

Society Must Be Defragmented: Data Shadows and Computational Life

by

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Graduate Program in Literature
Duke University

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Dissertation submitted in partial fulfillment of
the requirements for the degree of Doctor
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ABSTRACT

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Abstract

It is difficult to remember and perhaps harder to imagine that, once upon a time, a person with no prior experience could build a webpage in a couple of afternoons. Today, due to increasing interactivity and dynamism, building out things on the web is the domain of professionals and committed enthusiasts. As people who make use of the internet, we are distanced from a technology that supposedly democratized truth while we are simultaneously permeated by its fantastic lies. If parsing and arbitrating truth must take place prior to interface, but interface remains intrinsic to everyday life, then a need develops for interpretation before the interaction. It isn't enough to know what is said, the meaning must be known as well. As more people are more reliant on platforms controlled by distant experts, these same experts become an organic choice for the authority to judge meaning. As with the development of the web, this complex task of arbitration is deferred to machines, even if there are only ever people on the other side of judgment. With this in mind, it is easier to see how power only slightly altered from prior forms emerges in an entirely new and permanently dynamic environment like the internet. This project is an exploration of the rationality behind such power, an apparatus which I am calling datafication. I argue that we can begin to understand datafication by way of comparison between the initial investment in data as utopian extensions of the self during the 80s and 90s and data's value for data-industries over the

first two decades of the 2000s. This trajectory marks the most crucial shift from our early hopes about data to our late frustrations.

Initially operationalized through internet users and further leveraged through digital platforms, datafication is, in simple terms, a sum of monetization schemes by tech companies meant to derive profit from data they have accrued as a persistent yet incidental byproduct of their business. I will illustrate this regime of power through subsequent case studies of a period of emergence, of experimentation, and ultimately, mastery. Through case studies of the dot-com bubble, the Boston Marathon Bombing, and the Facebook-Cambridge Analytica Scandal, I look at datafication as the model for power relations from the late 20th century through today and as the business of the internet. These exemplar cases show the ways in which datafication is articulated with everyday life. This project describes the regime of power that functions through datafication in order to locate how it started, why it happened, and the ways in which it continues to function. Crystallizations of key moments make visible important kinds of changes that increase the efficacy of datafication over time. First in the economy, next in policing and the surveillance state, and finally in politics and social operations. Fully rendered, these three facets of datafication will reveal its presence at the very beginning of digitalization, then its emergence from, and eventual operation in excess of, this continuous technological substrate.

To clarify the historical change, we need to see digitalization and datafication as bound through time, as a continuous colonization of the space of everyday life. My project argues that the former is the technical infrastructure, while the latter allows the social, political, and technical operationality of a regime of power. The one is always happening with and through the other, but over time one becomes more important, superseding its infrastructure in consequential ways. Regimes of power, in the historical contextualization that I will provide, are exercised and expressed in economic terms, in state surveillance terms, and in political-ideological terms which are often not explicit. The project will thus provide a genealogical account by describing how both digitalization and datafication relate to one another using the three case studies.

Dedication

For YOU. Because you ARE.

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Introduction

Weathering Covid, Storming the Capitol

In situating my project, I want to dwell on the intersection of the pandemic, the 45th US presidency, and digital media. These events draw my attention not only because so much of Our Covid Years are bound up with each, but because any one of them provides a starting point for excavating some of the worst tendencies to take root during the emergence of the information age. Over the course of 2020 there were fires and protests, both literal and metaphorical, often in the same places. A decrease in relative comfort produced goodwill for some and animosity in others. There was an election which, in contravention of the usual primetime carnival, stretched from one culminating night into days and weeks of suspended disbelief—oddly mirroring the distortion of objective and subjective time that set in during the pandemic. The election itself was a point of contestation that spread widely until the tenets of denial had to be glorified with an official denunciation. Now as we enter the third year, denials continue and a whole media ecosphere is devoted to blaming institutional failures on a lack of faith in those institutions as demonstrated in the actions of people whom the institutions have failed.

As covid spread, trending topics like a global public health policy or musings on the restorative properties of bleach quickly came to share space with expert opinion and

clinical guidelines. I was ostensibly writing a dissertation on a conjuncture of political repression and digital media when the pandemic made structural failures impossible to obscure. Arsonists burned out cell towers because they heard, and believed, that broadcast frequencies made people sick. Professionals with the same three-letter imprimatur were giving wildly contradictory advice—some of the wildest and most contradictory of which was announced within spitting distance of the 45th president. If the preceding years created mild discomfort over the circulation of social media posts into commentary and journalism, each day under lockdown was giving me a new ulcer. Trying to intellectualize the problem proved useless for me because the epistemic gridlock of the pandemic generated a shared experience of not knowing what was going on or what would happen next, albeit from across greater chasms of race and class than previously conceded. I was forced to contend with my own leftist suspicion of authority, working class disdain for government, and sweet tooth for a good conspiracy theory. None of this was enough to peel me away from the endless stream of statements on digital media platforms nor from attending to the transmogrification of nonsense phrases into considered opinion. Some kinds of madness, I admit, can be seductive, even comforting.

I combed the grocery aisles in mid-March 2020 for shelf-stable provisions and comfort food. The air was full of muted conversation about getting together, agreeing to the adorable pantomime of intent that is *playing it by ear*. There were half-hearted shrugs

about upcoming plans; oblique references to other(ed) places that had not fared well. Many of the shoppers were masked. When to wear a mask and what counted as one was a point of debate to consider before going anywhere. Yes, here, but not there; two of these, but one of those. From over my bandana, I exchanged a furtive glance with someone who had plugged their nostrils with tampons. There was already a current of cynicism running hill and dale across news and social media that would equate us both as overly cautious and uninformed. By the end of the week, campuses and businesses began closing. After the first few institutional recognitions of the pandemic's severity, other spaces fell out of public circulation. Before entirely coming to terms with the possibility of a pandemic, it seemed as if we were immediately reacting to its foregone conclusions. The pandemic had already happened as it was happening, and no one knew what was going to happen next. It was either the beginning of a forced vacation or the end of the world.

Into this vacuum of knowledge rushed a flood of hot takes. These kinds of citationally capricious verbal equations are standard fare for digital media platforms because they are easy to digest and easier to disseminate. The benign form is a factoid plus a factoid, divided by the angle of ideological inflection, equals a function of x , (e.g., a notable technologist with a solid grasp on history and a good track record with near-term prediction, who is also still grieving the death of his parents as a child, outlines all of the ways technology will make us immortal). Statements of this sort constitute a

special category. The messages don't just get shared, they go viral. Hot takes go viral so often, so readily connect the cultural unconscious to algorithmic subroutine, that so-called guerilla marketing agencies adopt the form to inject their client's slogans into popular discourse. This kind of malignancy cuts against the grain of the standard process. As the years leading up to the pandemic show, demonstrably false statements, ideologically reactionary positions, and the array of gaslighting, dog-whistling, or alt-orienting messages have greater potential to become hyper-active on digital media platforms because they alight upon both cognitive and affective registers.¹

Whether seen through my wood-framed or light-emitting-diode window on the world, all of 2020's horizons were obscured by a cacophonous slurry of existential attenuation. In the new regime of lockdown it seemed as though each person was weighed against their utility to keep capitalism from devouring itself, unless we could hide within institutional confines. And here, there didn't seem to be any shared

¹ Think of a hybrid vehicle. The drivetrain switches between gasoline and electric power, while a flywheel at the break recharges the battery. Regardless of which is cognitive and which is affective in the metaphor there are elements that can be extended by working each in tandem, or by making one primary so the other can recharge or extend its range. There are also some remarkable psychological studies on this front, including one supported by the US Department of Defense and Facebook to determine the effects of spreading emotional contagion through digital media. From the paper's statement of significance: "We show, via a massive ($N = 689,003$) experiment on Facebook, that emotional states can be transferred to others via emotional contagion, leading people to experience the same emotions without their awareness. We provide experimental evidence that emotional contagion occurs without direct interaction between people (exposure to a friend expressing an emotion is sufficient), and in the complete absence of nonverbal cues." See: Adam Kramer, et al. "Experimental Evidence of Massive Scale Emotional Contagion through Social Networks," *Proceedings of the National Academy of Sciences of the United States of America*, v111 n24, June 17, 2014, (111:8788–8790; first published June 2, 2014; 10.1073/pnas.1320040111).

experience to grasp. Biopower in grim practice cordoned off essential jobs, public territories, and capacities for life or death. The long, fraught history of broadband in the US suddenly became less abstract and wonkish. A stable, high bit-rate connection meant the difference between working, going to school, keeping up with friends and family, participating in tracing and being cast adrift. The fullest expressions of living and dying throughout the pandemic were digitally mediated by belief in hot takes—many of which could be followed across platforms and legacy media. Over the proceeding months after the first lockdown, I swung between apathy and panic. A good day was being able to match the broadcast mood. Whether I managed to be productive or was running away, the interface was more or less the same. My political commitments were redirecting in strange and uncomfortable ways.² And yet, for all the instability, uncertainty, and apocalyptic overdrive, a lot of 2020 can be understood as less than shocking, bordering on the inevitable.

When, within the frame of purported lockdown, state-house-rock events in Michigan, Oregon and elsewhere were so well attended, why should the embodiment of

² I am indebted to Jessica Gokhberg for summarizing my inchoate anxiety: “The enemy is not so much the coronavirus as it is other people, and our own ethical positions against state surveillance that leftists have cultivated in the decades since the founding of the Office of Strategic Services and its affiliates in 1942. We can no longer trust in-person social relations, and we rely more and more on the very state that experimented with vaccines on subaltern communities throughout the 20th century to distribute the coronavirus vaccine we are all so desperate for. We are expected to let the state and federal governments (as well as private corporations like Duke University) track our most intimate physical symptoms daily through applications on our phones. And what disturbs me most is that I want to be tracked. I want others to be tracked, too.” In Jessica Gokhberg, *Doctor Zhivago’s Cold War*, (PhD diss., Duke University, 2021), xiv.

contestation that overran security at the federal capitol come as any deep surprise? At the hour of ceremonial and legal certification, a throng of insurrectionists attempted to stop the election, attack representatives, and overthrow a government I could only support by comparison with the outgoing administration. One party's constituency did the unthinkable—they took years of inflammatory rhetoric seriously.³ What had been standard divisiveness rapidly manifested in a permanent fissure. How could *we* go back to thinking the problem was localized and specific to a *them*, when it was obvious that they had been *us* all along? My struggle was parsing whether co-workers, neighbors, relatives, and friends had stripped out of their people-suits, or whether I had simply realized I was alone on a hostile planet. And from this flight of fancy, I was immediately hit with a pragmatic reminder that this cosmic alienation is exactly what people I claim to ally with must endure on a daily basis. I became acutely sensitive to the ways my failing alliances could conjure a mistaken coalition. If I avoided BLM protests for fear of the virus, was I supporting the thin blue line? Absent from one scene, did I imply my presence in another? I moved assiduously through public spaces, but never wore a mask from my apartment to my car. Did this act evaporate solidarity in a building full of neighbors who never spoke to one another?

³ They also preserved the moment in pictures, an act which indelibly marked each body with the time and place. It is this self-generated archive, in part, that law enforcement is using to arrest insurrections five months out (and counting.) See: Lena V. Groeger, et al. "What Parler Saw During the Attack on the Capitol" *ProPublica*, January 2021. <https://projects.propublica.org/parler-capitol-videos/> and "Capitol Hill Siege" *George Washington University Program on Extremism*, n.d. <https://extremism.gwu.edu/Capitol-Hill-Cases>.

Although situationally true for some time, every social interaction is now broadly, unavoidably political. Insofar as this constituted a shift in national discourse, legacy media traced the problem to digital media platforms, but failed to account for how the last twenty years had tightly imbricated the two via content and revenue streams. In my opinion, this particular hot take implies that the fault lay with all media via all cultural forms—so, if we rely on these traditional sources, the first step to solving the problem is by starting everywhere at once. On the day of the insurrection and the weeks that followed, an uncomfortable feeling I had been trying to ignore as I conducted initial research came to the surface. I felt that all of my thinking about this project had suddenly exploded into a general spectacle.

There is disagreement on how to refer to the spectacle on January 6th. In some circles it is called a siege, in others a riot or a protest. Calling it a rally, either at the ellipse or the capitol steps strikes me as disingenuous. Calling it ‘legitimate political discourse’ today is obscene. I think it’s worth calling this event an insurrection as it constitutes a culmination of sorts, but certainly not an end point. The people on the outside did not share an ideology with anyone on the inside, regardless of any representational politics in play at a narrative level. The actions on January 6th seem less about how to practice established governance than overturning a present government for an alternative, in this case one founded on authoritarian white and/or Christian nationalism. It is precisely the lack of a coherent, consistent ideology that makes the

political bloc that occupied the capitol such a volatile element. But those directly subsumed under 45's cult of personality are not the only ones psychically bound to the whims of psychopathic temperament.

The differences between the internet and the web, a website and a platform, speech and content, are bound up with the profit motives of Silicon Valley. The bizarre, perpetual motion machine that generates data and performs the magic act that makes data valuable can be unpacked on the steps of the capitol on January 6, in the Big Lie of a stolen election, through the politics of pandemics, pizzagates, and the oath-keepers. What we called disinformation on this side of the river, they called targeted advertising on the opposite bank. From either side of the interface, it was hard to notice when the targets got so precise, so effective at capturing attention, generating the lead, and closing the sale that it became bad business to ignore targeting as a strategy. Large corporations, small businesses, content-providers, and quantified-selves all took up the same tools and practices. In this scenario, anything that resembles marketing is applicable to the system of surveillance and prediction which resulted from the task of making web traffic profitable. When social media stamped the shape of a particular kind of digital media platform on the zeitgeist, the relations of so many entrepreneurial subjects became highly lucrative.

Take, for instance, a once permanent feature of daily news and anxiety-spiking push notifications: Twitter posts from the 45th president. The total number of account

posts alone is over 50,000. Roughly half of those were sent during the official, four-year regime. Of these, presumably included in the archival record of 45's statements, only about 5,000 are considered false or misleading.⁴ The posts generally increase in frequency from 2016 through to 45's account suspension on January 7, 2021. The reason for suspension was "due to the risk of further incitement of violence" following the "violent acts at the capitol" on January 6th.⁵ Such a violation of Twitter's "glorification of violence policy" superseded the platform's "public interest framework."⁶

Twitter's public interest framework is common to its type of platform—i.e., a user-generated content, social mediation, data commodifying platform. A public interest allowance permits speech that would get plebian users banned. Such posts can remain in circulation because the status of the user makes their speech a point of public interest. The policy seems to solidify in advance that posts are synonymous with speech acts. Prohibitions against verbal threat or incitement are well entrenched in laws governing meatspace (the antipode of cyberspace). Yet, the issue of how to assess and regulate digital content is largely left to respective platforms—either the CEOs or a star chamber of advisors and interested parties.

⁴ Twitter posts only. The total number of falsehoods and fibs across all of the Washington Post's nine categories is over 30,000. See: Washington Post, "Fact Checker Analysis," updated Jan. 20, 2021, <https://www.washingtonpost.com/graphics/politics/trump-claims-database/>.

⁵ @Twitter, "Permanent suspension of @realDonaldTrump," January 2021, https://blog.twitter.com/en_us/topics/company/2020/suspension.html.

⁶ @Twitter, "World Leaders on Twitter: principles & approach," October 2019, https://blog.twitter.com/en_us/topics/company/2019/worldleaders2019.html.

An assessment released by Twitter specifically takes up two final statements posted to 45's account. I am left to conclude, in the context of the insurrection, that only two posts constituted glorification of violence beyond what is in the public interest. I am also convinced that putting a single user out to pasture or allowing the same user special privileges based on some delusional mutation of a public space leaves as much out of the frame as limiting adjudication of a suspension to the final two missives. A narrow focus on specific platforms and whether a public figure can continue to utilize a particular service further obfuscates the power these platforms have over networking technologies and culture writ large. How did a group of companies effectively colonize everyday life to the extent that the capacity for speech is limited by their various terms of service? Why did the recognition of poisoned rhetoric get packed into two statements at the very end of the term? Why would these same platforms even consider reinstating the same inflammatory user fewer than six months later?⁷

On one hand I felt a wave of relief in light of 45's suspension. Ever thus to deadbeats, as they say. On the other hand, I felt a familiar stab of concern over a tech

⁷ Although much of the press has been focused on Facebook's arbitrary enforcement of their own rules and the punting of bad-PR problems to an oversight board, the actual judgement made by that panel was to say it was "wrong to impose an indefinite ban [giving Facebook] six months to either restore Trump's account, make his suspension permanent, or suspend him for a specific period of time." "Facebook Ban on Donald Trump Will Hold, Social Network's Oversight Board Rules," All Things Considered, updated May 5, 2021, <https://www.npr.org/2021/05/05/987679590/facebook-justified-in-banning-donald-trump-social-medias-oversight-board-rules>. As the world turns, the banned figure now pays a surrogate to post his statements to social media. These, along with press releases formatted to resemble social media posts, are circulated within the ecosphere with zero signal degradation.

CEOs momentary display of power. As one such CEO has said, “It’s dangerous for infrastructure companies to be making what are editorial decisions.”⁸ This cherry-picked quote is not a common sentiment within the cohort; however, it not only demonstrates that placing limitations on tech companies is *thinkable*, but also shows that elements of both public utility (infrastructure) and publishing (editorial) exist in the contemporary territory of the internet, Web 2.0, and digital media platforms.⁹ If a specific suspension from Twitter can cosign that much, then the content of all the posts deemed irrelevant—which is to say, in this case, those merely of public interest—illustrate a pernicious capacity for digital media platforms to generate massive amounts of social and economic capital from the circulation of empty signifiers. And it’s here that I see the feint: debate over free speech on platforms draws attention away from how a technology has been leveraged to capture the broadest and most minute relations and render them as surplus capital.

⁸ Cloudflare CEO Matthew Prince, begging to be stopped before he kills again, in Kevin Roose, “Why Banning 8chan Was So Hard for Cloudflare: ‘No One Should Have That Power,’” *New York Times*, August 05, 2019, <https://www.nytimes.com/2019/08/05/technology/8chan-cloudflare-el-paso.html>.

⁹ To imagine taking away editorial power from crypto-fascist-techno-libertarian oligarchs raises an obvious question: To whom would the task fall of deciding what decisions they are and aren’t to make? Regulatory efforts are likely to be unpopular, ineffective, or both considering the two-prong effect of diminished public faith in institutions since the 1970s and the ability of CEOs to direct legislation by way of lobbying and PACs. Reviving the fourth estate through subsidized independent journalism will require soliciting funds in an economy where few are as flush as crypto-fascists and techno-libertarian oligarchs. Suffice it to say, I am starting from the position that my problem doesn’t have a solution, as much as several smaller, interlocking problems that require reassessment.

Minimal interventions on behalf of single chief executives or advisory boards do very little except offer a glimpse of the veritable standing reserve of authority available to them while larger, persistent problems embedded in the business models of these companies go unaddressed. I don't find the fact that digital media platforms alter relations to self and others, foment unrest and instability, and increase suspicion and divisiveness to be strictly digital. To the extent that all media has a social dimension, if only limited to longer cycles of interaction or audience response, the development of platforms which focus specifically on user interactions for content will reliably magnify the potential benefits and detriments to the user base and the worlds they create. That I would find myself affected by or looped into these circulations, even where I am outside of the user base proper is understandable when platforms boast subscribers in the billions. But taking all of this—the number of users, the highs and lows of viral content, the veracity of public facing statements—at face value from the platform's largest beneficiaries is naïve at best. At worst, it ignores the inextricable degree to which digital media platforms, and their captains on the bridge, are tightly interwoven into the micro and macro functions of everyday life.

I originally came to my project because I felt that digital interface and surveillance were permanently embedded in our most basic emotional and cognitive maps. Data trails are unquestionably evidentiary. Online content manipulates individual perspectives, codifies populations, and thus effects world events—but also, crucially, all

this works in reverse. Conspiracy theories that normally die in daylight bloom, while actual conspiracies like voter suppression and soft coups are being discursively and legislatively sedimented into oblivion. In my years of research, I couldn't find enough critical reflection on the mutually sustaining and antecedent elements to cut through the fog of novelty around all the terrible and interminable events that are continually unfolding. This, despite a strong activism that draws stark connections from present calamity back through histories of white supremacy, political rat-fucking, and economic stratification.¹⁰ Both near-term and long-tail histories assure me I should know better, but I consistently find myself drawn into the news cycle for information and still struggle to piece that information together into a coherent picture of current events.

Extreme perspectives take root on digital media platforms and guide users into radical action since the technology's inception, in part because these perspectives and actions prefigure the medium. White supremacy, for example, was only the most recent long-standing problem to coalesce as an algorithmic threat. It wasn't even a moonshot from traditional recruitment methods to digital media posts. These agents took baby steps from email lists to UseNet and onto early web forums. Forums knit seamlessly into dedicated websites, which became central repositories for news, links, and branded

¹⁰ Rat-fucking is not just delightfully profane, but an actual GOP strategy going back to the 1972 Nixon campaign. It originates as lingo for boarding school and fraternity harassment. Ben Zimmer, "Roger Stone and 'Ratf—ing': A Short History," *Politico*, January 25, 2019, <https://www.politico.com/magazine/story/2019/01/25/roger-stone-and-rating-a-short-history-224218>.

merchandise. My interests lay in what happened next, because how web traffic becomes profitable is in no way limited to varieties of speech or the debates over how much we're allowed to lie online.

No one is as naïve as we once were about the existence of all the data as it relates to users. We don't question if we were being tracked and traced, but wonder how much to care about it. In that vein, data breaches are more widely understood as a vector of attack, rather than a personal error. The US government, half a century into a commitment to neoliberalism and all-in on late capitalism nonetheless advanced the claim that technology companies are monopolistic entities with too much power. And in 2018, the General Data Protection Regulation expanded personal data protection and privacy for citizens of the European Union—an action which circulates in the US as a counterpoint to domestic rules mainly written by the data brokerage industry.

Promising starts, maybe, but settled assumptions guide the debates that get us to these positions. We assume commodification of data makes the free web possible, that some degree of surveillance is necessary to curtail bad actors, and that companies trading in data are best suited to protect and regulate that data. That we rarely see much in the way of consequence for related malfeasance outside of a few cancelled accounts and carefully worded press releases suggests that the basis of these assumptions be overturned, and the fiber of the questions be re-spun. Where we once asked how the

masses could desire their own oppression, we must now ask what kinds of oppression are tolerated in exchange for not being reduced to the masses.

