in so recognizing the contingency of those relationships and changes that make up the internet, more democratic change is possible. What remains to be seen, and what I hope for as a person compelled to live through this digital history as not only a scholar but a participant, is for the age of the empowered democratic citizen to begin in earnest through careful scholarship and activism.

Bibliography

Alvarez, R. M., Levin, I., & Sinclair, A. (2011). Making Voting Easier: Convenience Voting in the 2008 Presidential Election. *Political Research Quarterly*, <https://doi.org/10.1177%2F1065912911398048>.

Arceneaux, K., Kousser, T., & Mullin, M. (2011). Get Out the Vote-by-Mail? A Randomized Field Experiment Testing the Effect of Mobilization in Traditional and Vote-by-Mail Precincts. *Political Research Quarterly*. Retrieved from <https://doi.org/10.1177%2F1065912911421013>

Balkin, Jack. 2022. "To Reform Social Media, Reform Informational Capitalism." In *Social Media, Freedom of Speech, and the Future of Our Democracy*, edited by Lee Bollinger and Geoffrey Stone, 233-254. Oxford: Oxford University Press.

Benkler, Yochai. 2016. "Degrees of Freedom, Dimensions of Power." *Daedalus*.

Cruz, F. (2021). *White Nationalists, Jan. 6 Protesters and QAnon: What You Need To Know About Border Vigilantes Along the Border*. Montgomery: Southern Poverty Law Center. Retrieved from <https://www.splcenter.org/hatewatch/2021/12/02/white-nationalists-jan-6-protesters-and-qanon-what-you-need-know-about-border-vigilantes>

Ford, Bryan. 2021. "Technologizing Democracy or Democratizing Technology? A Layered-Architecture Perspective on Potentials and Challenges." In *Digital Technology and Democratic Theory*, edited by Lucy Bernholz, Helene Landemore and Rob Reich, 274-308. Chicago: University of Chicago Press.

Holbig, H. (2020). Be Water, My Friend: Hong Kong's 2019 Anti-Extradition Protests. *International Journal of Sociology*. Retrieved from <https://www.tandfonline.com/doi/full/10.1080/00207659.2020.1802556>

⁶⁶⁵ Hong, Sun-ha. 2020. *Technologies of Speculation*. New York: New York University Press.

- Hong, Sun-ha. 2020. *Technologies of Speculation*. New York: New York University Press.
- Kang, C., & Frenkel, S. (2020, July 14). 'PizzaGate' Conspiracy Theory Thrives Anew in the TikTok Era. *The New York Times*. Retrieved from <https://www.nytimes.com/2020/06/27/technology/pizzagate-justin-bieber-qanon-tiktok.html>
- Kennedy, M. (2017, June 22). 'Pizzagate' Gunman Sentenced To 4 Years In Prison. *The Two Way*. Retrieved from <https://www.npr.org/sections/thetwo-way/2017/06/22/533941689/pizzagate-gunman-sentenced-to-4-years-in-prison>
- Kwok, K. (2021). Narrativizing the Face Mask as the Design of Dissent at the Intersection of Protest and Pandemic. *Design and Culture*. Retrieved from <https://www.tandfonline.com/doi/full/10.1080/17547075.2021.1872008>
- Lau, C. (2020, May 2). Hong Kong protests: police issued 18 penalty tickets for breach of social-distancing rules over Labour Day demonstrations. *The South China Morning Post*. Retrieved from <https://www.scmp.com/news/hong-kong/law-and-crime/article/3082578/hong-kong-protests-police-issued-18-penalty-tickets>
- Morozov, E. (2022, April). Critique of Techno-Feudal Reason. *New Left Review*, 89-126. Retrieved from <https://newleftreview.org/issues/ii133/articles/evgeny-morozov-critique-of-techno-feudal-reason.pdf>
- Panagia, Davide. 2021. "On the Possibilities of a Political Theory of Algorithms." *Political Theory* 109-133.
- Paura, R. (2016). Singularity Believers and the New Utopia of Transhumanism. *Im@go, a Journal of the Social Imaginary*, <https://cab.unime.it/journals/index.php/IMAGO/article/view/1295/pdf>.
- Persily, Nathaniel. 2019. *The Internet's Challenge to Democracy: Framing the Problem and Assessing Reforms*. Nonprofit Foundation Publication, Stanford: Kofi Anan Foundation.
- Richardson-Self, Louise. 2021. *Hate Speech Against Women Online*. Lanham: Rowman and Littlefield.
- Slotkin, J. (2016, December 13). 'Pizzagate' Suspect Planned 'Possibly' Violent Raid, Investigators Say. *The Two Way*. Retrieved from <https://www.npr.org/sections/thetwo-way/2016/12/13/505424283/pizzagate-suspect-faces-federal-charge>
- Sunstein, C. (2018). *#Republic*. Princeton: Princeton University Press.