In this context, where the ethical-political is everywhere discussed but under-achieved, let me say a few words about what this dissertation will not do. It will not fetishize computation. The tack of embracing computation as the beginning and end of our inquiry into the digital present not only (re)introduces strict quantification in all disciplines, but it makes computer science the basis for expertise in every conversation. Nor will the dissertation try to satisfy the yearning of cultural studies to rescue everyday life by offering a history of the logic and record of computation backward through preceding discourse networks. This strategy would simply lead to a dead-end conflating everyday life with the data that industries produce while sidestepping the complexities of understanding how ordinary worlds are being mediated through interfaces as a profound arena of social practice. The dissertation will not follow efforts to recruit Gilles Deleuze as the master thinker of digital culture; nor will it forge its theorization of digital media through the framework of Gilbert Simondon's technogenesis or individuation. Both of these theorists have been generative for media theories, but the thinking they prompt for contexts that concern me often privilege minute orders of magnitude and the horizons capital claims for itself—which today manifest as a sort of better living through algorithms.

The dissertation will not make a sharp distinction between itself as a work of media theory and as a work of cultural studies. Fidelity to one at the expense of the other would undermine my efforts from the start because of the way culture gets folded into media, and media into culture. A purely cultural approach might map the chaotic and persistent material of lived experience in the time and space of my project, but it could not simultaneously allow for a theorization of the effects digital mediation may have on that cartography. Likewise, models describing the impacts of mediation too easily subsume cultural complexity into communicative or informatic circuits that limit representation of media systems. That is, cultural theories of the everyday is too late to descriptions of media, while media theory is too specialized to account for the dynamics of culture. The specializations I am referring to look too carefully into computational systems, leaving the interface to questions of visual literacy. By the same token, film studies are interested in screens and images, but stop short of the interface threshold.

Altogether, this project demands multiplicity. Letting one perspective take the wheel changes the destination. And my destination, no matter how many detours I've taken in writing this dissertation, has always been first and foremost about how to understand the digital colonization of everyday life and its corruption of knowledge production. This commitment to culture that lives and breathes draws me to the actuality of the present and to Michel Foucault's later work on power to explore digital mediation in the present.

Notoriously mercurial, Foucault needs to be properly situated—dare I say restrained—before being put to work.¹¹ When I say later work on power, I am specifically referring to *Discipline & Punish: The Birth of the Prison* and the first volume of *The History of Sexuality* translated as *The Will to Knowledge*. Each was made available to English-language readers in the mid-1970s. I am also referring to posthumous lectures translated and published from 2003 onward, in particular those clustered around the development and publishing of the aforementioned texts, i.e., the end of Foucault’s working years. My intentionally focused reading is an effect of what I view as a shift in Foucault’s primary interest, from the concept of power to the concept of freedom and out of genealogy into ethics. A more theoretically oriented project would take the entirety of Foucault’s work from 1970 onward under close scrutiny. Alas, that is not my task. Instead, I track a moving target among well-tread thinking on power, knowledge, and bodies and an emerging corpus on freedom, ethics and subjectivity cut short by Foucault’s death.

I trace contemporary topographies of identity and surveillance, the emergence of a novel apparatus of power, and a mode of computational life centered on self-commodification as they coalesce through social, political, and economic determinations

¹¹ “Do not ask who I am and do not ask me to remain the same: leave it to our bureaucrats and our police to see that our papers are in order. At least spare us their morality when we write.” See: Michel Foucault, *The Archaeology of Knowledge and The Discourse on Language*. A.M. Sheridan Smith, trans. New York: Pantheon Books, [1971] 1972, 17.

made over the last thirty years. The project sits between bodies and subjects, splitting the difference between power and repression, freedom and restraint, but facing the genealogy of knowledge. These specifications are necessary because I am ultimately interested in a revising discipline for the present, and this task involves borrowing some terms that rightly belong to a Foucault who seems to have ventured into a different labyrinth.

A genealogical account of the period from the late-90s through today is necessary to fully consider the arc of American culture as a data-driven society which has yet to reach its apotheosis. Under the disciplinary scheme described by Foucault, the phrase “society must be defended” stands in for a systemic reorientation that defends people with power from people whose respect for and obedience to the top of the hierarchy is waning. My appropriation of this phrase in the dissertation’s title, *Society Must Be Defragmented*, pays homage to my critical investment in Foucault by repurposing the clarion to defend institutional interiority through efficient articulations of power and knowledge, but also references the basic process of fragmentation which takes place on mechanical hard drives.

Fragmentation slows down processes and thus degrades performance of certain file systems. An operation called defragmentation is a mitigation protocol that organizes a mass of files into small, contiguous collections. This process takes all data belonging together and places it into continuously readable blocks, leaving un-writable blocks in

isolation. The resulting reorganization of inscription makes the given system faster and more efficient. My rough analogy to people and practice is meant to suggest that if discipline is reconstituted through datafication, then the construction of space and production of bodies necessary for its function can be located through computer interfaces and in techniques that interpellate without interrupting the continuous read/write process of identity performance. The provocation of my title suggests that potential resistance at work in computational life is in danger of being actively redirected back into proven methods of containment and order by an autonomous regime of data.

The emergence of what I call the data shadow and present history of subordination began with a commercial-social internet that coalesced after the dot com crash at the turn of the century, evolves through network interaction as identity, and finally emerges over time at a point when predictive analytics serve a similar purpose as population statistics once did. If the familiar relation of discipline and control establish a norm and manage unpredictable-yet-unavoidable deviations, making live and letting die, then the apparatus of governmentality I seek to clarify in datafication establishes the norm and modulates predictable deviations while avoiding anything that escapes modulation. In more Foucauldian terms, it makes live and makes die.

This work, situated at the intersection of cultural studies and media theory, aims to address operations of power. Foucault's disciplinary project is well-suited for

thinking through the conditions of the present because data and statistical populations make biopower function. The collective trajectory of my case studies show how datafication articulates with the everyday from three perspectives. Each shows us a model of power that structures a distance between person and data which expands over time such that all are subjected to the extent that we submit or fail to exist.

The first case study looks at the dot-com bubble and the economic binding of datafication. I begin with the mythology of Silicon Valley start-ups. Drawing on memoir and biography, I show that the irrational exuberance of the mid-nineties' tech boom is rooted in very common financial edicts. The business of the internet is born early, reared quickly. The break at the end of the bubble constituted in a market crash and formalized through a convention organized by Tim O'Reilly, a key fabulist of the era, makes room for several potential utilizations of the underlying technology of the internet through digital media platforms. These platforms are a space where data and user are conceivably motile and malleable. The value propositions and low-overhead scenarios of social networks, among other factors, initiate the transition to a particular type of internet. In this new internet, there are spaces for the exchange of ideas, but everything is monetized. The merging of participation with monetization allows corporations to trade in a variety of new experiences: consumption with Amazon, attention with Google, relationships with Facebook, expression with Twitter. The commodified web

makes users legible as social interaction within internet communities, which are in turn hosted by companies whose valuation is a function of unique user imprints.

The second case study looks at how policing and surveillance are modified to take advantage of a communication system that distributes branded truths and rewards fidelity through the Boston Marathon Bombing. This articulation of datafication is a moment for the separation of person and data. Traditional media, police, and digital media platforms all three triangulate the event of the bombing to distinguish categories of user. Everyone has the capacity to become victim, suspect, journalist, vigilante, cop. The variations are not driven by an underlying consistency, but in the circulation of content. The archive consists of police after-action reports that recursively narrate the event, and live-thread updates on digital media, which eventually cross-pollenate with broadcast news. The outcome here is by no means under its own momentum. To the contrary, the police enact several failures in integrating platforms and data. Their eventual success is a result of previously entrenched financial incentives on the technology side and forward-looking police tactics that present a most-likely outcome under the persistence of diminishing returns on demographic data.

The conditional certainty of demography brings me to the practice of psychometrics, and the final case study in the Facebook-Cambridge Analytica Scandal. An existing data industry produces a series of firms dedicated to maximizing the insight a client might derive from particular stores of data. This is, on the surface, datafication in

the sense of its deployment following the dot-com bubble, when the Big Data paradigm, or what Bernard Harcourt calls the *expository society*, is rapidly normalizing.¹² In the context of my deployment of the term, Cambridge Analytica exemplifies the full operation of datafication as an apparatus of power. By using readily available industry tools and practices, Cambridge Analytica synthesizes both a norm and its modulation. To be more specific, where simple demography targets the population and tries to convince a certain proportion to act, psychometrics ascertains the relative norm on a topic, then locates pressure points to shift that norm. In terms most familiar to the topic (and sundry inquest subpoenas), consider voting. Based on the aggregation of all data pertaining to specific persons, to people around them, and to people similar to them all, any portion of potential voters can be swayed for or against a generalized proposition to a purposeful degree. A correlation strategy will then produce necessary valances or keywords to distribute through campaign content, broadly construed. Comparing academic studies on emotional manipulation and social media with news coverage and public records of psychometric techniques, I show how the full deployment of datafication inaugurates an extension of self, minutely differentiated and limited to the amorphous confines of computational life.

¹² Bernard Harcourt, *Exposed: Desire and Disobedience in the Digital Age* (Cambridge: Harvard University Press, 2015), 15.

My genealogy of datafication aims to put our contemporary struggles with technology and power into sharper relief. In so doing, I want to clarify the strategic balance necessary in both present and future oriented thinking. The discourse on digital media is consistently out of sync with its capacities, which allows for the exploitation of those capacities to be realized through intentional obfuscation of context. As a result, the meaning of elements can change before there is collective agreement on the existence of a problem. A Foucauldian account of media reveals the ends of subjection in the ultimate illegibility, which is to say, not abnormality nor social death, but a status as non-existent, unspeakable. When the subject becomes an effect of data, it ceases to exist in any way that is meaningful to the system of governmentality. The possibility of micro-targeting populations overrides the subjective control we might have over our actions by limiting the scope of choices to predetermined, optimized outcomes. The inversion of subject and data is routed directly through capitalist imperatives, be they short-term profit, raw material access, or brand-asset management. To meet this problem head-on, in time, is to reclaim the revolutionary potential of wide-spread communication and open circulation of knowledge on an open internet and to reconfigure personal autonomy through the messy and fragmented relations we make and unmake in habit and practice.

Chapter One: Truth in Lies

“...the Internet Era, that period of time from roughly 1993 through 2008 when computers and technology itself stopped being esoteric and started becoming vital and indispensable.”
-Brian McCullough, 2018¹

Introduction

I have never lived anywhere near Ocala, Florida, but I still have an unpaid bill from a cable company there. Worse yet, I exceeded the income-expense ratio for an apartment in Georgia due to a mortgage in my name in Idaho, a state I have never visited. Multiple data points reflect my presence in events elsewhere: a bank in Boise; a leasing office in Atlanta; a negative credit report; a swamp in Florida. My presence in the space of overlapping physical locations and digital traces remain highly abstract. The truth of my presence is less simple and straightforward than philosophers once assumed. That I did not participate in any of the activities done in my name is irrelevant in this mutual space of my digital and physical presences. And I'm not alone. National news is rife with these kinds of stories about the mishaps that occur in the imbrication of persons and their data.² These stories implicate chains of custody, arbitrate truth, call

¹ Brian McCullough. *How the Internet Happened: From Netscape to the iPhone* (New York: Liveright Publishing, 2018) 2. See also, Wendy M. Grossman. *Net.wars*. (New York: NYU Press, 1997).

² These stories are numerous and have a way of proliferating in conversation. Once you hear of one, similar variants spring up like mushrooms. We all carry an archive of what could befall us, but for the grace of the algorithm. The stories I reference here start as personal anecdotes, but end with exemplary types.

into question judicial authority and modes of surveillance, and reorient the relations between speech and politics as all of the above move in a constellation with informatic, technological, and industrial concerns. Understanding these present conditions requires an interrogation of how we got here.

There is a story commonly told about the emergence of the internet. It goes like this: we began in the flush years of the 1950s with cybernetics research and cold war strategy. From this work we got telephonic and radio networks. A cluster of databases and terminals beget many networks, and then the networks were inter-connected. After the internet, there was an emergence of a user base with interface-terminals in a web. Eventually, the cultural prominence of the internet increased by massifying the web. When no one needed to know what it was to use it, some people were able to make lots of money from it. From then on, the internet, information, and data were a seemingly permanent and robust presence, like a global patch of gardenia or...maybe hemlock. I want to suggest that the description of emergence above is only part of the story, and that this part is highly curated toward specific goals. One of the consequences of the curation is to naturalize processes of surveilling bodies, making identities vulnerable, and predicting behaviors. Another consequence is the obscuring of a governmental rationality that will be one of the primary focuses of this dissertation.

The collection of issues that concern me here, vectors of power intersecting with identities, bodies, and behaviors, rely on an understanding of an apparatus I am calling

datafication. To track these issues first requires an understanding of how datafication becomes a cultural and technological norm. To unpack datafication, the widely accepted story about the development of internet technologies must be dislodged. Tracking and unpacking will be oriented around two ideas that I will argue are important elements constituted and maintained through datafication—conveniently embedded in the title of this dissertation—the data shadow and computational life. The best place to start digging is in the early versioning years of internet scholarship.

The task of this chapter is to find a consistent way to distinguish the history of the internet's emergence from the developmental arc of the common story. By distinguishing a gap between a particular network infrastructure and user interface early on, we will be better positioned to understand how people, users, and platforms comprise a specific stage of digital culture. A submerged moment of the common story will then become open to deeper analysis. This moment is when utopianism is harnessed as collectivism, and during an economic conversion point is hitched to a new regime of power that valorizes data at cross purposes with individual(s/ity) and expression. I say submerged because the moment is not untold, but instead localized in corporate practices.

The use of historical framing in this chapter serves to disassemble the internet from one long history in order to focus on one specific form and isolated function that comes to light within a micro-period. By examining the internet and the web from the

late-1990s through today, an alternative history can be traced that reveals why some metaphors for this deeply integrated technology have held fast. It is necessary to start from a place where it is impossible to think of the web as anything other than a part of everyday life. This will produce an antecedent period in which networks are corporate-
logistic necessities, but also consumer-user oddities. I argue that it is this tension between commodification and experimentation at the heart of our contemporary dilemma regarding belief, identity, and politics on and of the web.

In examining datafication, I will also consider two ideas, the data shadow and computational life. The data shadow refers to a collating and updating coherence of data connected to a person that is more representative than their own experience and performance. Computational life is what allows the data shadow to obtain, or the everyday quantification and augmentation of our routines, habits, and unadministered activities channeled through the threshold of interface between platform and user. Analysis and prediction anchored to a set of normative practices correlated through vast troves of data are determined through the overarching rationality of datafication.

Datafication constitutes a mode of governance in the sense that it is a group of activities aiming to shape, guide or affect the conduct of some person or persons. These activities can include relations of self-correction, private interpersonal relations requiring some form of control or guidance, relations within social institutions and communities and, finally, relations concerned with the exercise of political sovereignty.

Governance, here, is not just a point of application, but the fundamental conditions that make such applications thinkable and operational for both the practitioner and the target of their practice. While many key elements uphold the rule, I am interested in the specifics of tactics and strategies for the constitution of knowledge around digital platforms. An understanding of these techno-cultural operations in terms of a contemporary disposition toward digital media, platforms, and interface can be expanded through Michel Foucault's concepts of jurisdiction and veridiction in the governmentality of biopower.

Hacking Belief

Before, documentation was authenticating. It proved I had been in a place, for a time, and perhaps verified some of the things I did in that place—served in the military, received state benefits, paid a mortgage, rented an apartment, or completed a university degree. It is possible to connect the statistics and administration of the eighteenth century to certification and documentation of the nineteenth and twentieth centuries, then to databases and algorithms of the twenty-first century, and in so doing validate a practice of sedimentation, of visual marking and tabulation, as evidentiary proof.³

³ Michel Foucault, *Discipline and Punish: The Birth of the Prison*, Alan Sheridan, trans, (New York: Vintage Books, 1995), 200-1; See also: Ian Hacking, *The Taming of Chance*. (Cambridge: Cambridge University Press, 1990); Lisa Gitelman, *Scripts, Grooves, and Writing Machines: Representing Technologies in the Edison Era*, (Stanford: Stanford University Press, 1999); Antoinette Rouvouy, "Technology, Virtuality and Utopia: Governmentality in an Age of Autonomic Computing" in *Law, Human Agency, and Autonomic Computing: The*

Digital tabulation, tracking, and interface constitute a second layer of confirmation using similar types of information, all in service of authenticating my presence and correlating other points of authentication with one another.

Now, documentation is also corroborative. You make an account to take advantage of the 10-week pass to yoga given by a friend and you must wait to receive a confirmation code on another device to affirm that you are you. Once upon a time, the Department of Motor Vehicles needed documents from other institutions to recognize you, whereas today, you can place yourself in line online, and arrive later to trade places with your data. In these examples, there are two ways of containing and categorizing an informational person, each cross-referencing and reinforcing the another, while also admitting to a proliferation of sources of verification. This more recent turn intersects layers of authentication and corroboration with the industry of predictive metrics.⁴ This predictive-analytic mode is what conjures a seat of observation or measurement, relates points to other points, and makes determinations about the status and meaning of all points within the scope or grid of the observation. Pedestrian examples of this arise in the pricing of insurance and airline tickets as algorithms allow retailers to shift fees

Philosophy of Law Meets the Philosophy Of Technology, Mireille Hildebrandt and Antoinette Rouvroy, eds. (New York: Routledge, 2011); Antoinette Rouvroy, "The End(s) of Critique: Data Behaviorism versus Due Process" in *Privacy, Due Process, and the Computational Turn: The Philosophy of Law Meets the Philosophy Of Technology*, Mireille Hildebrandt and Katja de Vries, eds. (New York: Routledge, 2013); Bernard Harcourt, *Exposed: Desire and Disobedience in the Digital Age*, (Cambridge: Harvard University Press, 2015); Colin Koopman, *How We Became Our Data*. (Chicago: University of Chicago Press, 2019).

⁴ David Beer, *The Data Gaze: Capitalism, Power and Perception* (London: SAGE, 2019); John Cheney-Lippold, *We Are Data: Algorithms and the Making of Our Digital Selves*. (New York, NYU Press, 2019).

based on customer location or purchase history. The predictive-analytic mode also bleeds into policing where the same kind of algorithmic sorting predicts intensity zones for high crime into which police deploy more patrols. Cumulative, transactional data is most important—the price is determined by the best guess at effecting the purchase; the police respond to the intensity of vague classification of potential crime. Data-driven correlations become algorithmically deterministic when they are deployed as the most efficient solution to existing institutional techniques and goals. For this reason, it is possible to understand persistent data collection and analytic insight as constituent elements of a broader exercise of power.

As the process of datafication becomes more prominent, more pronounced, more fully articulated with everyday life, the social value of information sourced from the internet increases because user bases and platforms are particularly robust locations for data with a high capital value. This status turns platforms into arbiters of social knowledge and mechanisms of its circulation—at once intimately involved and coldly automated. As the process continues, generalized content supersedes specific information on both planes of value as data is fully commodified. The needs of people who use networked interfaces, and thus produce data, drops further down any scale of concern for this particular mode of governmentality. Content and engagement easily supersede other, more complex or demanding mediations of experience and representation.

This project aims at exploring the articulations of the regime of datafication by taking three angles of approach to it as a mode of power. Datafication as I am defining it is present but largely illegible until the dot-com crash. Afterward it is present in heterogenous combinations and incomplete applications, during a period wherein residual techno-utopianism is harnessed and affixed to the new regime. In the final phase of legibility, datafication is a functioning, self-reinforcing social operation. I take three views to this logic of power in related case studies, but first want to explain the theoretical position I am taking with regard to power relations. The accrual of data over time leads to a situation that would not be possible without the initial operation of digitalization and its continual function. Yet, surveillance as a form of control and control as coercion are classic elements of disciplinary systems. The why and how of datafication's persistent colonization of the space of everyday life can be addressed through modalities of power and practices of governmentality.

A disciplinary apparatus is one that organizes time, space, and bodies, but also produces a specific truth through a distinct gaze. To produce truth, there must be a relationship of power at work through authority and subjection. The conditions of that relation are apparent in the specific apparatus of a given period. That is, whoever has authority will concern themselves with how to direct that authority, how to subjugate others to that authority, and will systematize that method to insure both the efficiency

and persistence of that authority—up to and including the refusal to acknowledge said authority’s existence in the face of its critique.

Under the disciplinary apparatus described by Foucault, both the presence and absence of activities are observed, examined, and judged. Through these main techniques of power, social standards are upheld and modulated to their most efficient degrees. The capacity to diffuse these techniques over the whole of a society makes their application that much more effective. On one hand, there are multiple agents responsible for acting as relays for power, which in turn expands the territory over which that power is effective. On the other hand, the expansive presence of these agents makes it more likely that individuals will take up this work themselves, directing correctives to their own activities and the activities of those nearest to them, which increases the efficiency of control in the given society. At both levels of application, these techniques hedge the main path of standard, normative social practice.

When speaking of control in the context of media studies, it is common to land on a brief text by Gilles Deleuze, *Postscript on Control Societies*. Here, control means “the power to influence people and things” but also includes forms of administration through quantifiable monitoring.⁵ Hence, Deleuze’s emphasis in *Postscript on Control*

⁵ Alexander R Galloway, *Laruelle: Against the Digital*. (Minneapolis: University of Minnesota Press, 2014), 106.

Societies is on passage through space via gates, turnstile, or checkpoint. Media theorist

Alexander Galloway clarifies that

when Deleuze talks about *les sociétés de contrôle* he means those kinds of societies, alternately those localized places within the social totality, where mobility is fostered inside of certain strictures of motion, where openings appear rather than disappear, where subjects (or for that matter objects) are liberated as long as they adhere to a variety of prescribed compartments.⁶

With this clarification in mind, I want to consider control as a versatile concept of interest to both Foucault and Deleuze, downplaying any oppositional sense that one's control is the other's chaos. At the same time, I want control to serve a particular role in the apparatus of datafication, and ultimately a key element in the type of governmentality under consideration. My choice to encompass surveillance and control in the analysis of computational life opens invisible elements of these practices to greater scrutiny without collapsing the function of visibility into a variety of panopticism.

I am specifically interested in the way a computational life is conducted or made possible as mode of conduct. The combination of conduct and counter-conduct, the bundle of activities which are permissible and prohibited, are sometime obvious, sometime hidden. The inter-operability of discipline with control, from a Foucauldian perspective, dictates that when rules are broken or we act in a way that directly defies an obvious or hidden rule, this derelict behavior is already calculated into the enforcement

⁶ Galloway, 106.

of those obvious and hidden rules. As a result, no bad behavior should be so detrimental to a system's internal order that it can destroy that order, nor so bad as to drastically restrict the activity of everyone under the domain of a particular set of regulations. Under the premises of computational life, counter-conduct is rerouted through the same circuits it would traditionally escape.

By utilizing the tools provided by Deleuze and Foucault, this project constitutes an intervention into media studies, insofar as it suggests that too much has been read into Deleuze's concept of control societies. I am not going back to Foucault or trying to center the debate at the oppositional meeting point between a Foucauldian or a Deleuzian reading of the present. Rather, I want to take the tools Foucault has developed for one purpose and utilize them in an analysis of the media saturated territory of our present. On the apparent paradox of Deleuze and Media, Mark Poster has written incisively on an inconsistency between supposedly limited engagements Deleuze has made with media and the attention this work is given in media criticism. Poster suggests that "the question of new media and of media in general is central to an understanding of Deleuze's concept of 'control society'" despite a lack of reciprocal interest on his part.⁷ By media, Poster seems to mean broadly (mass) communicative

⁷ Mark Poster, "Afterword." *Deleuze and New Technology*, David Savat and Mark Poster, eds. (Edinburgh: University of Edinburgh Press), 2009), p258-262.

forms such as radio, television, film, telephone, satellites, and internet. My understanding of his concern is as follows.

Poster thinks that Deleuze's concept of the control society pins so much on an understanding of new media, while in turn, too much theorizing of new media in turn anchors itself to the brief *Postscript on Control Societies*. Basically, the *Postscript* situates new media in a very specific way, but as what is new in media changes, readings anchored in this text implicitly frame media as what was then-new, rather than assessing what is actually novel—as Deleuze very well did in his thinking on control. But this two-way circuit is not the real focus of Poster's claim—which I take to be something specific he calls “digital media culture.”⁸ Theories of digital media culture, aside from being culturally focused, also circumscribe media forms into the category of digital media. The porous boundaries of such a category have changed dramatically since the writing of *Postscript on Control Societies* and continued to change since Poster's assertions in *Deleuze and New Technology*—a separation of roughly twenty years that straddles the turn of the century.

In Poster's reading of *Postscript on Control Societies* Deleuze doesn't move beyond Foucault as much as he characterizes a break between orders of domination, a break which he also claims is in line with Foucault's writing on the disciplines.⁹ The orienting

⁸ Poster, *Deleuze and New Technology*. 258.

⁹ Gilles Deleuze, “Postscript on the Societies of Control.” *October*, vol. 59, (Winter 1992): 3-7.

of Foucault's project as having described the dwindling of discipline to a gradual emergence of control presents several other concerns for Poster. He finds the *Postscript* lacking in an analysis of the media as technologies of power, "the specificity of the media as structuring systems" and the differences between media.¹⁰ For Poster, it is important to keep centered on the fact that "television, print, and the internet are each disciplinary institutions, different from each other, but also...similar to prisons in that they construct subjects, defines identities, position individuals, and configure cultural objects."¹¹

I do not want to be as sweeping as Poster and say that Deleuze was *not* a theorist of media.¹² Indeed, his work on cinema is substantial. David Savat points out that, in spite of dying before the proliferation of inter-networking and computation, Deleuze nevertheless takes the concept of machines very seriously.¹³ Deleuze is often concerned with "specific technologies and the effect of their usage as a component or function within larger assemblages" as any reference to *Anti-Oedipus* and *A Thousand Plateaus* with Guattari, or solo writings in *Foucault, Cinema 1: The Movement-Image*, and *Cinema 2: The Time-Image* clearly show.¹⁴ Thus, while *new* technology and media might not have been front and center, Deleuze's conceptualization of abstract and material forms of

¹⁰ Poster, *Deleuze and New Technology*. 260.

¹¹ Poster, 260.

¹² Poster, 258.

¹³ I hardly fault him for dying. It happens to the very best of us.

¹⁴ Poster, *Deleuze and New Technology*, 1.

machines and technology is considered and considerable. His concepts have had an enormous impact on the development of the field of film theory and film studies. One could also point to the importance the concept of the rhizome in theorizations of networked computing and the internet. Also, where Poster asserts that Deleuze barely mentions media beyond the *Postscript*, he would have to overlook the (albeit brief) discussion of digital media in *Cinema I and Cinema II*, and the systematic, rigorous engagements with literature, but also painting and music in various contexts.¹⁵

In a more general sense, Poster's complaint with Deleuze and media theory is in the latter's "understanding of film as art."¹⁶ Poster reads a consistent recognition of "art as a liberatory escape from the quotidian" in Deleuze as a disinterest in "the altered sphere of everyday life as steeped in audio and visual technologies."¹⁷ From this framing, Poster goes on to say

One cannot come near the problem of media with a view of the everyday as degraded, debased and baleful. It seems that Deleuze would have done well to heed the work of cultural studies, from Stuart Hall to Michel de Certeau, on the limits of modernist art theory, as well as the debate in postmodern theory over the merging of 'high' and 'popular' cultures.¹⁸

I think it is fair to say that Poster's main concern is cultural, and it is Deleuze's limited view of digital culture in the *Postscript* that gives him such pause. I think it is also fair to

¹⁵ With gratitude to Markos Hadjioannou who pushed me to reflect more carefully on the distinction between theorizations of media, digital media, and computation.

¹⁶ Poster, *Deleuze and New Technology*, 261.

¹⁷ Poster, 261.

¹⁸ *Ibid*, 261.

say that Deleuze is not interested in digital media culture or even media as culture. That doesn't mean that Deleuze cannot be useful in theorizing culture—digital, media, or otherwise. I see a more generous interpretation of Poster's critical reading of the *Postscript* as a critique of the afterlife of this text in consideration of the fact that Deleuze did not develop a systematic interpretation or theorization of digital or computational media, even if he turns from time to time to a brief discussion on the matter.

Poster's view of digital culture requires understanding that the digital is always comprised of codifications of freedom and control.¹⁹ So while it is possible that a society of control might emerge after disciplinary society, the component of freedom attends control, and a determination between the two can only follow from political action. While Deleuze can be read in numerous places as developing the tension between ethics and politics, it does seem fair to say that in the few mentions of control, any program of political action is under specified. An integrated position can perhaps be summarized as taking the specific tactic of revolutionary art to a general strategic level of media as culture. If so, Poster's assumption that media theories grounded in the *Postscript* cannot adequately attend to "new media's potential for resistance to commodification and

¹⁹ Poster, *Deleuze and New Technology*, 261. See also: Wendy Chun's, *Control and Freedom: Power and Paranoia in the Age of Fiber Optics* (2008) and *Programmed Visions: Software and Memory* (2013), and Alexander Galloway's *Protocol: How Control Exists after Decentralization* (2004).

especially its potential for facilitating new forms of global politics” would hold without completely barring Deleuze from association with media theory.²⁰

Both control and discipline complicate the freedom needed to resist techniques of power whose conditions of possibility require attention to datafication’s crucial effect: a person is no longer unique nor necessary for the production of their data. Rather, this data can be produced through second or third order interface and device connections. Here, second order refers to the data produced through intentional activity, but without our knowledge, like web searches or online shopping. Third order refers to unintentional activity and unknown productions, such as constant broadcast of data from smart-devices or harvesting of that data by third-parties as we move through public locations—say, if we stormed a government building with our smartphones. Such changes in data production are important because the user is no longer intrinsically located at one point of an interface. Digital templates or othering-selves make differential performance easier at the same time as they make categorical distinction more ominous because of how they multiply the potential categories without any loss in observational or organizational authority. Infinite diversity in infinite combinations, to borrow the phrase, is fairly meaningless if an existing form of domination remains fixed.

²⁰ Poster, *Deleuze and New Technology*, 261.

This dissertation argues against the tendency to ask questions of *the technology* in one way or another—even if we are addressing ourselves through those interfaces. Different questions need posing in terms of the multiple, at times paradoxical conditions of datafication and the data production which makes it possible. Doing so allows an interrogation of the distinction between data and self, and the consequence of archiving the person in the shadow of their data. My work herein seeks to theorize a framework that expands from a disciplinary apparatus, but crucially takes account of reconstitutions of sovereign power through biopower in the emergence of in computational life.

The disciplinary project must be reconfigured for today. Technologies of confinement and correction require, at minimum, the idea of an overseer. In the model of the prison, the figure in the tower is not the guard at all, but a shadow in the guard tower.²¹ That this figure of the shadow is a necessary component in the orientation of what we understand as the panoptic gaze is a key point for my utilization of Foucault. The extent to which digital observation and tracking makes individuals and population ultimately controllable is the question of the day. In its historical dimension, my project contributes to our understanding of perpetual quantification as it gives us the impression of less exclusion since it results in higher visibility and greater legibility,

²¹ Michel Foucault, *Discipline and Punish*, 200-1.

rather than control through total knowledge. Yet in order to be perpetual, no limit must be placed on what data can be collected, which presents both social and material challenges.

As it appears in the prison, the shadow stands at a distance from the space of pure or potential visibility and ensures the atomization of correction. However, my dissertation will show the organization of figures within disciplinary spaces must be reconsidered specifically in terms of the digital age. The prison is only a model for how one aspect of discipline worked. There are other models for other aspects of disciplinary space. Taken together, these models illustrate a fuller picture of a system that establishes and exploits power relations. Michel Foucault's work between 1975 – 1979, comprising *Discipline and Punish: The Birth of the Prison* and *The History of Sexuality Vol 1: An Introduction* and course lectures at the Collège de France during the same period are useful for theorizing cotemporary debates about media and culture, in spite of a lack of direct interest on behalf of Foucault himself. That is to say, the panopticon was vital to thinking about the technologies at one point in time, particularly in drawing out the conditions and consequences specific to surveillance. As digital media platforms reach a kind of ubiquity, panopticons spring up like clover, the body remains captured and the shadow moves freely.

Foucault's concepts are not shy of reference. Often, the logics of panopticism, discursive formation, and normation are mapped onto digital environments without due

consideration for how the particular orientations of the interface effect relations of power outside of the disciplinary focus of surveillance studies, which is to say from the screen to the user, or from the network to the developer/founder. In light of this tendency, I attend to the space-between, the interface threshold where the everyday life of people who use computers is entangled with the software, hardware, and infrastructure that make computers useful.

What we find in this period that is presumed to be contained with little variation within the control society schemata is that it is not the technology which supplants the jurisdictional element of our contemporary apparatus as much as it augments the means of veridiction by which existing relations of power are reinforced, refined, and redeployed. Digitalization and datafication illustrate the two main axes of order which realign in that shift. The first is juridical, dealing with a reformulation of policing which allows old forms of direct force and visibility to regain legibility under the sign of justice. The second is veridical, bearing directly on what can be stated and how it is made true or meaningful. Between these two axes, the fundamental vectors of a Foucauldian apparatus are in operation—the former accounting for force, the latter enunciation, and both dealing with visibility.

What is important to note is that media differ, just as singular media must be different across existing spaces. The category of new media must be understood as constructing subjects, defining identities, and curating cultural objects even as new

media differ from other disciplinary spaces—especially those composed of brick and mortar. There continues to be a consistency between all of these spaces. People stubbornly insist on building and living complex daily lives from pieces and parts which do not solely belong to the category of new media. What must be foregrounded is the paradox of power, in which two opposite operations of constraint and resistance are always present in the digital. This is, in part, how I understand Foucault’s microphysics of power and why I am skeptical about strategies of refusal alone. To discover resistance is to better understand how power operates, and this requires attention to the quotidian mediator, culture. For the discussion herein, it’s worth putting marketing on the radar of any consideration of culture and power in the US at the turn of the century.

Cultural theorist Amit Rai is helpful in sketching the contemporary relationships between marketing and power. He notes that Deleuze raises the issue of marketing in *Postscript on Control Societies* as the context of modulated control, and goes on to say that this type of control is often counterposed to Foucault’s use of the panopticon as a model of how power functions through visibility.²² Marketing and power also more carefully

²² I find that the panopticon is itself somewhat typecast in discussion of digital media and culture. Rapid proliferations of computational interface from the mid-90s onward made the designation of what Mark Poster called a “superpanopticon” and Steve Mann classifies as “sous-veillance” generative and especially useful for the field of surveillance studies, but this has an unfortunate byproduct of making carceral logics into the dominant expression of power. I don’t want to detract from the force and violence of incarceration, nor the utilization of data and computation in the role of policing. Nevertheless, I think those un-or-lightly-touched by carceral logic might be lulled into a false sense of freedom. Simone Browne’s concept of “dark-sous-veillance” is a notable exception, see *Dark Matters: On the Surveillance of Blackness* (Durham, Duke University Press, 2015).

situate Foucault in this discussion, because it strikes a line between capitalists and capitalism. Focusing on the agents within the system, rather than the system itself leaves aside questions of productions, or even hybridizations of production and consumption, to instead dwell on consumption alone.

Marketing is analytically important for my purposes because it identifies the intermediary position between production and consumption in excess of single transactions or discrete utilizations. One of the tools marketers use to form and sustain the intermediary relation is branding. Rai defines branding as the creation of a population which identifies itself as consumer-of, such that in specific instances of consumption the choice of producer (merchant or source) is already determined. In short, a branded commodity, like attention or audiences, can fetch a premium in terms of price or exchange. In the process of branding, consumers are made identifiable according to minute and coarse differentiations—or as Rai quotes from industry texts, “carving up the market from every angle.”²³ I read this process as having affinities with confinement in the Foucauldian sense—not of physical bodies (at least not immediately), but of the data intimately linked to, through, and with those bodies.

The intersection of marketing and power provides a pivot for turning Foucault toward capitalists in a limited agential form and toward media in the wider case I am

²³ Amit Rai, *Media Assemblages*, Oct-Nov 2010, n.p. <https://mediaecologiesresonate.wordpress.com/2010/11/02/deleuze-foucault-on-marketing-as-control/>.

interested in making. Namely, my effort to understand how disciplinary control is articulated with capital under biopower today, and what technologies, apparatuses, subjects, ideologies, affects, and habituations are formed and sustained through that articulation. Among these many parts and pieces, I shall consider the interface threshold between platforms and users. Here my thinking is absolutely localized to the US over the course of the last two decades.

Questions about the internet as a global network are well worth dwelling on, as are the webs of people who interact with one another from different places in the world. There are specificities of use and ownership that are contingent to the US. A consideration of platforms from the perspective of multinational parent companies or cultural multiplicities of user bases is an entirely different critical operation than the one I am working on here. I am willing to stipulate that it may well be the more important task in the long run, a more ontologically grounded approach as opposed to the merely epistemological one I think is necessary for my immediate purpose. Digital media establishes an ontology, but this doesn't point to or explain the epistemological consequences of such a grounding that is perceived and experienced via both the new and the old conditions—what David N. Rodowick marks via the difference between the cinema screen and the electronic screen in *The Virtual Life of Film*, which I will engage in a subsequent chapter. To deal with the problem of a split ontology in digital media, I recruit Foucault's epistemic framing in which the operation of categories and limit cases

become instructive of technologies of power. Being able to thus recognize the contours, the finance and marketing work of digital platforms is more clearly separated from the operations of communication, aesthetics, or representation. There might yet be a digital art, but platforms as I understand them are only incidentally involved with any of the operations above because marketing analysts, platform hosts, and user experience designers exploit them to target and contain bodies, to foment and sustain engagement.

The Microperiod of Digital Accumulation or: The Short 20th Century

The user as a distinct position, relative to the constellation I am working with, first gained a contemporary valance in the early 2000s as an entity organized through digitalization, as a referent for a person operating a computer, as the so-called end-user.²⁴ Normalization of such operational interface multiplied end-users and made necessary a differentiation among them which is largely self-selected. A project of minute differentiation formerly applied to consumer goods was increasingly applied to consumers by themselves. Such approximate identities can be based largely on class orientation and attendant expectations of the web, colored by technical proficiency, habits of online behavior, and so on. Following the dot-com bubble, platforms emerged

²⁴ Elaborated below; see also Bruce Sterling. "When Bobjects Rule the Earth," keynote address at SIGGRAPH Conference on Computer Graphics and Interactive Techniques, Los Angeles on August 2004 http://www.viridiandesign.org/notes/401-450/00422_the_spime.html.

as a way of concentrating existing users of the internet and putting them to work through various amalgamations of production and consumption. This utilization is not without excesses that remain unattended to in the form of a consumptive audience who all must eventually be rendered as users, i.e. as pro-sumers, consumption-labor, etc.²⁵ These excesses are identifiable in the persistence of digitalization as an infrastructure, and the additional operations that function through datafication. Digitalization creates a space wherein a person becomes a user and generates data. Through datafication an operation of power makes-use-of this user, sublimating the person and in perpetuating this relation distances the person from their data.

I want to propose an alternative to the chronological progression of time that marches us through an internet of contemporary causes and effects, while also avoiding claims of a new, world-historical era. I take my lead from Stephen Paul Miller and his method of micro-periodization. This method entails locating a presumptive beginning and end, then reorienting these dominant markers as partial or emergent events. By taking an expansive view of cultural artifacts, Miller organizes events and objects by their relations to one another and arrives at a framing of narrow moments through breaks, borders, and hybridization. The result is a mapping of the contemporary which

²⁵ For debates on labor in the realm of user-generated content, data commodification, and social media marketing, see Poster (1990, 2001, 2006), Fuchs (2014, 2015), Scholz (2012), and Cage (2012).

can assume near-term, and therefore less-historically totalizing, experiences as dominant enough to mark a shift in social forces.

For example, among the general and particular elements of the 1970s, Miller finds that the practice of surveillance emerges in more and more places, and at different levels of intensity or relevance. He claims that this period marks the inauguration of intense self-surveillance as a normal practice in American culture. This intensification would not be possible without a preceding adaptation to persistent surveillance in other walks of life, which Miller locates in the mutual suspicion between culture and counter-culture over one another's external surveillance. The linking of prior, nominal external surveillance to then present, naturalized internal surveillance is described through the specific micro-periodization of the era. In that exercise, Miller finds that the 60s is still organizing parts of discourse in the 70s to the extent that a counter-cultural sentiment undermines fundamental elements of society and government while, simultaneously, the lack of a revolutionary 70s undermines this very sentiment and forecloses the ability of extending potentially radical horizons of thought very far.

The language of the previous decade is used to grapple with massive changes before there is a language produced by American culture that is adequate to the shift in consciousness. There was a perception and an eventual sedimentation of that perception that the 1960s created a rupture in the social fabric of American culture. Miller reads this perception through popular discourse and through reactions which demand reality

make good on the presumptive rupture. That is, the language of rupture effectively created an already-foreclosed break. Miller points out that the sixties were so bursting with new possibility that the economic and social realities that followed appeared as rejections of the former power relations. It would not be until later, Miller claims, that a valid story about social or economic relations in the 1970s could be experienced and expressed—for him, this sort of reckoning doesn't emerge until the nineties. One reason for the delay is that the spatialized experience of any present cannot travel chronologically and remain intact.²⁶ The perception, or classification of it, becomes out of sync with experience to the extent that some portion of the description will be comprised of the recovered possibilities or the predictive fantasy of that experience. In short, there is palpable disappointment in losing what was never there. The relevance for my purpose is that the optimism over a new media technology in the 90s functions largely to narrate its failures in the following decade, a failure which simultaneously sets the terms for a rehabilitation through the demands of venture capital and marketing. Miller claims the temporal breakdown and reorientation of experience has to do with the interplay of reality, a given period's approach to reality, and the experience in question.

There is, essentially, an experience, a description of that experience at that same moment, a retrospective description of that experience, and the experience repeated at

²⁶ Stephen Paul Miller. *The Seventies Now: Culture as Surveillance* (Durham: Duke University Press, 1999), 15.

some later date. None of these necessarily need to align. Indeed, as I discuss in later chapters, the misalignments can be intentional forged and exploited. Miller relies on the example of drug use, pointing out that a description of drug use in the 60s will be incongruent with a description of the same experience decades later. At the same time, however, the perception of drug use in the 60s colors the experience of drug use into the present. The cultural perception of drug use in the 60s can be repeated, branded, and reified in numerous ways, but it will only ever be a then-present perception bearing passing resemblance to the moment and experience of drug use in the 60s, and present drug use will be captured by the persistent gravity of that history, each operating more for the benefit of a social order than any archive of the past or inscription of the present. His whole point in this example is that “historical periods modify the ‘reality’ of drugs.”²⁷ In order to clearly establish a process of micro-periodization as something which can be brought to bear on both reality and history, it seems wise to establish a link with a different process of periodization, and for that Miller turns first to Fredric Jameson’s “Periodizing the Sixties.”

Jameson theorizes periodization in terms of the notion of situation. Drawing on Jean-Paul Sartre and Raymond Williams, he writes on the emergent and residual to explain the hegemonic. To accept that the claim of a certain situation happening is also a

²⁷ Miller, *The Seventies Now*, 15.

claim against the historically dominant as that which allows any residual situation to emerge for assessment. The period will always share a certain objectivity of the situation, responses must fall within situational limits, and critique of the periodization must attend to both historical and ahistorical problems arising through the periodization. Something like real-life can emerge from an intentional relating of formal breaks, so long as we avoid the temptation to produce an “organic unity” and instead settle for a “hypothesis about the rhythm and dynamics of the fundamental situation.”²⁸ Since both linear narrative and history are both in crisis, Jameson’s solution is to produce concepts of history. What Jameson proposes will always be a strong claim, but Miller doesn’t think this is entirely necessary.

In response to Jameson, Miller says that it is less important to cloud the water and end up with the strong concept of history as long as the periodization itself is analyzed in a specific way. He therefore proposes an idea of *de-periodizing*, because of what he expects any close reading to do to generalizations of any given period—which is to rupture that generality. This is why Miller insists on “periodizing as he de-periodizes” on an axis of general to particular.²⁹ He claims to create opportunities to bypass accepted generalization in favor of “particularities to create their own fabric” and to let generalizations be read as “particular textual figures.”³⁰ Miller goes on to say that

²⁸ Fredric Jameson, “Periodizing the 60s.” *Social Text*, no. 9/10. 1984: 178–209, <https://doi.org/10.2307/466541>.

²⁹ Miller, *The Seventies Now*, 367.