Tucker, Joshua, Yannis Theocharis, Margaret Roberts, and Paolo Barbera. 2017. "From Liberation to Turmoil: Social Media and Democracy." *Journal of Democracy* 46-59.

Vasilogambros, M., & Van Ness, L. (2021). *Despite Security Concerns, Online Voting Advances*. Pew. Retrieved from <https://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2021/02/17/despite-security-concerns-online-voting-advances>

YouTube. (2022). *Misinformation Policies*. Retrieved from YouTube:
<https://support.google.com/youtube/answer/10834785?hl=en#zippy=%2Charmful-remedies-and-cures>

VITA

GARRETT CURTIS PIERMAN

Born, Kalamazoo, Michigan

- 2011-2014 B.A., Political Science
Florida International University
Honors College
Miami, Florida
- 2014 Teaching Assistant, Ph.D. Student
Florida International University
Miami, Florida
- 2019 M.A., Political Science
Florida International University
Miami, Florida
- 2020 Best Graduate Instructor Award- Political Science
Florida International University
Miami, Florida
- 2020-2021 Dissertation Year Fellow
Florida International University, University Graduate
School
Miami, Florida
- 2021-2022 Adjunct Professor
Florida International University
Miami, Florida
Departments of Politics and International Relations,
Computer Science
- Adjunct Professor
Nova Southeastern University
Ft. Lauderdale, Florida
- 2018-2022 Doctoral Candidate
Florida International University
Miami, Florida

PUBLICATIONS AND PRESENTATIONS

Peer Reviewed Publication:

Pierman, Garrett. "The Grand Strategy of Nonstate Actors: Theory and Implications." *Journal of Strategic Security* 8, no. 4 (2015): 69-78.

Selected Conference Publications:

Pierman, Garrett, "Digital Democracy: Optimism in the Face of Crisis." American Political Science Association Annual Meeting. Seattle, Washington. (October 2021)

Pierman, Garrett, "Compressed Political Spacetime as a Threat to Digital Democracy." Midwestern Political Science Association Annual Meeting, Chicago, Illinois (April 2021, Virtual)

Pierman, Garrett, "Ruminations of a Cyborg: How are We Thinking about What We are Doing with Technology?" ASPECT Graduate Student Conference, Blacksburg, Virginia (March 2019).

Pierman, Garrett, "Fake News, Real Implications: Political Spaces of the 21st Century," International Studies Association- Northeast, Baltimore, Maryland (November 2018).

Pierman, Garrett, "Protecting Peoples: Towards a Non-Nuclear Realism," Midwestern Political Science Association Annual Meeting, Chicago, Illinois (April 2018).

Pierman, Garrett, "The Macabre Masquerade: The Risk of the Anonymous in Social Spaces," Midwestern Political Science Association Annual Meeting, Chicago, Illinois (April 2018).

Pierman, Garrett, "Rationalizing Inequality in Modern Liberal Democracies: A Re-Conceptualization," Southern Political Science Association Annual Meeting, New Orleans, Louisiana (January 2018).

Invited Talk:

Panel Discussion: The Challenges of Then, Now, and Tomorrow (feminist event). FIU Student Government Association. 29 April 2022.