³⁰ *Ibid.*, 367.

while something like a genealogy of periodization could go back much further, constituting an era or epoch, it is possible to deploy the Foucauldian “notion of the episteme to keep us closer to our own period.”³¹ In Miller’s reading of episteme, Michel Foucault’s term for an era’s prevailing mind-set, it also implies the extent of that mind-set’s epistemological horizons. An episteme is the totality of relations (uniting all discursive practices) that can be discovered for a given period.³² Foucault’s shift from archaeology to genealogy prompts him to move from this terminology to the use of ‘cultural discourses’ that change during historical moments. It is through this method that Miller sees that examination of “social phenomena are the progressions of discursive formations” and is thus able to take shorter periods of time into historical consideration while remaining within the confines of Foucault’s use of episteme as a genealogical tool.³³

Miller develops his argument through the idea of both the episteme and the matrix of the discursive subject. To make connections between discourses he applies the concept of the episteme to short timeframes, what he calls micro-periods of only a few years, rather than multi-century epochs. Micro-periods are similar in their perpetual opening and closing but differ in that Miller considers the temporality of borders and

³¹ Ibid.

³² Michel Foucault, *The Order of Things: An Archaeology of Human Sciences* Alan Sheridan, trans. (New York: Vintage, [1971] 1994), 167-8. and *The Archaeology of Knowledge* Alan Sheridan, trans. (New York: Vintage, [1972] 2010), 191.

³³ Miller, *The Seventies Now*, 28.

momentary hybridizations as authoritative and structural, rather than representative of a shift in the dominant episteme. Change and difference are therefore used to unseat the conceptual fixity of an episteme by showing the persistence of transition. As Miller points out, “Epistemes use synchronic perspectives but are not limited to synchronic views. After all, a narrative, which all historical explanations must in some sense be, must suggest change.”³⁴ For Miller, if we set out to study a period, we have already spatialized that period, however implicitly, and such spatialization “suggests an instantaneousness of field and apparent totalization.”³⁵ Thus, Miller uses a historical rendering of an ahistorical set of conditions and an account of the ahistorical as “a kind of public space that is negotiated between the participants and the phenomena of a given epoch.”³⁶ Through a micro-periodization, the ahistorical is historically situated, the situation is spatialized, allowing these seemingly ahistorical conditions to find consideration within the public arena of negotiation and struggle already familiar to cultural studies.

Miller’s de-periodizing periodization, or micro-periodization, is made possible by locating the relevance of writing and over-writing of cultural moments that continue to affect the present. He calls this effect of the past on the present that allows us to write

³⁴ Miller, *The Seventies Now*, 29.

³⁵ Miller, 367.

³⁶ *Ibid*, 368.

a history of the present a “rippling episteme.”³⁷ He writes further: “Micro-periodizing considers small temporal changes with a historical period...[which] articulate the period’s prevalent episteme.”³⁸ Miller’s micro-periodization is to take 70s and break them into four periods which “oscillate between different dominant overtones.”³⁹ Each dominant break severs the previous period from the next, reorients thinking and possibilities, and in some cases eradicates what was formerly clear and present. Using Miller’s micro-periodization as a model, my own examination of computational life is built around three case studies: the first, the break created by the crash of a technology underpinned market, colloquially known as the Dot Com Bubble; the second, the confluence of memory and mythology in the 2013 Boston Marathon bombing; and finally the third, a highly lucrative merging of the first two situations demonstrated in Cambridge Analytica’s exploitation of content and psychographic analytics. This new periodization is motivated by two consistencies with Miller’s long seventies, since I read the commercialization of the internet and web as a moment of detachment from reality that produces a demand for surrogate realities.

³⁷ Ibid, 17.

³⁸ Ibid, 47.

³⁹ Ibid, 48.

The Creature from Silicon Valley

Janet Murray reflects on the state of the information technology industry in the introduction of *Hamlet on the Holodeck: The Future of Narrative in Cyberspace*. She describes two fundamental and oppositional camps in the 1960s, suits and hackers. One ran the business, the other discovered and invented.⁴⁰ The dichotomy of characters more or less remains, although supporting figures and foils appear through the years. Around them, Murray argues, a narrative about a place in California, an industrial magic which develops to support the people and the place. These pieces combined with state, academic, and corporate institutions weave a narrative about networking technology. The narrative surrounding how the internet was used, the promises made for its users, are rooted in this series of myths. The myths in turn form how consumers are bought and buy into the internet.

The idea of a mythology that amplifies a commercial and residential cosigning of the internet in the United States is supported by Roy Rosenzweig in “Wizards, Bureaucrats, Warriors, and Hackers: Writing the History of the Internet.” Here, the industry is further distinguished into four inter-articulated camps, alluded to above, which are no less constitutive of a founding narrative.⁴¹ Suits are easily slotted into

⁴⁰ Janet Murray, *Hamlet on the Holodeck: The Future of Narrative in Cyberspace*, (Cambridge: MIT Press, [1998] 2017), 10.

⁴¹ Rosenzweig, Roy. “Wizards, Bureaucrats, Warriors, and Hackers: Writing the History of the Internet” *The American Historical Review*, v.103, no. 5 (1998): 1530–52. <https://doi.org/10.2307/2649970>.

either bureaucrat or warrior categories, which refer to corporate managers and military officers, respectively. Hackers belong to the self-same category as that of wizards, being those who can exploit hardware and software in new and interesting ways. Between Murray and Rosenzweig, it becomes clear that these categories alone are sufficient for addressing the possibilities for representation and meaning that will attend the social expansion of information technology. The complex histories of new technology's effects cannot be siloed into single-origin sources, each are part of a narrative arc unfolding at a pivotal moment for the story of the internet in the 1990s.

In the late 1990s, economic and industrial applications of information technology in the United States had produced dynamic changes. Chief among these changes was arguably the internet,⁴² which developed over the course of several decades after World War II. Eventually the internet became a material predicate for the World Wide Web and together the respective innovations of network technology and information sharing expanded more deeply into corporate and consumer markets. Attention to these markets is crucial, because it opens my inquiry into the cultural dimension of information technology to overlapping arenas of finance and mass media. Each of these elements—network technology, corporations, finance, media, consumers, information sharing—at

⁴² Specifically, the Internet which is initially capitalized in academic and periodical references, along with the Web, or World Wide Web, only later being reduced, so to speak, to a lower-case internet and web. The branding of technology and how to hierarchize it is unsurprisingly performed at a grammatical level.

varying levels and intensities, fuel an irrational exuberance that would close out the last century and define the initial gestures in the next.

In my reading of Murray and Rosenzweig, the technical origin of the internet is widely told and heavily romanticized by the end of the century. Often recounted as something between a wild wild west and benevolent colonial expansion, these histories of the internet are variously written. One reason for this is simply a function of history. Miles of speculation can be based solidly on records, but records based on what? The technical genesis of networking one computer with another draws in fields of computer science, electrical engineering, and cybernetics. In the 1950s, military defense budgets funded cooperative and parallel programs to develop a decentralized communications system. Universities provided a unique incubation space for packet-switching technology because its inhabitants supported linkages and sharing within campus spaces and across the US to other campuses entirely. Not only did a computer scientist on one campus communicate with a computer scientist on a different campus, but an altogether third party at another school was able to communicate between departments. Regardless of intentional themes or tonalities of the story, the creation of the internet involves multiple, intertwining narratives. As World Wide Web progenitor Tim Berners-

Lee has it, “The story of how the Web was created has been told in various books and magazines. Many accounts I've read have been distorted or just plain wrong.”⁴³

Before moving too far afield, the following common-knowledge history will provide a rough starting point. The general narrative must include aspects of cold war defense and computer science, information transfer over and between networks, and some standardized program or rule set that makes sure information arrives where intended with minimal degradation. While the concept and discussion of a decentralized mode of communication was circulating around the Defense Advanced Research Projects Agency (DARPA) since the late 1950s, it wouldn't be until the early 1980s, with the adoption of a Transmission Control Protocol/Internet Protocol (TCP/IP) to an existing network that something recognizable as the colloquial internet comes to be.

Vint Cerf is widely credited with this breakthrough, who asserted that it was “already apparent that computers [were] being employed in tactical as well as strategic military equipment...To make this collection of computers, sensors, and databases useful, it [was] crucial that the components be able to inter-communicate.”⁴⁴

Interconnecting these three elements—computers, sensors, and databases—is basically an internet. It would be several years before *the* internet became an immovable object of discourse, and several more until Tim Berners-Lee paired that existing network of

⁴³ Tim Berners-Lee with Mark Fischetti, *Weaving the Web: The Original Design and Ultimate Destiny of the World Wide Web by its Inventor*, (San Francisco: Harper, 1999), 2.

⁴⁴ Jane Abbate, *Inventing the Internet* (Cambridge: MIT Press, 1999), 124.

networks with the older idea of hypertext first introduced in 1965 by Ted Nelson.⁴⁵ Berners-Lee, for his part, insists on a collaborative development wherein “a general communications infrastructure” emerged and became pervasive over the course of the 1960s and 1970s, at which point he arrived in time to write the code merging several existing technologies together.⁴⁶ Through these early-development years, the exercise of pure research is conducted alongside a robust software industry.

Software had an industrial presence as early as the mid-1950s, but it did not garner much attention until 1970.⁴⁷ In the early days, software was mainly written in-house or by directly adjacent companies in the same industry. Programmers were tasked for specific purposes requested by large manufacturers like payroll systems, inventory control, or report generation. Martin Campbell-Kelly likens these early developers to civil engineers of their given corporate cultures.⁴⁸ During the 1960s developer and suppliers of purpose-built software sold many copies of the same programs for public and private use, resulting in the growth of software companies into capital firms in their own right. After 1970, the software industry began to grow, particularly by the end of

⁴⁵ Nelson imagined non-linear “literary machines” enabled by computers whereby every quote and reference could be chased down to its source, and likewise with that source’s quotes and references. I consider Nelson as part of the lineage that includes Vannevar Bush’s *memex* in 1945 and Paul Otlet’s *Mundaneum* in 1910, all more or less precursors in some sense to the internet and world wide web. Interestingly, Nelson also stipulated that if every quote linked back to its source, authors could be paid a small sum for each instance that quote was read; see Berners-Lee, *Weaving the Web*, 5.

⁴⁶ Berners-Lee, *Weaving the Web*, 6.

⁴⁷ Martin Campbell-Kelly, “Development and Structure of the International Software Industry, 1950-1990” *Business and Economic History*, v. 24 no. 3, (1995): 74.

⁴⁸ Campbell-Kelly, “Development and Structure,” 76.

the decade when personal computers arrived in households.⁴⁹ Personal computer software was largely a diffusion of hobby and game software across “a techie computer culture.”⁵⁰ Thus, personal computer software constitutes a third wave of information technology industry, because it does not emerge from within the existing hardware and software requirement of that industry, but rather as a parallel concern.

Throughout the 1980s, there were “dramatic growth rates in the software industry of 20 percent a year or more” bringing revenue for US software firms into the tens of billions.⁵¹ Campbell-Kelly points out that when personal computer software rapidly became a dominant sector in information technology, the software was mainly sold to corporations; however “the ethos of the industry [was] more akin to publishing or consumer goods than to capital goods.”⁵² User communities cohere around specific software, and relative utility is debated along the lines of qualitative attributes like pop music or commercial film. In light of such celebrity status and fandom, software developers are guided by the search for the next hit program. It is no surprise, then, that product events and release celebrations popularized by Microsoft and Apple in the 1990s, what technology critic Shira Ovide has derided as “tech infomercials,” remain

⁴⁹ Campbell-Kelly, 74.

⁵⁰ Ibid, 77.

⁵¹ Campbell-Kelly, “Development and Structure,” 74.

⁵² Campbell-Kelly, 77.

mainstays to this day.⁵³ It was precisely this star-power and name recognition that drove much of the early web, although the market would consistently favor large, legacy firms like IBM which outpaced Microsoft's market capitalization—the cumulative value of public shares—by five-to-one through the early nineties.⁵⁴ Eventually, the situation will be dramatically inverted and a new orientation of product and customer will prevail, but it won't emerge until after the music stops with the dot-com crash and the information technology industry players find a dearth of chairs.

Media and communication scholars James Curran, Natalie Fenton, and Des Freedman conclude in *Misunderstand the Internet* that initial, generally optimistic or utopian predictions for the internet were built on top of sales pitches for software and hardware, not extrapolations of application or deployment of the technology.⁵⁵ That is, under full realization, the internet is a global medium that makes interactive communication open, accessible, and cheap for all people. As noted above, while the network can be global, applications running on the network, like the web or any number of platforms on it in turn, are almost inevitably regional and localized by a particular user base. Users in America, Russia, China, and Brazil all support local social media platforms, even if they can and do migrate to other spaces provided one speaks the

⁵³ Shira Ovide, "We Don't Need Tech Infomercials" *On Tech*, The New York Times, April 14, 2021, <https://www.nytimes.com/2021/04/14/technology/apple-tech-event.html>.

⁵⁴ Campbell-Kelly, 77.

⁵⁵ James Curran, Natalie Fenton and Des Freedman, "The Internet of Dreams: Reinterpreting the Internet" *Misunderstanding the Internet*, 2nd ed. (New York: Routledge, 2016), 1-47.

language or understands the memetic gestures within the given platform. The regionalization of the application layer is why this project focuses on internet and web discourse in the US and sits apart from the question of whether the theoretical stakes can be extrapolated to the level of global concern or applied to other cultural contexts.

Although a persistent economic force and astounding technical innovation, concurrent public discourse around software remained relatively niche in the immediate post-war years. The general history from the mid-1950s to the late eighties presents a narrative in which software underwent a shift from an internally organized project of logistic efficiency to an outward oriented project of brand awareness. All the while, technically proficient hobbyists were using computers and sharing network time. Specialists and enthusiasts of military grade research and development were no doubt following both software and hardware very closely; however, as Roy Rosenzweig notes in his survey of new media's history, before 1988 the *New York Times* only briefly alluded to the internet once.⁵⁶ It would not be until nearly a decade later that a creation myth for the internet, sketched above, started to circulate. An assay of optimistic histories finds largely uncritical, biographically oriented stories.⁵⁷ Ethical blind spots and outright

⁵⁶ The lone reference is made by a reporter, David Burnham, whose main preoccupation over the same period of time is how information technology will usher in a Computer State incompatible with the ethics of western liberalism or the freedom necessary for any functional democracy. See, *Rise of the Computer State* (London: Weidenfeld and Nicolson, 1983) for this deeply Orwellian perspective.

⁵⁷ See Nicolas Negroponte's *Being Digital* (1996), or Berners-Lee (1999) and Abbate (1999).

utopianism are challenged by more indicative mood.⁵⁸ These utopic and dystopic dispositions are then re-situated within a constellation of direct and oblique critiques in scholarship and journalism.

The average user is presented with a universal technology only half-understood yet fully articulated into their future. These users can understand the internet without knowing its history because digital culture is an everyday experience. A critical understanding of digital culture and its everydayness requires being able to grasp the significance of the internet's ubiquity. In its multiplicities, these histories of the internet allow a selective framing on behalf of various agents whose vocation is the constitution and capture of a user-as-commodity. Depending on the historical narrative in play, it's possible for a user base to feel let down by an entire technology while from the perspective of true believers within the Silicon Valley headspace, it is users who have failed the technology by not actualizing its full promise and reward as represented by the pitch-deck future. One reason for such deep investment in the future—apart from literal monetary investment—is that from the perspective of tech-evangelists development isn't the creation of tools, but a seeing-forward through time. Thus our failure to buy-in isn't a choice, as much as an abortive understanding of how the world works.

⁵⁸ Exemplified in the work of Marilouise and/or Arthur Kroker, several volumes by Critical Art Ensemble between 1994-1998, or Sherry Turkle's triptych comprised of *The Second Self* (1984), *Life of the Screen* (1995), and *Alone Together* (2011).

Time and Space of the Net

Thus far, I have endeavored to situate instabilities of truth and meaning in digital culture within a specific epistemic situation with recourse to the multiple narratives of network technology in the US. This section unpacks these tensions to show how they set the stage for parsing questions of infrastructure more clearly from questions of social, political, economic, and technological operations. Separation of infrastructure from operation is useful for distinguishing when and how spatial metaphors of the web contribute to the aforementioned narratives. At issue in this section is the basis on which I will distinguish the difference between what I term as digitalization and datafication.

Without digression into the colonial projects in the city, with apologies to Jane Jacobs and Doreen Massey, some attention should be given to the repeated deployment of parks and gardens when spatializing the internet. Digital anthropologist Payal Arora traces the tendency with reference to expectations of play and how walled gardens cage the soul of cyberspace.⁵⁹ To increase efficiency and predictability of market transactions, spontaneous interface is limited at the level of design. Likewise, science and technology historian Paul Edwards shows that computational systems move through geo-political and socio-cultural openings and enclosures in the process of reflecting what is said and

⁵⁹ Payal Arora, *The Leisure Commons: A Spatial History of Web 2.0* (New York: Routledge, 2014) 57-89.

thought, creating and solving problems, and signifying rationality.⁶⁰ Between networks and nation-states, open worlds and closed systems are tactically deployed. The geopolitical conditions of the cold war indicate closed worlds, while networking during this same period promotes socio-cultural openness. An internet and web described through a utopian lens resonates openness reflected in (and/or by) global neoliberalism. Along the way, the digital and its accompanying data pass through similar apertures of meaning.

Since the internet was, by the turn of the century, both ubiquitous and borne out of concomitant origins, it had multiple forms and many functions. Even if it is possible to slide its birthday from the 1950s in military research and development to the early eighties with the introduction of a viable networking protocol, as Yochai Benkler and David D. Clark suggests or the late eighties with the introduction of the World Wide Web as Mary Pappalardo does in her illuminating review of Patrick Jagoda's *Network Aesthetics*, there are continuing, definitional, conceptual separations at work in the difference between what this network-of-networks is and what it does for people in an everyday sense.⁶¹ Under the cover of the internet's technical form, that of a necessarily open transfer of information, the web initiated and replicated a number of mutually exclusive, overlapping, and redundant functions. Since various locations on the web

⁶⁰ Paul Edwards, *Closed World: Computers and the Politics of Discourse in Cold War America* (Cambridge: MIT Press, 1996) 15-21.

⁶¹ See Benkler and Clark (2016) and Pappalardo (2016).

(sites, forums, blogs, etc.) could be defined by how they were used and/or who used them, the story that connects *data* to *digital* takes a bumpier path.

There was a bare, informational internet that deployed a packet-switching technology originating in signals intelligence research during the second World War. There was also a corporate-logistic internet that came along later, itself a result of the pure research network connecting universities being opened to public traffic. The internet that connected business to business only later embraced a consumer facing web-presence. At roughly the same time as a corporate-logistic internet was emerging, a social and political internet was developing. Because of this legacy, it is particularly important to separate the internet backbone from the web to better understand the territory of its technical infrastructure, and to further distinguish a web based on functionality or utility to locate the degree of social contact.

The web as it became known in an everyday sense—an elsewhere of image, sound, and text interfaced through a variety of screens—ostensibly began in 2006 but was created by Tim Berners-Lee as an open and exploratory tool for accessing the internet in 1989 (albeit merely textual). His work opened the existing network infrastructure to broad, scientific disclosure but kept mass adoption at bay because utilization of the technology required significant degree of specialization. This was not a barrier implemented by Berners-Lee to retain propriety within a minority subculture. Rather, the expectation, or at least implication, was that each user would rise to the

challenge of gaining the expertise necessary for navigating the open space of the web. In so doing, all would become more knowledgeable and in turn spread knowledge.

Widespread debates over how to open the web, and to whom, carried on over Usenet where Berners-Lee initially offered his creation to the community. The primary mandate for the web was open access and public good, which created deep suspicion around corporate interest in the project. Even after a prohibition on commercial activity was lifted in 1991, the fundamentally humanitarian mission stayed intact.

Making sense and making use of digital technologies in between the possibilities we are sold and material limitations we are faced with requires focusing on a corporate culture that promotes successive narratives of digital revolution as it works for and against the imaginative underpinning of ideas about the digital, computation, users, and data. I read a similar position in Janet Murray's proposition that meaning in a cultural sense is independent of medium, particularly when it comes to the practice of narrative.⁶² Expanding on the sentiment that the end of the twentieth century brought with it a crisis of meaning, Murray points out that commercial forces prioritize a form of engagement that is simplistic, quite apart from any kind of sense that captures any depth of expression of ordinary life. Murray seems optimistic at the time that a digital medium will allow for nuanced and textured interpretations of the world as soon as the

⁶² Murray, *Hamlet on the Holodeck*, 254.

expectation for a ruling power to dictate the openings and enclosures of the given imaginary is abandoned. A market contextualization allows questions regarding power and digital technologies to be discovered between what can be conjured by our imaginary, what expectations can be sold to consumers, and what these technologies can actually do on any given day. This triangulation calls for pessimism because authority over meaning in a literary sense can be abdicated once an audience embraces multiple simulations of the world, but that same authority is entrenched when meaning is contentious is the epistemic sense. That is, when audiences experience the world in incompatible ways their expectations of technology and culture develop similar incompatibilities. Furthermore, the goals of authorship are not the same goals as market dominance.

As a result of the multiple narratives bringing the internet into coherence alongside investments in utopian and dystopian futures articulated through currents of innovative creativity and crushing uniformity, a plethora of false starts and dead ends for industry and finance beget many agents and trajectories which are bound in contradiction. A case in point is the drama fomented over Gamer-Gate in 2014. Here, women in game design, academia, and journalism were targeted with harassment for months on end.⁶³ Gamer-Gate also produces a number of rapid discursive shifts on

⁶³ Shira Chess & Adrienne Shaw (2015) "A Conspiracy of Fishes, or, How We Learned to Stop Worrying About #GamerGate and Embrace Hegemonic Masculinity" *Journal of Broadcasting & Electronic Media*, 59:1, 208-220, DOI: 10.1080/08838151.2014.999917.

various social media and news sites where one part of the user base accuses the other of politicization, de-politicization, radicalization, red-pilling, and/or wokeness. Upheaval and migration to different platforms then seeds an explosion in misogyny and racism that catalyzes the alt-right (at least online), which in turn creates and sustains Q-anon (online and off) from 2017 onward.

Since so many people are doing so many different things on the web, the space lends itself to rapidly rearranging—but only potentially *replaceable*—codes of conduct or community forms, while the basis for each overlapping user base remains somewhat rough and ready. It is habituation and repetition within these communities that inform its core tendencies, from which users ebb and flow according to their general participation, but also their expectation of what is possible.

Even though it might seem tedious to linger on the apoplectic crack-ups of misogynistic videogame enthusiasts, it pays to address the effects of the tension I am identifying in the microcosm of Gamer-Gate, because it is the proverbial tip the iceberg—the bummock of which includes: the presentation of global solidarity derived from a prescriptively normative white, masculine, leisure-class framework; a double-exaltation of individual; and a kind of first principle regarding who/what cannot obtain in the *other*-space of the web which itself begets the early imprint of the web as territorially distinct from real-life.

Attempts to regulate or police a new technology under terms derived from preceding technology ran parallel to rapid monetization of both the internet and the web at multiple levels. Imagining the various players is not hard, considering these figures continue to dominate news cycles—CEOs, advertising and marketing agents, lobbyists, activists, engineers, entrepreneurs, innovators, disruptors. Starting from the assumption that the web should be an open and exploratory space, we came to live in and with a moment when the status and value of data cannot be undermined, when even false data is useful.

When proximity to discourse amounts to material support and guilt by association, we are witnessing a spatialization of digital media platforms which intersects reality. And when the lines between work and leisure, experience and expression, must reference evolving aesthetics of popular platforms, first as curation and filtering, and eventually through an endless sponsorship of self-surveillance that has been an integral part of the American life since the early twentieth century. It should come as no surprise when confusion arises around personal motives. How can I believe in my own intentions, or those of my friends and neighbors, when we are all our own salesperson? Life conducted according to the mandates of a platform limits identity and ideology to core brand propositions. It doesn't take very long for all encounters to be in a reenactment of an event already performed or consumed online. This continual present-perfect is of late turning toward relatability and authentic reality—albeit still

contained by the space of the platform. Pivoting toward this trend could result in social media influencers leaning into the confessional and admitting a manufactured past, making the appeal to authenticity that much more real because of its framing through digital media platforms.

We are by now familiar with a contemporary condition that is some extension of data collection, or the result of an industrialization thereof cast as the era of Big Data. Despite its habituation, the large-scale production and collection of data includes a cultural dimension that has gone largely unnoticed. It is necessary to distinguish and emphasize everyday culture if we are to seriously engage problems which are currently addressed to technology as a reified agent of change. Without understanding the additional dimension, the standard and emergent effects of data collection will persistently collapse into a single technical operation: what I would like to name in more specific terms as digitalization.

By digitalization, I mean an operation of a computational technical infrastructure founded on the continuous and rapidly increasing transformation of our lived material experiences into digital form. The term denotes the act, process, or result of making something digital. Digitalization is contrasted to datafication, which denotes the making of data from data. For example, while digital records can be printed, the process of datafication has no need of such conversion because it serves no purpose outside of

computation. For this reason, computational life is a useful heuristic alongside the data shadow.

As is witnessed by the historical developments of the Internet's creation, nationalization, and globalization, digitalization is dictated by the future promise of some new potential. This horizon of possibility gets bound up within mythologies of a utopian and/or dystopian nature. Importantly, digitalization came to prominence during an economic and political shift that leaves the process only partially regulated at best. The problems which arise are indeed a result of the technical operation of digitalization, yet making-digital on its own is not a sufficient force to, for example, undermine the entire life experience of foreign exchange student Ismail B. Ajjawi and render him a potential terrorist 2019, or account for the distance and suspicion Tavi Gevinson casts upon herself when she thinks about the authenticity of her decisions between 2011 and any moment thereafter.⁶⁴ An additional system equally invested in perpetual data collection functions through the technical operation. This other process—which I call datafication—operates in the tension between a person and their data, a tension which constitutes and animates a data shadow.

⁶⁴ See, Deanna Paul and Susan Svrluga, "A Harvard Freshman says He was Denied Entry to the U.S. over Social Media Posts Made by His Friends" *Washington Post*, August 27, 2019, url: <https://www.washingtonpost.com/education/2019/08/27/harvard-freshman-says-he-was-denied-entry-us-over-social-media-posts-made-by-his-friends/>, and Tavi Gevinson, "Who Would I Be Without Instagram? An Investigation" *New York Magazine*, September 16, 2019, url: <https://www.thecut.com/2019/09/who-would-tavi-gevinson-be-without-instagram.html>.

Much like the tendency to conflate internet and web, there is a tendency to collapse digitalization and datafication. The resulting, singular analysis of digital culture does not account for the social, political, technical, and economic operationalization of a regime of power as it functions through datafication. Initially activated through internet users, and further leveraged through digital platforms, datafication is in its simple form the sum of monetization schemes by information technology companies designed to generate profit from data they have accrued as a persistent yet incidental byproduct of their ongoing business. However, as this process increasingly distinguishes between the personal and datalogical, power relations emerge which work to guarantee optimal outcomes for data-harvesters and analytic firms via a real and/or perceived narrowing of available options.

Great importance has been attached to truth and falsehood in the current political climate, whereas the relevance of this binary is as much skewed because we often talk about informational conditions like signal and noise, when we are in fact referring to a more complex condition of possibility of datafication which renders content along entirely different lines. Whereas falsehood must be filtered from information to maximize its operational value, both are accounted for and weighted in a data stream. In fact, as Antoinette Rouvroy has pointed out, false-positives have a value quite apart from true instances in large-scale data collection to the extent that falsehoods

are just as actionable as true information.⁶⁵ In essence, the total data collected on me correlated with the total data collected on everyone else might result in invalid action to my detriment. However, my detriment is still a successful correlation relative to the analytic operation of compiling best-guesses at scale. This gruesome A/B testing implies that we all must be willing to take one for the team so that, in the fullness of time, the right people will eventually be punished.

Conclusion

Over the course of this chapter, I have suggested that thinking about digital media platforms requires a cleaving of the heady, early days of innovation from a more recent period of predation and irrational exuberance facilitated by the same technical protocols. In order to avoid the confusion that attends deep histories of the internet, I proposed a microperiodization on the late 20th and early 21st centuries to clarify an episteme for the internet, the web, and platforms. The result has been a survey of key terms of this project and the theoretical framework for the case studies that follow.

⁶⁵ Antoinette Rouvroy, "Algorithmic Governmentality," (2013) and "Ends of Critique," (2013).

Chapter Two: The Second Coming of the Internet

*Digitally, they've taken all your rights, they've taken all your personhood,
and they've written these algorithms that treat you like a hamster.
You're totally controlled, absolutely, totally controlled.*

—Stephen K. Bannon¹
fmr. executive chairman, Breitbart News
fmr. vice president, Cambridge Analytica

Introduction

In 2018's *How the Internet Happened...* tech guru Brian McCullough describes the Internet Era as “that period of time from roughly 1993 through 2008 when computers and technology itself stopped being esoteric and started becoming vital and indispensable.”² I want to suggest that for computers and technology to have shifted from specialized knowledge to broad adoption, something more complicated was afoot than the internet merely having happened. What I particularly want to unpack is the continuum suggested by such a periodization. We are told that the internet era encompasses a span of fifteen years and are given criteria for the framing. Between the dates given, two events encapsulate what constitutes the Internet era and what made such an era possible. The first is the dot-com-bubble, a period of rampant financial

¹ *American Dharma*, directed by Errol Morris (2018; Los Angeles, CA)

² Brian McCullough, *How the Internet Happened: From Netscape to the iPhone* (New York: Liveright, 2018), 2. Title and date of publication tell an interesting story besides: development from websites to mobile devices narrated recursively from within whatever era the mobile device will constitute. See also, Wendy M. Grossman's *Net-wars* (New York: NYU Press, 1997).

speculation that occurred between 1995 and 2001, when the internet and the world wide web achieved marketability. The second is the first Web 2.0 conference held in 2004, an invitation-only tech industry conference that made legible a plurality of ideas about how to reimagine the web following the bubble. These two events mark a point at which technology companies, their investors, and their evangelists established a speculative logic for the internet that was already a prevalent market rationality.

By making the internet, its use, and its users legible as commodities, they created the logic that would subsequently dominate both the material experience and the historical narrative of digital interface. Specifically, players in the space were able to establish a pliable, present moment through which actions taken in the past or proposed for the future are valorized or vilified.³ We are currently experiencing the effects of this weaving of temporal and narrative speculation through a variety of cultural codes that imagine technology companies and their hard/software as both teleological and inevitable. The description of business practices articulated in Web 2.0 catalyzes many of the elements refined during the dot-com-bubble. If there is an internet era to speak of, it emerged from the practices of the bubble and the conference that followed.

Taken at face value, McCullough's periodization implies that prior to this Internet Era computers and technology were esoteric, while during this era they became,

³ This idea is heavily indebted to Brian Massumi's concept of future-threat in the context of political economy, which he uses to explain the logic of pre-emptive and permanent war that is crucial to post-9/11 US foreign policy.

and by extension continue to be, vital and indispensable. From the date of publication in 2018, this periodizing of an Internet Era recursively divides its own present moment from at least two historical trajectories. First is the explicit bracketing of 1993 through 2008 as the Internet Era. Second is an antecedent period prior to 1993. I am drawn to McCullough here because the questions provoked by a demarcation of an Internet Era imply, yet do not explicitly name, what I describe in the previous chapter as a cursory division between digitalization and datafication.

The twinning of technological development and financial speculation is nearly as old as capital itself. In the late 17th century, when London's newspapers were deregulated, share prices on the market exchange became widely available to the public. As a result, financiers could access new pools of capital, casual investors with disposable income could play the markets, and a strata of dupes and grifters gravitated to a novel confidence game. In short, all hell broke loose. So too, with the expansion of railroads, telegraphy, radio, telephone, and most germane, the internet in the 90s. In relation to the internet, speculation functions in two ways: on one hand, as the medium of speculation in the sense that the arcs of my case studies all depend upon a network infrastructure, and on the other hand, as the object of speculation since, in this case study, the bubble was a result of over-valuing of stocks in the information-technology sector, i.e. Tech Companies writ large. Internet speculation was anchored in a single user-interface protocol for linking and accessing wide categories of information on servers and

computer terminals. The speculative element was in the market valuation of companies which took some deployment of this protocol as a core brand proposition. The years during which the expansion and collapse of a speculative bubble beget the emergence of a corrective business model for a bundle of industries most deeply affected by the crash—computer hardware and software, marketing and advertising, and publishing—continue to be quite consequential.

This chapter looks at the bubble and the Web 2.0 conference as deeply articulated and mutually reinforcing, but also as the territory within which a contemporary relation of power is operational. One of the elements that makes these scenarios possible is the capacity for players in various, overlapping industries to tell a particular story about the internet after massive losses from the crash undermined the promise of commercialization. The narrative is formalized and named, Web 2.0, at an inaugural summit of the same name in 2004. The story Web 2.0 tells about the internet and related industrial concerns clears the ground for the development of ancillary services built atop the existing internet and World Wide Web, services which change the nature of the web for everyone who will use it. To put it terms circulating today, Web 2.0 brings platforms to the world. This chapter examines various discursive registers in the emergence of a strategy for commodification of the internet's primary resource, data.

I understand the history of an Internet Era as a folding of literal and figurative temporalities with general and particular events as follows: *before* through 1993 is when

a technical infrastructure is tried and tested, 1993 through 2004 is when the first experiment of capitalizing on the infrastructure begins, and 2004 through *now* is when everyday life comes to find expression through digital culture. On either side of the strict chronological framing are rough, temporal qualifications. Taken together, this muddling of chronology and temporality allows for amorphous notions like *now* and *before* to be used in conjunction with the operations of tech companies like Google, Amazon, Apple, Facebook, etc. The fluid way that these technologies are deployed by respective companies make the tech seem more deterministic and its agents feel less accountable. By writing and re-writing the narrative, these companies operate within an aura of their own inevitability. Illuminated by that aura is a social condition which cannot be understood apart from datafication.

As discussed in the previous chapter, my concern is not how the internet came to be, although the technical infrastructure developed prior to 1993 and maintained through today is a necessary condition for what I am interested in. Instead, I focus on the idea of distinguishing an internet era because it immediately offers context for a series of events which take place after 2004 when specific business practices are standardized. Tactical framings of before and after are crucial for making sense of the confluence of culture and technology that continues through today. Each moment is taken up respectively in the present and subsequent chapters, together articulating the overall movement of datafication.

The formation of datafication is worth consideration because it bears directly on what contemporary digital culture might actually signal and portend for those of us currently living through it. As scholars who have committed to a full accounting of the socio-technical milieu, citizens who expect regulatory oversight from their representatives in government, and everyday people living out everyday lives, we have adopted the very narrative that the tech industry spun to maintain commodification of the internet. Without a deeper understanding of how the turn of the century was dealt with and represented on the way to a data rich and curiously controlled here-and-now, questions about datafication cannot be properly expressed. The dot-com bubble is an extended period of expansion and contraction that is punctuated by a moment of inscription that inflects contemporary accounts of the internet. In order to commodify data, speculative activities became normalized. The esoteric became vital and was soon enough indispensable.

The Business of the Internet – Silicon Valley turns 2.0

A speculative bubble in computer and technology stocks was not hard to anticipate. Financial bubbles, created when markets expand rapidly in a particular arena of goods and service before contracting violently, are by no means unique to the US.

(In)famous examples include Dutch Tulips, British Railroads, and Japanese Real Estate.⁴

In all cases, there are notable symmetries in the fervor and panic that accompany the serial drama of capitalism. Waves of speculators arrive en masse to reap the windfall of the Next Big Thing, driving up value until, inevitably, companies are over-valued. As instability sets in, investors panic, warning signs are suddenly obvious, and winners and losers are tallied in the final shake out, which typically involves some degree of economic recession. Many of these patterns and standards appeared in what has become known as the tech bubble, or the Dot-Com-Bubble (hereafter, DCB). A period of economic instability and devaluation in the late 1990s was driven by unchecked optimism in the belief of a new economy and rampant speculation in technology and internet stocks which came to represent that optimism.⁵ The exuberance and tumult of the DCB sets the stage for my understanding of many aspects of contemporary computational life.

⁴ For a cursory survey, see: Charles P. Kindleberger, *Manias, Panics and Crashes: A History of Financial Crises*, (New York: Basic Books, 1978); John Kenneth Galbraith, *A Short History of Financial Euphoria*, (New York: Penguin Books, 1994); Bernice Cohen, *The Edge of Chaos: Financial Booms, Bubbles, Crashes, and Chaos*, (Oakland: University of California Press, 1997); Edward Chancellor, *Devil Take the Hindmost: A History of Financial Speculation*, (New York: Farrar, Straus, Giroux, 1999); Paul Sheeran and Amber Spain, *The International Political Economy of Investment Bubbles*, (Aldershot, Hants, England: Ashgate, 2004); Haim Kedar-Levy, *A Critical History of Financial Crises: Why Would Politicians and Regulators Spoil Financial Giants?* (Singapore: World Scientific, 2015); William Quinn, and John D. Turner, *Boom and Bust: A Global History of Financial Bubbles*, (London: Cambridge University Press, 2020).

⁵ O'Halloran, et al. describe the Dot-Com-Bubble as "characterized by speculative investment in technology and internet stocks that caused unrealistic asset prices, a crash in stock prices and, ultimately, a recession." See, "Overview of the Financial Crisis and Its Impacts" in *After the Crash: Financial Crises and Regulatory Responses*, O'Halloran and Groll, eds. (New York: Columbia University Press, 2019), 4.

The period of the DCB creates a template for influencers, clickbait, and dark money that are so troubling for political discourse in the US today because strategies from public relations, branding, and finance are transplanted to reinvigorate the internet industry after the bubble burst. The problem space this chapter will explore, a terrain capturing the imaginaries of Main Street, Wall Street, and Madison Avenue, draws out the initial threads of what I am calling datafication and sketches the relationship between technological change and its generation of computational life and a new digital culture. Once mania in the technology sector subsided, a new iteration of net-commerce was inevitable mainly because the internet itself was in fine, working order before and after the DCB collapsed.

I am using the specific term, DCB, rather than the generalized 'tech bubble' because the crisis was focused on a variety of businesses for whom network technology was intrinsic and the eventual offer of stock in the company was inevitable. Nearly all the companies involved in the crash put a web site at the center of their operations and staked value on the future-tense of a stock certificate rather than a present-tense equation of receivables and overhead. A vast array of adjacent support and service industries were close enough to sustain collateral damage from the crash, hence a parallel meltdown in US telecommunications, and the US stock exchange writ large, around the same time frame; however, core operations touted a 'dot-com' web address and an executive suite which experimented with different monetization schemes or

mission pivots until an investment bank issued stock in the company. In an effort to guide the post-crash reconstruction, a group of industry players forensically studied the few profitable companies to have survived. To this list they added predictions based on new software applications. In sum, the creation of a second iteration of the World Wide Web was a recursive casting of existing technology via wishful thinking from a very specific cohort. At once a set of philosophies about the existing web and a new set of practices for business to come, Web 2.0 authorized a kind of sociality to coalesce after the DCB burst.

In order to understand the importance of the DCB for contemporary techniques of power, whereby exploitation of the technical infrastructure of the internet has become synonymous with that infrastructure, it is useful to start with the hype and overdetermination that is the first Web 2.0 Conference. Held in San Francisco over three days in October 2004, conference organizers and invitees treated the event as a chance to plot the course of the future that would inoculate the tech industry from financial and political instability.⁶ The conference took place at a time when those trying to steer their

⁶ A who's-who of the new economy which included organizers Tim O'Reilly and John Battelle, venture capitalists and angel investors like Seth Goldstein, computer scientists like Paul Graham, tech journalists like Ryan Singel, and CEOs like Jeffery Bezos. The intent of the Web 2.0 Conference is readily inferred by the history provided in <http://www.paulgraham.com/web20.html> and <http://www.oreilly.com/pub/a/web2/archive/what-is-web-20.html>. Graham's description of the conference is especially telling: "*The conference itself didn't seem very grassroots. It cost \$2800, so the only people who could afford to go were [venture capitalists] and people from big companies. And yet, oddly enough, Ryan Singel's article about the conference in Wired News spoke of 'throns of geeks.'* When a friend of mine asked Ryan about this, it was news to him. He said he'd originally written something like 'throns of VCs and biz dev guys' but had later shortened it just to 'throns,' and that this must have in turn been expanded by the editors into 'throns of geeks.' After all, a Web 2.0 conference would presumably be

way to profit through the crisis decided to reorient the discourse about technology and its relation to capitalism.

One of the core tenets of the Web 2.0 consensus stipulated at the 2004 conference was that technological revolutions were made of highs and lows, winners and losers, bubbles and shake-outs, and that real volatility in an industry or market doesn't signal Armageddon as much as an ascendancy. Eventually, this sentiment would be captured by the term *disruption*, but at the time it was a way for true believers to separate themselves from pretenders by categorizing successful investments as a sign of sage wisdom. To have survived the shake-out meant having the authority to anoint emerging tech and promising people. That is, tech proves itself when investors offer approval. What made the DCB a defining moment is that it provided a territory for two corollary practices of the first half of the Internet Era—building speculation into revenue streams through ad exchanges and monetization of user-generated content—to align under the aegis of the new economy. Web 2.0 did not create a new internet, it rehabilitated a faulty strategy for commercializing the web.⁷ Identifying strategies toward the same goal of

full of geeks, right? Well, no. There were about 7. Even Tim O'Reilly was wearing a suit, a sight so alien I couldn't parse it at first. I saw him walk by and said to one of the O'Reilly people 'that guy looks just like Tim.' 'Oh, that's Tim. He bought a suit.' I ran after him, and sure enough, it was. He explained that he'd just bought it in Thailand. The 2004 Web 2.0 conference reminded me of Internet trade shows during the Bubble, full of prowling VCs looking for the next hot startup. There was that same odd atmosphere created by a large number of people determined not to miss out. Miss out on what? They didn't know. Whatever was going to happen—whatever Web 2.0 turned out to be."

⁷ As noted in the previous chapter, the Web is a specific set of protocols for sharing data over networks. The Internet is an infrastructure relative to the web. Both are commercialized and commodified in different ways, e.g. I pay an Internet Service Provider for an internet connection, I am then able to access all manner

perpetuating commercialization became an annual event. In this sense, the participants of the first few conferences were collectively engaged in challenging the narrative of the crash as an end of the internet as a site for capital investment.

From the very start, these conferences were descriptive exercises. Between 2004 and 2012, a rotating cast arrived by invitation at what was billed as the Web 2.0 Summit to determine the State of the Industry, but also to name its horizon. Subsequent conference themes are not entirely relevant, but the revamped web of 2004 would be *squared* by 2009, and carried into the next two conferences, which stressed the importance of ownership and control of data in the future. The designation Web 2.0 and web² replicate Tim O’Reilly’s center-staging of a technology’s application, rather than a World’s Fair type of aspirational inventory of invention. The difference in conference programming noted here illustrates a commitment to a prominent Silicon Valley maxim that extolls the virtue of permanent beta, or leaving everything in a working-draft state. To push a second iteration, as in Web 2.0, is to do a better version of what worked before. To square, as in web², is to multiply an instance of what is already in hand—or better still, it suggests an alignment of any number of things with a settled object.

The term Web 2.0 was taken from the first conference keynote, delivered by publisher, marketer, and tech evangelist, Tim O’Reilly.⁸ The keynote stressed that the

of commercial offerings on the web through subscriptions, targeted advertising, or scraping of personal data.

⁸ Straight from the horse’s platform profile: <https://www.linkedin.com/in/timo3/>

versioning system was a way of referring to the technological development of the web was more or less arbitrary.⁹ It would be more accurate to think of the second version of the web as a set of if/then conditionals drawn up by developers, engineers, and various other stakeholders to identify structurally sound elements from the detritus of the DCB. As O'Reilly puts it, the goal of the conference was "to tease out the principles that are demonstrated...by the success stories of web 1.0 and the most interesting of those new applications."¹⁰ This was a conditional trajectory that embedded a strict imperative: locate profit vehicles after severe market contractions and distinguish viable applications based on a belief in their profitability. While the keynote did not draw a tight boundary around what counted as a second iteration, it did establish a gravitational center, which O'Reilly calls "a set of principles and practices that tie together a veritable solar system of sites that demonstrate some or all of those principles, at a varying distance from that core."¹¹ In his analogy, Web 2.0 is the physics that govern a cosmology—or in a more limited sense, the orbital mechanics of a planetary system—but neither quite encapsulates the thinking embodied in Web 2.0 as a radiant core. Descriptions of the web would from that point rely heavily on reappropriating technical terminology like edge, node, center, periphery, and heads in contrast to long tails.

⁹ Tim O'Reilly, "What Is Web 2.0 - Design Patterns and Business Models for the Next Generation of Software" <https://www.oreilly.com/pub/a/web2/archive/what-is-web-20.html>, n.p. September 30, 2005.

¹⁰ Ibid. Although, it should be noted that Web 1.0 is first deployed recursively within the context of Web 2.0.

¹¹ O'Reilly, "What Is Web 2.0" n.p.

First among the principals to drive this new narrative was a reorientation of the web as a platform. The implication here is that a global community of users would constantly reimagine what it could mean to platform, as a verb, but it turned out to be a description of what the second iteration of the web will become. There are two existing platforms, each distinguished by a business model:

On the one side, a single software provider, whose massive installed base and tightly integrated operating system and APIs give control over the programming paradigm; on the other, a system without an owner, tied together by a set of protocols, open standards and agreements for cooperation.¹²

If the two models are being distinguished, and one is considered paradigmatic, it will be useful to proceed under the assumption that the other model is equally paradigmatic. If so, the verb-tense of platforming noted above seems to indicate the second model as the platform paradigm.

What I want to contrast here are both platform development philosophies, one based on a traditional corporate structure, and the other based on a description of the World Wide Web—here meaning the specific project developed by Berners-Lee, Cailliau, et al. In essence, O'Reilly is saying there are two existing platforms that can be distinguished by a business model, or: web services, networking protocols, application stacks, and content delivery are not merely what makes the web function, but are themselves applicable to corporate governance. The DCB was, in this sense, a

¹² O'Reilly, "What Is Web 2.0" n.p.

consequence of trying to run web companies like a business rather than like an instance of the web. In other words, the viability still in the web as a set of nodal connections for linking and accessing information could be reconfigured to operate businesses as platforms. Once initiated, companies following the Web 2.0 business model would no longer be what is being platformed via the web, but instead realize the web as a means of accessing existing platforms—i.e., the businesses subscribing to the Web 2.0 model.

As noted above, one of the certainties of the conference participants was that the web was a viable technology and thus a solid investment. No one argued, even after the bust of the DCB that the internet was a grand invention, nor was it assumed the World Wide Web was a faulty evolution of network technology. Part of the certainty about the underlying tech is a reflection of the two largest Initial Public Offerings (IPOs) to that point, Netscape and Google. A brief tangent on these two players will be useful for understanding the gist of Web 2.0 as an instantiating moment is the microperiodization I am committing.

For Netscape, in 1993, the web was already means-to-platform. The way to profit from the web was to draw in users with a free browser, and then habituate them into replacing the offline, computer desktop with an online, browser workspace. Once users were embedded with the browser, so to speak, information providers would have to purchase a license for Netscape's service to access their servers and thus access the attention of Netscape's users. In other words, Netscape's service would be platformed.

The goal, and the value, was to be for the web what Microsoft was for the personal computer. After the crash of the DCB, it no longer seemed wise to aim for such monopoly goals. Profitable companies would need to deliver (read: platform) services over the web. They would stop trying to be the best thing on the web and instead make the web disappear beneath their wares. Making the web disappear turned out to be something Google ironically excelled in.

Google's IPO was in 2004, just a few months before the first Web 2.0 conference. Up to that point, both Google and web-search were considered standard web applications. At this stage an application is the platforming of a service; only later will it make sense to 'be a platform' as we refer to social media platforms and de-platforming as a loss of life. I read the platforming dialogue in the post-bust conference days as akin to building new construction with an eye toward its re-modelling. In the first half of the DCB, Google was among several start-ups to tackle the problem of gaining meaningful access to information on the web via a functional search interface.

Initial strategies for information retrieval, or web search, put most of the onus on the user. For example, Yahoo's hierarchical directory interface that borrowed categorizations from preceding bulletin board services like Usenet, or other sites that aggregated links to websites in a list of best-guesses to match a user query. Google's advancement was an algorithm developed by co-founders Sergey Brin and Larry Page along with Rajeev Motwani and Terry Winograd. This algorithm, in simple terms,

ranked results from user queries based on the number of other users who selected those links after entering similar queries.¹³ Aptly named PageRank, Google's algorithm introduced a kind of passive voting system to search ranking. Sites moved up on the search results list based on how many users selected it following a similar query.

What set Google apart from other search engine deployments was a commitment to persistent usage. This feature is touted in the original paper as establishing a de facto immunity "to manipulation by commercial interests." As more people used the search engine, the more accurate and responsive the engine would become, and its popularity would increase with users because it always returned the best results. If a lot of small traffic sites link to a single page, the latter page rises in the ranking. If a highly ranked page links to another highly ranked page, that latter rises higher still or retains its place in the ranking. Users paid for the service indirectly, by letting Google keep the data gathered from when they visit its page. Direct payment for the service came from advertisers. In advertising, we find the worst-case scenario for commercial manipulation. One could, conceivably, rig the search results by purchasing links to highly ranked sites. Page, et al, address this as seeming "well under control since it costs money." That is, the only barriers to worst-case scenario manipulation of the information retrieval on the web are the bank accounts of bad actors. In Web 2.0 terms,

¹³ Lawrence Page and Sergey Brin, Rajeev Motwani, Terry Winograd, "The PageRank Citation Ranking: Bringing Order to the Web" Technical Report. (Stanford: InfoLab, 1999).

this is a fulfillment of the business model so thorough that it constitutes a new, platform paradigm.

Long Tail of the Internet in a Room Full of Venture Capitalists

Tim O'Reilly frames Google as a specialized database. Search is a tool, but that tool is useless without the data, and the voluminous amounts of data necessary for the tool to be useful won't work without the software. Under the old business paradigm, companies licensed software and maintained control over how to use it. The shift of the new paradigm was toward software that only had to perform, regardless of where its hosted or what use it was being put to. Performance-centered thinking of this sort requires constant feedback from use cases and is one reason why Silicon Valley privileges the philosophy of pushing working drafts that users test for bugs in order to realize new features, i.e., move fast and break things is another way to frame perpetual beta testing.

Without the functionality to collect and manage data, software itself is of little commercial value in the Web 2.0 space. O'Reilly was specific in his keynote, "*the value of the software is proportional to the scale and dynamism of the data it helps to manage.*"¹⁴ The quote is telling, if only for the clarity with which data is determined as a vital

¹⁴ O'Reilly, "What Is Web 2.0" n.p.

commodity at such an early stage. Also of interest is the understanding that interface needs only to facilitate use, and software need only to work in service of the data management. Under the new paradigm—what I call the platform paradigm—software isn't distributed, it lives on servers and is performed and operated merely to collect and manage data.

Contrasting Netscape and Google, it is clear that for O'Reilly they are not dynamic opposites, but rather variations on a theme. Netscape was leveraging browsers and servers under the old paradigm. Google used servers and browsers under the new paradigm as a middle step between user and that user's experience. Web 2.0 referred to "the space between a browser and the search engine and a content server."¹⁵ From one perspective, it's all software; however, the difference I want to point out is some software is an application *for using* the web, while other software is an application *accessed through* the web. Of these applications, some have a very specific function intrinsic to the new software-as-service model.

One illustration of how the Web 2.0 criteria is actually different from the first half of the DCB is evident in the company, DoubleClick. The pitch for DoubleClick was an online advertising firm, while its core service was data management. The limitation for its business model, revealed in the first part of the DCB, was that at the time the

¹⁵ O'Reilly, "What Is Web 2.0" n.p.

commercial web largely functioned as a publishing space controlled by advertisers.

Legacy thinking was geared toward following ad-agency preferences regarding content and form. This meant putting the right ad, in front of the right audience, in a context that wouldn't offend or damage any of the transaction's participants. For instance, the consumer should see ads as complimentary to both themselves and the media they are consuming, and the ad itself should not endanger the brand. Such specificity and consideration, regardless of its truth-value, is immediately problematic for advertising on the web.

A golden ratio for ads is immediately dubious if only because of the axiom attributed to department store magnate John Wanamaker, who claimed that half of all advertising money was wasted, he just didn't know which half. Advertising and marketing trades both dispute the quote and hold it dear, especially when touting a strategy that will finally settle the debate.¹⁶ After the DCB shakeout, data management in the ad space was down but not out. Since Web 2.0 is a description of a business model anchored in social participation driven by consumers and consumption, Google displayed its post-DCB competitive advantage through an approach to both data management and the gateway to ad dollars from publishers in the form of AdSense.

¹⁶ See: Wharton School of Business marketing professor, Peter Fader, on customer lifetime value, url: https://wsp.wharton.upenn.edu/blog_post/customer-lifetime-value-centricity-peter-fader-ted-x-penn-talk/.

Google's AdSense placed ads on any website. The ads became merely textual instead of wholly contextual. Another way of saying this is that ads became content without context. In AdSense was another Web 2.0 maxim: *"leverage customer-self-service and algorithmic data management to reach out to the entire web, to the edges and not just the center, to the long tail and not just the head."*¹⁷ Moving forward, after the DCB shakeout, the cry would be to tax transactions between individuals no matter how small—in terms of the tax, the transaction, and the group of individuals. This strategy would make every user on the web into a node or server. The goal would always be to grow the network, but not the entire network of the web or the internet. Instead, growth would be focused on the specific network interior to the platform, e.g., grow Google's ad network or later, Facebook's social media network.¹⁸ To increase transactions is to increase nodes. After the DCB, platforming subjects everything on the web to the market and scales it up.¹⁹

In 2004, at the turning of the tide, O'Reilly pointed to the agile pairing of edge-individuals with center-content by server distributors like Akamai, but noted that the money still originated from the center or the head, as opposed to the periphery or long

¹⁷ O'Reilly, "What Is Web 2.0" n.p.

¹⁸ Malignant networks won't die, they will just incubate more malignancy see: Emily M. Bender, Timnit Gebru, Angelina McMillan-Major, and Shmargaret Shmitchell, "On the Dangers of Stochastic Parrots: Can Language Models Be Too Big? 🦜" in *Proceedings of the 2021 ACM Conference on Fairness, Accountability, and Transparency*, FAccT '21 New York, Association for Computing Machinery, (2021), 610–623, doi: <https://doi.org/10.1145/3442188.3445922>.

¹⁹ For a critique of scale thinking, see Alex Hanna and Tina M. Park "Against Scale: Provocations and Resistances to Scale Thinking" (preprint, submitted in October 2020), doi: <https://doi.org/10.48550/arXiv.2010.08850>.

tail of users. And from this, Web 2.0 maxim three: *the service automatically gets better the more people use it*. It's useful to pause and ask what *better* and *use* mean here.

Large distributors of content pay server distribution companies to make sure distant customers can access high-demand sites. This is not exactly the techno-utopian dream of decentralization. The major deviation from that dream is that conflating increased use with optimization all depends on what one means by *better*. Obviously, it gets bigger. If bigger means more profitable, and profitable is better, then...well, yes, O'Reilly is right, but it's a massively selective interpretation. It doesn't seem cynical to say, here, *better* means doing more of what one is in business to do—and that's still just a fancy way of circling back around to profitability as sole justification for any material or philosophical changes to the web. What is being pushed here is a selective projection of the network effect—a term from economics which has a specific academic definition.

The network effect assumes the value a user gets from goods and services is a function of the number of users who utilize the good or service. Telephones are a standard example: Telephones are more useful when more people have telephones and are busy finding ways to spend time using their telephones. The application of the phenomenon O'Reilly is drawing on depends on the first half of the internet technology development cycle where sharing and adoption is high, while completely obscuring the second half, where adoption drops off and competition gets fierce. Once everyone has a telephone, and is satisfied with how they use it, capturing market share becomes

increasingly difficult. He is able to let the second part go unnoted in the Web 2.0 description because his audience understands that people on the other side of the screen, the consumers, are not going to be the most profitable users over the long haul. The bubble had proven as much.

O'Reilly had been on the trail of what made the difference between life and death for tech companies throughout the DCB. He found it in the uniform embrace of "the power of the web to harness collective intelligence."²⁰ Hence, maxim four: *Network effects from user contributions are the key to market dominance in the web 2.0 era.* Top contenders at the time were Wikipedia, delicious, and flickr— respectively, platforms for general knowledge, link posting, and photo sharing. For each, the pitch paints a rosy picture of the web's future: Spam filters will aggregate the individual decisions of users, viral marketing through users' communication will build brand recognition, and the infrastructure of the web will live and breathe by contributions of the open-source community.

In the decree to harness collective intelligence through use is just one piece of a persistent metaphor of internet-as-mind. The implication is that once all collective intelligence is harnessed through the internet, the internet will be a de facto global brain. Linking, pings, trackbacks and the like, and later blog and RSS feeds, are assumed to

²⁰ O'Reilly, "What Is Web 2.0" n.p.

operate like synapses where associations repeat and intensify and become stronger, allowing organic growth to be the natural output of collectivity. What better uses of the internet will eventually produce is something between persistent forebrain chatter and the ever-present voice we call a self. In this definitional matrix, deep structure means unconscious, content means conscious thought, and digital media platforms (as the blog before them) mean reflections of thought and attention. How can these networks not have a powerful effect on discourse, society, and individual people? And moreover, how can it go unseen that synaptic operations are not, by default, positive and productive processes? Does no one behind the Web 2.0 curtain possess even trace amounts of residual trauma to a degree sufficient for the triggering of behavior that is defensive and simultaneously damaging? These questions are abstract, and maybe less important during the conference since at the time, every meaningful internet application was founded on a specialized database. This fact leads O'Reilly to a more practical and inevitable if not prescient question: Who owns the data?

Assuming data is a commodity, then control over databases leads to market share and large financial gain. For all the fanfare around the user in the Web 2.0 description, data is the "sole source component" in an infrastructure that is "largely open-source or otherwise commodified."²¹ The logic unfolds like this: If one person

²¹ O'Reilly, "What Is Web 2.0" n.p.

owns the data, three other people can license it and all three will go broke trying to outdo the other two by offering better ways for users to access that data. However, if any one of the three people takes on the license and adds on its own data, then a new database is created, and the remaining competitors are at a disadvantage. Amazon did this well when it started compiling a database of books and other media from publishers and combining it with a unique Amazon Standard Identification Number (ASIN).

O'Reilly is quite right to suggest that "the race is on to own certain classes of core data: location, identity, calendaring of public events, product identifiers and namespaces."²² He goes on to pinpoint a strategy for asset sequestration where creating data might incur a substantial cost. The winner of the race will have "a critical mass of user aggregation and turn that aggregated data into a system service" and be able to turn "certain classes of data into reliable subsystems of the internet operating system. When the race is over, user will enter the next generation of applications."²³ Framed as competition, the model would re-envision the web as a series of platforms, as an ecosystem of proprietary applications which capture users until the user can be spun as an embedded feature of the application. The race to be won here is an oblique reference to the start-up cycle of venture capital investment, company pivots, and eventual acquisition. The venture capital cycle is, in itself, another way to say that anything that

²² O'Reilly, "What Is Web 2.0" n.p.

²³ Ibid, n.p.

looks like innovation will be scarfed up by apex predators. Nowhere in the conversation is a thoughtful definition of what innovation might entail. Innovation, like disruption, will remain a value defined according to a strict and limited agenda of investors after the fact.

If the Web 2.0 model is gravitational core, then data management is the axis of that core. iTunes and TiVo are specifically named by O'Reilly as exemplary demonstrations of Web 2.0 principles in the conference keynote. In spite of what a user might make of these services, both user and service are data-production engines. Getting users into position at the point of interface is the first step. Multiplying a specific kind of interface is what then puts that user in contact with a phone, a car, a home, a refrigerator, and/or a toothbrush; all of which are themselves connected via internet protocol address into a platform data collection scheme. Early warning signs of the capabilities of the Web 2.0 business model include "real time traffic updates and navigation, flash mobs, and citizen journalism."²⁴ The latter two come to a crisis point when folded into surveillance networks, as is the case following the Boston Marathon Bombing in 2013. Having discussed the paradigmatic business model, I will now turn to its imbrication into the web of everyday life.

²⁴ O'Reilly, "What Is Web 2.0" n.p.

Infrastructural Internet, Inter-structural Platforms

The key to dot-com lucre in 1993 was in figuring out how to make old models run on networks. That started with the idea of charging for portals to the outer reaches of the internet and brand-specific websites. As this strategy matured through 2004, described above as the boom and bust of DCB, the collective wisdom of crowds and exploitable long-tail produced by savvy, early adopters was marketed as having minced conventional wisdom. But these savvy players were just as often ignored—especially when their use represented a rejection of commodification. Any proof of success in (selectively) listening to the user always took the same path toward market capitalization. A company's valuation was more often fueled by actions of investment banks, venture capital funds, and the specific edicts of the company's founder. Casting the narrow ambitions of a few as the collective wisdom of humanity and the best of all possible worlds is an artful execution of vested interests. One might also call it the history of western civilization, but I digress. The craft of getting users to demand what were long term corporate strategies all along turns out to be the core competency of the DCB.

Beyond the Web 2.0 conference keynote there are representations of the DCB from other attendees, each from their own domain of the new economy. John Battelle enters from the perspective of journalism and publishing, Seth Goldstein that of venture capital, and Martin Fowler from software development. In some ways Battelle and

Goldstein are apostles in the most generous sense. It is easy to get the impression from their writing that a certain vision for the future requires harnessing the pinnacle of human achievement—if only expressed through the distribution of western media content. Reading through years of blogs and editorials by tech players, gives one a sense that just beneath the surface churns an embedded assumption: business culture should guide the broader conversation.²⁵ This is not a belief that culture and business can be made compatible, or even that business practices are part of culture—such as it is part of a whole way life. Rather, it is a belief that a culture specific to corporate governance ought to be the template for an entire socio-historical milieu. Martin Fowler is similarly optimistic about the technology, if not slightly cynical in terms of its various applications, which is perhaps to be expected of someone closer to the sphere of engineering.

Fowler points out that the birth of Web 2.0 took place in 2004 but was conceived and gestated well within the DCB.²⁶ The persistence of what was eventually described through the conference causes Fowler to categorize Web 2.0 as a general reference to a perceptual shift in the nature of the World Wide Web. In the original proposal for the world wide web in 1990, by Tim Berners-Lee and Robert Cailliau, the emphasis is on solving for then-current “incompatibilities of the platforms and tools” of “large classes

²⁵ For John Battelle’s confirmation of as much see, James Ledbetter, *Starving to death on \$200 million: The Short Absurd Life of The Industry Standard*, (New York: Public Affairs, 2003), 272.

²⁶ Martin Fowler, “Web 2.0” 2006. url: <https://martinfowler.com/bliki/Web2.0.html>

of stored information such as reports, notes, data-bases, computer documentation and on-line systems help.”²⁷ The idea of the web proposed here imposes a certain order on the textual chaos by making the information linkable via a protocol and then providing a means to navigate the protocol through a program called a browser. The World Wide Web proposal is a worlding exercise from scattered and disparate territories which already existed on the servers at European Organization for Nuclear Research (CERN).²⁸ The various texts become nodes, and since some texts might reside on different machines, the problem of access to different texts on different machines is overcome by a recursively unifying system. When Fowler calls Web 2.0 a perceptual shift, he’s indicating an expansion of that recursive unification. If Web 2.0 names a generalized sense of transition from old to new, the conference attendees are mainly interested in a distillation of the essence of that trend.²⁹ The motivating question is not simply how to identify the trend, but what core business propositions are most likely to succeed in the unified territory.

Fowler goes on to stress that any new technology or economy is invariably constituted of the old. The overlap of new and old has been thoroughly explicated by N. Katherine Hayles in *How We Became Posthuman*. There, Hayles engages in a discussion of

²⁷ Tim Berners-Lee and Robert Cailliau, “WorldWideWeb: Proposal for a Hypertext Project” 12 November 1990. url: <https://www.w3.org/Proposal.html>.

²⁸ Anglicized derivation of *Conseil européen pour la recherche nucléaire*.

²⁹ Redundancy intended. The consensus here is that there is always inefficiency to engineer away, and from that business propositions of ever increasing purity.

how the marginal can age into the mainstream, and how minor practices can found within a subsequent, major discourse. The stages of what is presently possible and what was previously experimental are shown to be intimately linked with the impossible and merely theoretical through conceptual constellations. These constellations are the model for similar developments in material culture. Concepts and artifacts are in a continuous loop, Hayles explains, so as *A* rises, *B* develops; as *A* falls, *B* rises, and *C* develops, and so on. *A*, *B*, and *C* are therefore linked as subsequent conceptual constellations.

The conceptual constellation understood within the present context of this project is the internet, the World Wide Web, and platforms. The murky points of reference common to public discourse relating to networking technologies is further explained through skeuomorphs, or design features with no present function other than as a reference back to an object or feature that used to be functional. Beyond mere decorative or nostalgic effect, this design tactic can be applied to increase adoption and acceptance of the unfamiliar. Platforms can obscure any number of functions—surveillance, monetization, radicalization—while remaining visible testaments to innovation, experimentation and creative play. This threshold point is what conference attendees are eager to actualize.

Under the hood of Web 2.0 are a series of predicates for a heroic history like mistrust of democratic self-determination and reverence for the individual over ideology. One of the first cultural expressions of the platform established through the

DCB is in Time magazine's 2006 Person of the Year: YOU.³⁰ The poll is contextualized by the World Wide Web, but specifically "not the web that Tim Berners-Lee hacked together as a way for scientists to share research" nor even the "overhyped dotcom web of the late-90s."³¹ The accompanying article stresses this is a new web and *you* are its object. Absent is any reflexive consideration of what follows from the elevation of individual will over ideological current. That is, if the individual should trump ideology in full, then former ideological tenets can be replaced by individual personality traits. In such a case, the possibility exists for an ethical and moral framework to be superseded by anything from a cult of personality to run of the mill shitposting. I want to suggest that such individuality is at one pole of the axis at the center of the gravitational core that is Web 2.0.

By centering the discussion of a new, new web³² on the figure of the individual it becomes clearer that the platform paradigm exemplifies what is actually at stake in a business model that first serves a template for cultural orientations and secondly functions as an exaltation of the willful and heroic individual: all externalities, negative and otherwise, are immediately less important than this prime mover of history. Put

³⁰ "Silicon Valley consultants call it Web 2.0, as if it were a new version of some old software. But it's really a revolution." In Lev Grossman, Grossman, Lev. "TIME PERSON OF THE YEAR You." *TIME Magazine* 168, no. 26 (December 25, 2006): 38–41. <https://search-ebSCOhost-com.proxy.lib.duke.edu/login.aspx?direct=true&db=f5h&AN=23469016&site=ehost-live&scope=site>.

³¹ Grossman, "You Yes, You," 38-41.

³² Recall, it's *not* the one we got from CERN *nor* is it the one the dot-com bubble nearly destroyed.

another way, settled matters like truth and reality are potentially expendable. In the cohering, digital territory of 2006, any collective *we* is alienated and of diminished consequence to society. The future-tense of that society is maintained through the present-tense of the individual. Web applications under the platform paradigm are self-validating exercises in support of the illusion that *you* are the central character in your own drama. In these early stages, being the main character of your own story doesn't mean you are necessarily good or bad, or even the best, just that everyone else you encounter must be subordinated to a supporting role. Reminders that this is not the case—that you might be a supporting character, or you might not even feature in the story at all—is potentially a source of anger or confusion. Web 2.0's narrative possibility is bound by the fear that an individual might live in a world codified by the sum of their weakest impulses, that one might fail to live up to any standard of heroism or villainy in the story structured entirely around them.

The Web 2.0 moment effectively captures identity politics because identification is established relationally, through material externalities that are technically available to any other individual in the database. Through this specific play of image and sign, identity performances via platform interface are defined in terms of the web as a space without grounding in the everyday. What the platform paradigm establishes is not a determination of real and unreal, but of online and offline, two equally consequential spaces that only partially overlap. The debate here is not a matter of identity

performance or of sign functions, but the emergence of what could be termed a nagging vulnerability that comes from interacting with platform applications described by the Web 2.0 model. Once more or less established, and through the intervening years, what is in my view an intentional technical operation will come to be recognized by sociologists and psychologists as representation of an endemic narcissism whose limit case is entitled nihilism.³³ Between 2001 and 2008, there is a tendency to invest more and more importance in online expression and experience which is aided by such diagnostics of individual mental health and deteriorating social conditions. Very real, material concerns present in the first decade of the new century—school shootings, to cite but one example—are categorized as either originating in or metastasized from platform discourses.

Quasi-panics about what tech is doing to US society entirely miss that the applications on the web are developed to foster engagement and treat it as a tool for a specific means and end. Platforms encourage interaction between users and capture whatever portion of that interaction is potentially exploitable. Assessments of total social decay may well be valid, but their attribution to web applications takes as representative an archive that only exists to the extent of its exploitability in the advertising-auction space. Attempts to contextualize what is intentionally and repeatedly decontextualized

³³ Sherry Turkle is the most approachable on the topic, but see also, Twnege (2006), Twnege and Campbell (2009). A more critical appraisal can be found in Tyler (2007) where the pathology is shown to have political force in the US from the mid-20th century onward.

on the platform risks participation in raw redistribution of content. As a result, what is framed as an assault on the public sphere issuing from the platform is amplified beyond the platform. It's not wrong to claim that within the Web 2.0 matrix, individuals matter more than populations. Nor is it a stretch to point out a rising pessimism in relation to long accepted mores and folkways residing on or within various platforms—which are, recalling O'Reilly, databases. However, anchoring the concerns to the tech can't account for the role the technology plays in sizing up, demarcating and regulating the online territory. Instead, I propose starting from the position of affirming a shift in ethical frameworks as they are revealed in the practice of everyday life.

Platform applications at the outset encourage a mutated kind of self-ownership and feigned empathy that is extremely pliable to strains of authority.³⁴ This malleability is not strictly intentional but is in my view a kind of collateral damage from actualizing the fable of Web 2.0. That is, basically, a fictionalization of the self for the purposes of taking confession from a less-than-ideal self. It seems unforeseen, in the early stages after the DCB, how deeply and widely this problem could spread via the very conditions established by a model that was—and remains—highly effective at getting people to spend more and more time at computer interfaces.

³⁴ See, Adam Kramer, et al. "Experimental Evidence of Massive Scale Emotional Contagion through Social Networks," *Proceedings of the National Academy of Sciences of the United States of America*, v111 n24, June 17, 2014, (111:8788–8790; first published June 2, 2014; 10.1073/pnas.1320040111).

The DCB rose and fell between 1996 and 2001. The first Web 2.0 conference was held in 2004. By 2006, there was a distinct sense of *before* and *after* circulating around the DCB, the web, new media, and the new economy. As soon as it was possible to articulate the *after*, its horizon was mapped by contradictory utopian and dystopian futures. Culturally, the computer that was going to free humanity was now in the past. Instead, automation threatened to halve labor rates while doubling labor output. Production and reproduction were increasingly taking place on a computer. Formerly raucous public gathering places like coffee shops were more and more falling under the seductive clatter of keyboards.

The first decade of the new century started with reorienting new media. At this point, idealized fictional selves were not yet real even though many more people were treating each other as if it was the case. A brave new world of original content created by and for users was being distributed from site to site. The necessity for lowering the bar of admission to the world of links and nodes encouraged innovation in the realm of search engines, a world promptly disrupted by Google. Google's early contribution to search included a system for selling and placing ads among the web's commercial traffic. Thus, a series of portals linking information were used to push attention according to algorithmic mandates, which were themselves used to sell ads and pull revenue. This process had an undeniable effect across the web, in multiple industries, and throughout US culture. The gap between utopian and dystopian dispositions

toward these effects reveals how difficult it is to say that the effects were wholly negative. If Web 2.0 offers a mirror universe of context-free play, it is potentially the realization of post-structural political ideal. However, similar modes of critique were quite often first to the mark with denunciations of the internet or web's potentially repressive capacities—particularly when it comes its subsequent iterations.

Two years after the first Web 2.0 conference, in 2006, it was wholly tenable to refer to user generated content and data commodification as a form of “digital sharecropping.”³⁵ This idea emerged from a line of thinking that treated users who generate content as laborers who create value for corporations, but themselves go, ultimately, unpaid. The platform paradigm was seen at this point to drive traffic on the web to bigger and bigger sites even though this seems to contradict the doctrine of using ideas from the long tail and edge-dwelling nodes to perpetuate and sustain the dynamism of the web.³⁶ By the end of 2006, success was measured by top-ten page-view rankings. The emergence of social media complicated things because it became possible to think of each user profile a single content-generating site, and in so doing claim that the web was still the diffusion of user traffic. However, the concentration taking place was not about content alone, but the value of content. Digital Media Platforms that came

³⁵ Nicholas Carr, “Utopia is Creepy and Other Provocations,” (New York: W.W. Norton & Company, 2016). This volume collects a decade of posts from Carr’s blog, *Rough Type*. url: <http://www.routhtype.com/?m=200612>

³⁶ Recall the second maxim of Web 2.0: the service automatically gets better the more people use it.

to dominate after a web 2.0 implementation, especially social media, offered tools for free in exchange for relative capture of all subsequent production. From the view of attention alone, the web had become a massively distributive space, while simultaneously becoming an exponentially concentrating space from the view of financial return.

Any contradiction between attention and financial return on the web is resolved through a Web 2.0 economy. In the context of the DCB and the Web 2.0 model that followed, attention economies could be tightly managed as a system of cheap or free resources for capitalist production. Media theorist Jonathan Beller has examined attention economies as an element of a cinematic mode of production. The question of a mode of production is beyond my present scope, since what I am describing is the emergence of a power relation in two steps. The first step occurs when data management services no longer have to rely on staggered conversion that takes place under digitalization. Once a steady conversion is more or less automated under datafication, the practice of everyday life produces data. The second step is manifest through repeated scaling of the system. As of 2006, step two was underway, although its level of scale was only that of the web. As scale increases, it is eventually possible to identify datafication rippling out through more and more relations.

Web 2.0 is a description of a business strategy for shifting from a deployment of software to selling software services. These services generated vast quantities of data.

Database management became the core function for profitable ventures in the information technology space. The myth of the venture capitalist in Silicon Valley was tied in with very specific ideas that borrowed heft from a historical valorization of individual genius and the reliance on instinct. In spite of the fact that investment just as often came from elsewhere in the world, Silicon Valley venture capitalists were proverbial wizards—or literal angels in the moniker of Angel Investor. The infrastructure of this model relied on the existing edges and nodes of the internet and protocol of the world wide web. Beneath the technical infrastructure are systems every bit as vital to the creation and reinforcement of the platform paradigm. These para-structural systems are economic, in the form of advertising and branding, and interactive, in the form of interface design.

Advertisers were interested in capturing customer attention through web search as early as 1995. Email had already been infiltrated by spam, and a law firm’s attempt to solicit business via the first truly social network, Usenet, an early internet Bulletin Board Service was met with outcry.³⁷ Web search was the true starting gun for making ads synonymous with the internet, regardless of how many failures and acquisitions occurred in this sector during the DCB. At first, the focus was on the internet as a

³⁷ For as much variance in the history as I am ultimately pointing to, these flamewars are stable elements in time, see Michael Hauben and Ronda Hauben, *Netizens: On the History and Impact of Usenet and the Internet*, (Los Alamitos, Calif: IEEE Computer Society Press, 1997) and Martin Dodge and Rob Kitchin, *Atlas of Cyberspace*, (Harlow, England: Addison-Wesley, 2001).

distribution medium; however, the increasing volume of internet use was hard to ignore. Advertising in the US was a well-established practice. If the internet simply provided another avenue for existing practice, then monetization remained similar to legacy, mass media—agreements were made between media companies and advertisers to deliver their respective wares to the most amenable audiences. Instead, the early web introduced stiff competition for existing media and outright hostility toward traditional means of monetization. By 2004, users were an object for both advertising and interface design, but each for different reasons.

What I have referred to as legacy mass media is a category of distributions channels that were, during the period of time under consideration in this chapter, commonly contrasted with internet or web media. This category included television, radio, and print. Producing content elements for these channels was a large investment, and often this cost was subsidized through advertising. The relationship between advertising and mass media is important for the story of the web because as they increased in volume users started to outgrow the confines of the early web. Although perennial in some regard, small-scale user communities were a strange fit for a converging mass media audience. As internet use increased, a growing ratio of those users were attuned to curated and packaged information. A user base that was primarily seeking an alternative to legacy media was increasingly populated by users seeking a different version of it. In simpler terms, what started as difference in kind inched closer

and closer to a difference of degree. The demand to provide for such variegated tastes led web companies toward two options: package user-generated content on slick, feature rich platforms, or license or produce ad-sponsored content. As will become a familiar refrain, new economy visionaries looked at two options and chose all three—each one, and a hybrid of both.

The smorgasbord approach to web ads entailed pulling user-generated content into platform specific spaces and placing it alongside more professionally produced sponsored content, as well as layering sponsorships within user-generated content, and splicing ads into all content. Full application of this approach would take several years, but even its initial germination established a dominant philosophy about ads online. There would be no question of placing ads on the commercial web, instead a line would be drawn between the mode of acceptable advertising. Henceforth, good ads were ads and bad ads were spam. As noted briefly above, there was an early attempt to advertise on Usenet in 1994. A law firm posted an ad in several thousand Usenet threads only to ignite hundreds of complaints and flame responses. One sentiment derived from that experiment would be to say that no one wanted ads on the web—therefore, it should not be done. A different sentiment would be to focus on the ratio of instance and complaint.

Clearly hundreds of people were incensed, but a larger portion of people, perhaps nine out of ten, either endorse ads or are not bothered enough to complain about it.³⁸

One of the first recognizable ads on a website was the banner ad. Banners were a category of advertisement that was able to close the sale of an untested kind of solicitation. The banner ad was a rectangular image of varying size—although often reminiscent of the wide aspect ratio of a billboard. The image communicated a brief message, and most likely contained an embedded link to a site for the product being advertised. One reason for the lack of an initial standard is that online advertising was a gamble, another reason was that the gamblers were making up the rules and the odds as they went along. A self-regulating body for the industry was formed in 1996, but did not codify standards for online advertising until 2004. In the intervening years, the online advertising game would experience marked change.

The banner ad was among the first of its breed, but other permutations soon followed, many instigated by magazine publishers who had set up web-based versions of their periodicals. Of the many types of web ad to emerge on the screen, they still required a traditional ad sales approach behind the curtain where people determined

³⁸ Among the first to test this barrier was Wired publisher and co-founder, Louis Rossetto. "People told us if you put ads online, the internet would throw up on us," he said, "I thought the opposition was ridiculous. There is hardly an area of human activity that isn't commercial. Why should the internet be the exception? So we said, "Fuck it," and just went ahead and did it." Quoted in John Cassidy, *Dot.Con: How America Lost its Mind and Money in the Internet Era*, (New York: Harper Collins, 2002) which also contains a useful appendix of dot-com companies, valuations, and market capitalization.

the best placement for the best kind of ad, for the best product or service, in order to result in a sale of the product or service being advertised. If this old model derived from Madison Avenue's advertising industry, the new model for online ads, much like the Web 2.0 model itself, borrowed heavily from strategies and tactics of Wall Street. The first to apply such a change was Google.

Google had already positioned itself as the locus of web search, and that gave the company a massive resource of user attention. The first innovation Google made was a program called AdWords, which allowed advertisers to match promotions to search results. Within AdWords were two key technologies. One was an auction system, absorbed in Google's acquisition of a search competitor. This auction process put advertisers in competition with each other for a spot next to search results for designated keywords. The other was an algorithm that could assess the composition of an ad and correlate its elements to the likelihood of user engagement. Together, these technologies meant that, through AdWords, Google could maximize ad inventory prices while also introducing a quality matrix for the kinds of ads that were quantifiably useful and relevant to users. However, AdWords also made it possible for advertisers to evaluate bids for spaces with lower quality ads. In a perfect world, good ads and bad ads would find some kind of equilibrium. In practice, it was the first step in decontextualized advertising on the web.

AdWords was the infrastructure for Google's advertising venture. Other products were built off of its core principles. AdSense, for example, folded publishers into the supply side of the equation. This program allowed other web sites to sell ad space in the same way AdWords created a market for the space in and around Google's search results. The advertising infrastructure created with these programs shifted ad business away from traditional sales toward engineering focused, algorithmic automation. Once the change was affected, it was a much smaller leap to fully programmatic advertising that more closely resembled the business models of finance. Having established an infrastructure, a stable system, the natural next step was to scale up.

Google made this change by passing the reigns to economists. Leading the effort was Hal Varian, a microeconomics expert who was hired in 2002. Varian's stated goal for the existing ad markets was a consolidation that would make "a search-word equivalent of the stock market."³⁹ Without grinding through the details of speculative finance, Varian's goal was to introduce market segments to the system of advertising inventory. To do that, he basically took ad responsibility from salespeople and gave it to engineers who then applied automated analytics. Market segments and algorithmic

³⁹ Stephen Levy, *In the Plex: How Google Thinks, Works, and Shapes Our Lives*, (New York: Simon & Shuster, 2011), 117.

analytics turned an economy focused on audience into an economy focused on data, and in the process commodified attention.

Whereas before, some attention was more valuable than other attention, after Varian's consolidation all attention was more or less the same. Attention was reduced to the status of another data stream. Data does not pass through a stage of differentiated value like attention metrics, which at least for a time is managed through demographics like race, class, gender, and so forth. A data economy assumes perpetual collection and anticipates value as a function of correlation between databases. For example, recall the map data and Amazon Standard Identification Number (ASIN) scenario above.

Licensing the map is less profitable than adding an additional layer of data or functionality to it, thereby generating a secondary license. By and large users will generate the raw material of those additional layers. The process of generating these additional layers is another way of referring to the creation of metadata, information-about-information, or traces of user activities. Deploying financial markets as the guiding metaphor for online advertising elevated Google from a speculative venture in web search to a legend of the internet era. It also made the idea of a free market for advertising into a default feature moving forward.

Once exchanges for online ads were established, the practice of advertising itself began to change. Expectations arose around performance metrics that would dictate ad placement and bid marking. Considering the timing of Google's revelation and the

turbulence of the DCB, the participants of the Web 2.0 conference were amenable to the finance metaphor when contemplating the design of platform applications for the web and the expansion of its infrastructural components. To recapitulate: The internet was a necessary infrastructure for the web. Commercialization steadily reoriented the web as an infrastructure for platforms. This is the moment when the signs collapsed, web and internet became interchangeable.

The commodification of attention is the other side of the data commodity coin, cast and stamped by the very same structure and practice that created the DCB. The market for buying and selling ad space was incrementally automated. A slippery concept like attention was steadily converted to discrete notation, or data, which was stored, valued, and put to market. With industry standards approved by a professional association, an algorithmically managed ad market made it possible for anyone with to establish themselves with what was essentially a trading account. The exchange permits buying and selling of attention units for any account holder. No training or connections were strictly required. Since buyers and sellers, the goods, and the standing record of transaction were all algorithmically managed, priced, and matched, what took the DCB at least a few years to inflate happened almost immediately for online, or interactive advertising.

When platforms were established as viable propositions, advertising was recognized above all else as a consistent avenue of return for internet companies—a

truth which borne out over the entire DCB. Indeed, although shaken by the crash, advertisements were still being placed—and when pulled, sounded the death knell for all manner of tech venture. It is ironic that finance destabilized an industry sector and left advertising as the safest bet for profit, a scheme which when applied at scale turned immediately to the same finance practices. It was the return to finance that made the buying and selling of ads into an essential infrastructure for the platform paradigm and cuts the trail for datafication. The same scaling mandate also effected platform interface design. Where advertising was reconfigured to maximize impressions and conversions, interfaces needed to increase and sustain engagement.

Tech Booms Eternal, or: The Use of Impressions

The bubble was primed through late 2000, went bust in March 2001, and then went into capitulation thereafter. At the Web 2.0 Conference in October 2004 the speculation of this past was reoriented toward a specific future, one that assumed ad conversions could be refined with enough data where enough meant all the data, in perpetuity. As noted above, in Tim O’Reilly’s keynote the production, ownership, and management of data was already central to the ordainment of this future. The task was achieved by picking up on qualities shared by surviving businesses. In terms of return on investment, search, email, and neophyte social networks were consistent e-commerce money makers throughout the DCB’s boom-and-bust cycle. What each had in common

with the others was the utilization the web (an internet application itself) as a platform for other applications.

In the previous sections, I have suggested that the model proposed during the Web 2.0 conference was a wholesale shift in business culture that can be situated as a platform paradigm. One of the key steps in materializing the shift was to rhetorically subdue to World Wide Web into the infrastructure of the internet. Once achieved, referring to interactive experience on the Net, the web, or the internet, was to at once name a series of discrete platforms that would not require broad interoperability. Instead, these web applications would pull the technology closer to another medium, that of print, or more specifically, publishing.

The commercial web was already distinguishable from the communicative or communal web—itself recursively labelled web 1.0—by virtue of its embrace of advertising. What changed was how the advertising industry adopted practices of speculation and investment from finance for its digital media business. What was the Web seemed primed to move through another key phase. The attributes of this phase-shift are precisely what this chapter, and the dissertation as a whole, are concerned with.

The event of the conference led entrepreneur and angel investor Seth Goldstein to describe an emerging common sense about what a web platform looked like. Gone are the decade old single-link networks connecting large sites into a web “now we have niche pages and targeted offers connected through elaborate search algorithms, RSS

feeds, and affiliate marketing networks.”⁴⁰ Goldstein’s statement rehearses several assumptions and goals from the conference, but also tacitly announces, just as the conference did in its own way, the pitch for investment in this sector moving forward. Sites that acted as portals to the wider web (i.e., from the head to the long tail) were dead money. A natural progression toward platforms was underway and ad targeting was intrinsic to this evolution.

Goldstein goes on to say that the internet was already two different things: a medium of distribution and a computational platform. Such a distinction between computation and distribution fits with my description of specific developmental tendencies as altering the web from a focus on communication to a focus on publishing and also reiterates the overall emergence of datafication from the more infrastructural digitalization. I read Goldstein’s statement as an endorsement of computation and distribution as twin operations that make the internet and the web function. A communicative web provides computational translation of information and a means of distribution, while a publishing web takes the distributive means as primary and coordinates various computational operations to aide in a specific process of managing ads and content. The network of networks became a playground for targeted ads

⁴⁰ Seth Goldstein, “Web Platform as Equity Analyst” *Transparent Bundles*, November 15, 2004. url: https://majestic.typepad.com/seth/hedge_funds/.

because anyone with enough desire and technical skill has an endless font of queries, item lists, and clickstreams with which to test ad technologies.

Considering the perennial trouble of market bubbles, it is perhaps less than surprising that algorithmic processing of transactions, automated pricing, and opaque business practices would immediately plague the speculative area of programmatic advertising. In order to explore this problem masquerading as a solution, I turn now to several years of provocation and reflection from Seth Goldstein. Building off of a similar reading of Tim O'Reilly's keynotes and subsequent reflections on the Web 2.0 conference—as the obverse side of what the following chapter will discuss with reference to John Battelle—a reading of Goldstein and the finance strategies applied to digital advertising bring into relief a crucial step in the commodification of attention through data harvesting. As Goldstein asserts in the sub-heading of the blog: somewhere between Wall Street and Madison Avenue lives the future of both.

Bear in mind that commodification of data was already underway, and the commodification of audience is where Jonathan Beller locates value production in his cinematic mode of production. My approach assumes commodities are the basic, full equivalent fungibility of any item. As I apply the term, attention is now the commodity of a data economy. A unit of transaction it no longer requires something so embodied as an audience (a population that requires context). Attention is increasingly abstracted under datafication to raw engagement, which is why data points and impressions can be

used in ad-pricing metrics. Bots and dummy accounts, mac address pings, and other forms of provocative agent all indicate attention commodified as/through an economy of data.

Transparency is a common watchword often deployed in relation to digital media platforms in contexts of privacy, profit, and propriety. Just months before the Web 2.0 conference, but several years after the DCB had well and truly burst, Goldstein suggested that transparency works for networks but hinders economies.⁴¹ In support, he offers the example of Unix, Linux and other types of Free and Open-Source Software (FOSS) as a pressure-point that force giants like Microsoft to offer ala carte options for previously bundled products. FOSS lives on open networks (arguably because open networks live on FOSS), it spreads because people share knowledge and code. From this perspective, transparency is an absolute win. Economically, the view is somewhat darker.

Goldstein points out that “too much transparency in the wrong places can negatively impact the economy...because soft-money is the bread and butter of capitalism.”⁴² In this kind of arrangement, some opacity is preferred because business transactions require a type of trust accrued through personal relationships or otherwise

⁴¹ Goldstein, “Transparent Bundles” *Transparent Bundles*, March 24, 2004.
<https://majestic.typepad.com/seth/2004/03>.

⁴² Goldstein, “Transparent Bundles” *Transparent Bundles*, March 24, 2004.
<https://majestic.typepad.com/seth/2004/03>.

unbillable hours. If the internet is an open network, there is a paradox at its center because transparency is valued by users in proportion to the value placed on opacity by service providers and site hosts. In 2004, it was an open question of what commercial value private information would have. Such an evaluation would have to account for the tension between transparency and opacity. Looking back, now, in 2020, this reads as somewhat quaint. Data already constituted a market, broadly speaking, but there was an uneasiness around exactly what areas of data were too-private, or what these businesses could do with data once it was on hand. It is important to stress, however, that the question of commodifying personal and/or private data was indeed undecided in 2004.

The soft-money, as Goldstein calls it, of data commodification was focused on finding an average consumer threshold for sharing personal information and vital statistics. As an aspect of biopower, informational bodies were not new, but as an aspect of a web experience it was relatively uncharted. Businesses have long offered a legacy of incentives to accrue information about their customers: credit offers, rebates and the like all require the collection of unique behavioral information. Long before that, states had seen the importance of population statistics. The conversion of these practices into a business model for the web required selling personal information to polish advertising transactions for marketers. To this day we are told that in exchange, users get a dynamically expansive interactive experience for free.

The commercial web made it possible for data to be commodified—and why wouldn't commerce portend commodification? Personal information had been subject to collection by governments and then corporations for decades, perhaps centuries before the internet. Post-war computational technology made that information electronic. Digitalization automated the collection and storage processes that had already been at work constituting and reinforcing statistical beings. In its commodification, data became something of a double-barreled shotgun approach. It generated massive profit on the marketing and advertising side (increasing opacity in those transactions) while allowing some investment to grow the web and increase an overall userbase—a userbase which will need training before letting go of its expectation of transparency baked into network technologies.

During the DCB, it was difficult to say for certain, or with a data point, what would make money and what wouldn't. As a result, a large amount of leeway was granted in terms of how dot-com or e-adjacent firms spent money, so long as the promise of an eventual, large payout remained tenable. The problems that emerged here were directly attributable to transparency. On one hand, it became easier to tell bad investments from good, at least on paper, because there were more reports and metrics. On the other hand, it removed middle-point services that relied on what Goldstein referred to as bread and butter—soft money and off-hours relationships—to locate competitive advantage in brokering between firms. Google's model for selling ads

through auction not only deployed cutting edge algorithms as proof of concept for its own IPO, but also reduced the importance of the kind of brokerage in advertising that was once the total domain of the marketer. Note that at this point in time, the map has yet to become the territory. In fact, it's merely the refinement of a goal in the advertising sector that had been around since 1995, when search engines and keywords signaled the opportunity for direct consumer connections. 2004 pushed firms back onto the web, but this time away from dot-coms or even direct response advertising built around user-generated content. Instead, firms geared toward impressions, attention, and engagement.

The value of digital, or online, advertising was determined through a calculation of user searches, clicks on sponsored elements, and average cost per sponsored click.⁴³ Google set the delivery rate of sponsored clicks per search, and adjusted the price of putting an ad in that space on the results page accordingly. Over time, and with enough input, Google's algorithm performed three tasks: it set the right price, found the right space, and it closed the transaction quickly. In effect, Google's value was not the number of users or the accuracy of its search, although both were important and mutually reinforcing. The true value was in the perception of its algorithm as accurate and reliable.

⁴³ Goldstein, "Google vs Wall Street" *Transparent Bundles*, May 3, 2004. <https://majestic.typepad.com/seth/2004/05/>.

By the end of 2004, Goldstein returned to the challenge of financially incentivizing the web as a platform through an analysis of attention markets. His analysis was guided by several question and assertions, some of which include

[are] shopping and searching part of the same process? What part of internet commerce is retail and what part is media? What is part of the internet, what traditional specificity is being projected onto the internet? Mostly, internet businesses are alike: Amazon is like ebay, not Walmart. Yahoo is like google, not Disney.⁴⁴

These businesses also focused on similar trends. Through the late 1990s, the internet economy was driven by user impressions and page-views. Later, in 2003, everyone placed faith and value in keywords.⁴⁵ In 2004, algorithms not only priced and placed advertising, but reported the results of real-time ad placements. Internet businesses could little afford to ignore this trend, because it amounted to refusal of a multi-billion-dollar proposition supported by the most highly valued companies and the most cutting-edge technology.

When the DCB burst and the market capitulated, there was serious doubt over whether anyone would spend money to advertise over the internet again. Although the losses from the DCB still grounded salient, institutional and private investor memory,

⁴⁴ Goldstein, "Attention Markets" *Transparent Bundles*, December 1, 2004. <https://majestic.typepad.com/seth/2004/12/>.

⁴⁵ See Tim Hwang, *Subprime Attention Crisis*, (New York: Farrar, Straus and Giroux, 2020) for discussion on the high value placed on the keyword "mesothelioma" and why advertisers are so eager to capture some of the attention directed toward this aggressive and malignant cancer.

the market for internet advertising was growing rapidly. By 2004, Google posted just over \$1 billion in advertising, 99% of its revenue.⁴⁶ In a filing with the Securities and Exchange Commission, Google was described by its officers as “a global technology leader focused on improving the ways people connect with information” whose “innovations in web search *and advertising* have made our web site a top Internet destination and our brand one of the most recognized in the world” (emphasis added).⁴⁷ One reason for this growth, according to Goldstein, was the remarkable synthesis of interest and preference that constrain internet consumer behaviors.⁴⁸ There are any number of preferences available to the ideal internet consumer, but it makes sense to explicitly name one preference that would only increase in relevance: a preference for decreasing the number of ads one has to look at. Linger for a moment on the pedestrian nature of this paradox. A market is rapidly expanding despite a stinging reticence from outside investors. The promoters of the market certify growth based on an infallible matrix of desire and satisfaction, or once investors realize that the thing they don’t want is the only game in town they will ignore the negative response to advertisements that predate the bubble.

⁴⁶ See filing with Securities and Exchange Commission, Form 10-K For The Fiscal Year Ended December 31, 2004, url: <https://www.sec.gov/Archives/edgar/data/1288776/000119312505065298/d10k.htm>

⁴⁷ Ibid.

⁴⁸ Goldstein, “False Profits: The End of Internet Advertising: The Beginning of Sales (and Surfs)” *Transparent Bundles*, February 2, 2005. <https://majestic.typepad.com/seth/2005/02/>.

With a preference against advertisements in mind, consider the perspective of the advertiser. Internet Consumer Behavior is a function of the Internet Consumer, which is a sub-set of an internet user. The Internet Consumer is not the vocal ten percent noted above, but some portion of the remaining ninety percent with a unique set of behaviors and goals. This is, at least from the perspective of the advertiser, a person who is a user first but is also, crucially, a consumer. An ad auction is priced based in part on the likelihood of putting the ad in front of the consumer most likely to convert a sale. If consumer here is a subset of user, then it must be possible to want to be on the web with absolutely no commerce in mind—to merely be a user. The user is not always a consumer in any sense that actually matters to buyers and sellers of advertisements. Amit Rai’s theorization of marketing points to the cold rationale of branding in a way that better illustrates my point. In the marketing calculation, users differ from consumers in the sense that users are “the useless people who don’t matter.”⁴⁹ Where the rubber meets the road for ad markets, consuming is what matters, not use.⁵⁰ Making use into consumption on the internet, means making consumption of what is always only ever content look like the average use case. Activity that falls outside of this narrow

⁴⁹ In Rai, *Media Assemblages*.

⁵⁰ This marketing perspective runs counter to interaction/interface design, where users are at the very least contested. See Alan Cooper, *About Face: The Essentials of User Interface Design 4th ed.*, (Hoboken: Wiley, [1995] 2004) and *The Inmates Are Running the Asylum: Why High-Tech Products Drive Us Crazy and How to Restore the Sanity* (New York: Pearson Education, 1998), and Olia Lialina, *Turning Complete User: Resisting Alienation in Human Computer Interaction*, (Heidelberg,: arthistoricum, 2021).

definition will increasingly be irrelevant or illegible. If a firm can divine consumer impulses from looking at search queries, then anyone with access to that information has a decisive advantage, perhaps even a fiduciary responsibility, in monetizing internet traffic.

The ability to measure the level of enchantment with ad-driven profit schemes in this period marks an important difference between digitalization and datafication. Internet advertising companies like Google come to the table with a very convincing pitch. Google, like the internet advertising behemoths to follow such as Facebook, doesn't need money from any specific business because the revenue from algorithmically metered advertising *at scale* is an undeniable winner. What they offer is, essentially, an equity stake in a once and future cash machine.

Writing just months after Google's IPO, Goldstein was remarkably prescient when he said that any company similarly situated, i.e., data-rich, need only turn this crank until they were bought out by a large investor and/or staged a stock offering. The main issue he had with the strategy was that, even then, at the ostensible starting line, the speculator must readily accept a weakness carried over from the DCB: There is no guarantee of being in line when the payout happens. That fact makes some portion of all internet advertising businesses pure scams with no means of knowing sure bets from the

scams until after the fact.⁵¹ Within just a year's time, though, online advertising was worth \$10 billion and it was part of everyday life to the extent that being online was being part of an automated sales channel in direct relation to advertisers—evidenced by the perpetual development of ad-blockers and torrent trackers developed and maintained by the noisy few in the margins of this space.

I'm trying to sketch the borders of a problem in this chapter, and part of that problem is how much the business model and new paradigm were premised on infinite scalability and increasing value, which in turn assumed endless growth and determinate participation of the user base. The subset of use that platforms, advertisers, and marketers have made crucial to media and technology markets would necessarily have to match the rate of scale. The future proposed by this plan was for the Internet Consumer, though summarily called a user, to be a subject of ads and an object as content at the same time, in perpetuity.⁵² This goal was impossible to achieve without a dramatic investment in data collection and algorithmic correlation over and above what was required for a commercial internet to function to begin with. Goldstein seems quite aware of this when he charts the future-tense of the overall ad-auction project. There are four elements to consider in the past-prediction.⁵³

⁵¹ Frank Houston, "Get Big, Sell Out, or Die." *Columbia Journalism Review*, vol. 39, no. 2, (July 2000), 28.

⁵² Goldstein, "False Profits: The End of Internet Advertising: The Beginning of Sales (and Surfs)" *Transparent Bundles*, February 2 2005, <https://majestic.typepad.com/seth/2005/02/>.

⁵³ Goldstein, "Media Futures: part 1, 2, & 3" *Transparent Bundles*, March 21-8 2005. <https://majestic.typepad.com/seth/2005/03/>.

The first is to highlight the importance of consumer production in digital media and the failure of advertisers to account for this in the targeting of user behaviors. In order for both to work, all users must be flattened into a single population, say prosumers, because the split individual, noted in the previous chapter, is too complex for prediction. In the aggregate—which is exactly what databases and predictive algorithms do with data—creativity and outliers matter less and less over time because the value of internet media when based on advertising responds to the overall tessellation of user activities constrained by changes in technology. Yes, the image is a mosaic, but since it is only ever observed at a distance, the pieces and parts carry little weight as long as they reflect the proper hue. Expressing differentiation, performing identities, resisting imposition seems to proliferate from a tightly circumscribed point of view, but from the commanding heights all parts of the process are codified, measurable and to some extent predictable.

The second is the requirement to build algorithms that can automate commercial content based on the inputs of user-generated content. This element prefigures the ranked choices of filter bubbles and news gyres, two forms of audience capture. For decades, credit rating agencies have extrapolated data to categorize demographic buckets. The same principle is here applied more widely and with less oversight since all the code is proprietary. Interactions on the platform cannot be both left to chance and

retain high valuations, therefore guiding users without breaking the illusion of a wide spanning field of creative play is vital.

Third, platforms must build and maintain a critical mass of users and developers to expand and maintain an application ecosystem. This is how the web becomes distinguished from internet and platform. When platforms grow and become dominant, control is assumed to be diffused, even if some companies oversee huge pools of user data and can direct traffic as they see fit. Companies (say, Google) can “recycle users through complex interconnecting networks of search, email, dating, travel, shopping, local services, and more.”⁵⁴ This point is important because platforms only need to be an alternative to walled gardens at first. As time goes on, the larger platforms can start a process of enclosure. Instead of walled gardens (think America Online, CompuServe, Prodigy), the platformed web was fashioned into a gated or planned community (think The Villages or Disney’s master-planned town of Celebration, both in Florida). Consider the map data example noted earlier in this chapter—collect, license, augment, sell, repeat.

The fourth and final element is the subsequent creation of metadata accrued through continual collection and analysis of user activities. As a final component, metadata closes the loop, folding user communities back in upon themselves allowing

⁵⁴ Goldstein, “Media Futures” March 28, 2005.

both agents in advertising auctions to refine the terms of respective transactions, or more to the point, turn to a kind of behavioral marketing strategy. Targeted ads, sponsored content, and sock puppets churn the content until being online is to submit in a concretized version of the Turing test where one never quite knows whether they are the machine.

These four elements presented by Goldstein were not at the time of writing predictive, as much as prescriptive. It was a statement of how to make the ad-supported, data-driven platform paradigm work for everyone at the table without repeating missteps of the DCB. The problem was that the advertising market for internet media had already adopted practices from finance, and finance had already endorsed aggressive speculation and arbitrage. Goldstein was not blind to the issues of speculation and arbitrage in the context of financial markets, and so he made a pivot on the topic. He stopped talking about a promising system and began to speculate on its embedded weaknesses. Specifically, he saw a potential issue with arbitrage.

In most basic terms, arbitrage is a process of taking advantage of price fluctuations in a specific item over different territory or different time. One can buy cheaply from here and sell at a higher price there or close a sale now and assume the risk of price fluctuations later. This is not an application of the standard maxim to buy-low-and-sell-high because the opacity in these transactions hide the degree to which the seller has access to inventory or information that increases their margin, or spread, and

are thus positioned to block competition. That is, the transaction is based on exploiting an asymmetry of assumptions or facts within a given transaction or market. Historically, this is a gray area in terms of legality. Enron is one of the marquee examples of being so successful at arbitrage in energy markets that logic was applied internally to the companies own books. In that instance, Enron eventually went broke. The primary beneficiaries of the practice in the digital ad space discussed thus far are large players like Google. But this would be true of anyone with the ability to leverage large quantities of user activities across an application ecosystem. Facebook grows into the position so well, it is hard not to wonder if it was intentional.

Already, in 2005, there was a whiff of smoke in the form of Google's refusal to fully disclose key details about user behaviors to advertisers. Goldstein's suspicion at the time was that they were using an arbitrage strategy to increase returns on its key commodity: users. Recall that what matters is how much traffic is actually consumption, even if the term 'user' will be applied liberally. The arbitrage tactics arise more or less organically because the platforms assume a seamless integration of human and technical capacities—here, communicative relationships and programmatic advertising networks. It's not a bad practice, in and of itself, as Goldstein presents it, but he's not naïve about the potential problem it could create down the road or, perhaps most importantly, at scale.

Monetizing Everyday Life

When Google launched its IPO in August 2004, monetizing activity on the web was less of a question than ever. The early years of debate over commercializing the web had given way to more practical matters of how and by how much more. Monetization was a metric for measuring the success of what would become, over the following five years, what we know today as the platform. Interactivity could be tracked and traced through various means available to marketing companies which had been summarily automated through opaque, computational processes. Algorithmic, or programmatic advertising subsidized the expansion of attention markets and justified platform ecosystems. At the center of all of this was the issue of how to direct all user traffic to or through platforms, and how to then interpret that activity as financially valuable—the short-sighted cousin of economically viable. However, the patterns of use could not be analyzed by existing instruments familiar to publishers and broadcasters.

New methods of valuation imported from finance begat a reorganization of the relationships between media, marketers, and advertisers. This new relationship empowered tech companies in their dual function as quasi-publishers because their platforms had the most control over user data through Amazon, Google, Facebook, and Twitter having respectively created a trade in consumption, cognition, relationships and

emotion.⁵⁵ Commodifying data was an ongoing process of correlation between data that had been gathered against a steady supply of new data that was always being added to what was essentially populating the foundational database. In other words, comparisons required new inputs which then became part of the database of old inputs, and the process continued indefinitely. Consequently, an existing database could be continually updated by new inputs, and new inputs correlated against the most up-to-date database. Attention markets—the result of commodified attention in a data economy—reoriented the commodity, the transactions, and the players away from depth and context, toward breadth and content. In so doing, as Seth Goldstein points out, the industry was primed for the same instability that had historically plagued markets: the perennial crisis of speculative bubbles.

I want to extend as much credit to Goldstein as possible. He seems to be one of the few insiders willing to both think critically about then present conditions and speak openly about the critique. It is hard to find VC's going on record with things like this:

Here is the story of globalization from a market perspective: Capitalism spreads through former socialist markets, new markets bring new consumers, multinational companies claim them as customers. Due to the same mechanisms, a currency-in-crisis can move from one economy to the next, spreading deflation and leaving recession. No one, including the IMF, can or will do anything about it.⁵⁶

⁵⁵ Chronologically, Amazon launched in 1994 and went public in 1997, Google 1997/2004, Facebook in 2004/2012 and Twitter in 2007/2013.

⁵⁶ Goldstein, "False Profits" February 2005.

Nevertheless, it is a set of narrow assumptions about the web proffered by venture capital that catalyzes the moment of Web 2.0 where social interactions were made legible through user-interface with/in platform communities while host-companies were valued via user-impressions, or the engagement of internet consumers. But nothing about the moment was a foregone conclusion. A quick rehearsal of some details might be in order. The web is distributed on the internet but does not require a persistent connection to the internet to surf or browse.⁵⁷ While the internet must maintain its connections to exist (a disconnected node is not a node at all, but simply a dumb terminal), one could download pages and view them offline if need be. In fact, all web pages are downloaded already, they are just stored on servers. Connections to and from those servers, utilizing the internet, are what constitute the experience of the web. This experience is in turn mediated by an interface comprised of hardware and software. One of the prime commercial goals for the web was to convince people to transfer routine market transactions to the digital space, and to adopt and maintain specific hardware and software preferences. Therefore, early giants were not only hardware and software distributors, but also e-commerce facilitators and telecom companies.

⁵⁷ Surfing is the initial nomenclature, connoting a vast oceanic body and some intention toward cresting waves—but also some intention and skill. This is replaced by browsing and the connotation of a curated and organized selection of items in specific locations. Perhaps we have now supplanted browsing with scrolling or swiping? It might also be worth noting that the continual reloading of an endlessly long page required for doom-scrolling also requires a stable, always-on connection.

E-commerce was driven by the expectation that traditional in-person retail would be replaced by point-and-click shopping, and so there was a proliferation of websites to capture that emerging market. Telecom companies, in turn, anticipated massive profits since the most common means for connecting to the web was over telephone or fiber-optic lines. Telecoms leveraged debt to increase network capacity while e-commerce sites (dot-coms) leveraged venture capital to run operations valued for their eventual IPOs rather than fundamental cash flow. Into this territory came advertising and marketing, an established industry making new inroads, but using old tools to do it—this is legacy media strategy of generating leads and converting those leads into sales.

Between 1999 and 2001 a death rattle sounded for the New Economy and its New Democratization generated and sustained by New Media. This was a painful reversal of the optimism in industry press like *Wired* where the new economy was set to mint millionaires by the day and empower citizens to steer government with direct action. “The so-called ‘new economy’ was turning out to be nothing of the sort: it was just boom and bust on steroids,” recalls one mourner from a tenth anniversary retrospective of the crash, the main thesis of which is that much of the tech that is taken for granted then (in 2010) was born out of the boom’s bust, which is precisely the idea

being developed in this chapter.⁵⁸ Instead of making everyone too rich to care about poor people, IPOs paid off early investors, while most internet technology firms could not turn a profit. Pets.com is one of the more striking examples: growing rapidly, exceeding its cashflow with marketing, benefitting investment banks with a celebrated IPO, and promptly falling into bankruptcy and liquidation. Financial analyst Nils Pratley discussed the disjunction between valuation and accounting through a post-mortem offered to investors by Sun Microsystems CEO Scott McNealy *several years after* the crash. During the market inflation, Sun was trading at ten-times annual revenue per share, which McNealy explained,

At 10 times revenues, to give you a 10-year payback, I have to pay you 100% of revenues for 10 straight years in dividends. That assumes I can get that by my shareholders. That assumes I have zero cost of goods sold, which is very hard for a computer company.⁵⁹

He went on to clarify that such a return on investment would require great feats of any company—incur no expenses, in spite of requiring a staff; incur no tax liability, in spite

⁵⁸ Namely, that we just weren't ready for the future, see: Richard Wray, "Ten years after the crash, the dotcom boom can finally come of age" *Guardian*, March 14 2010. url: <https://www.theguardian.com/business/2010/mar/14/technology-dotcom-crash-2000>. Here, I would like to suggest that aggressive financialization is not "boom and bust on steroids" but rather a pretty standard form fraud called a "bust-out" whereby "the fraudster builds up a history of good behavior with timely payments and low utilization. Over time, he or she obtains additional lines of credit and requests higher credit limits. Eventually, the fraudster uses all available credit and stops making payments." See, Experian Decision Analytics, "Bust-out Fraud" (2009), url: <https://www.experian.com/assets/decision-analytics/white-papers/bust-out-fraud-white-paper.pdf>.

⁵⁹ Nils Pratley, "Google Shares are a Bubble Waiting to Pop" *Guardian*, June 10 2005, <https://www.theguardian.com/technology/2005/jun/10/city.newmedia>.

of things like laws;⁶⁰ and commit zero funds for research and development—before concluding that the basic assumptions underlying the financials of then smoldering dot-com stocks were simply “ridiculous.”⁶¹ Added to the problem of overvaluation was a spate of accounting fraud at a number of telecom and tech-adjacent companies.

On the heels of energy trader Enron’s collapse came the failures of WorldCom, along with the pedigree accounting firms that aided or at least signed off on bad books. My re-reading of the dot-com bubble in this chapter shows that the internet, the World Wide Web, and thus digitalization, are already held apart from the exuberant monetization in this first peek of datafication. Because the vacuum created by the DCB doesn’t collapse anything but the US stock market and exploitative companies, advertising and marketing can be grafted on top of resilient infrastructures to rehabilitate industry survivors.

When the speculative bubble surrounding dot-com assets burst, the investment class dug in and doubled down. Diagnosis at the time assumed the value-rich propositions of the web were not proven false by the bust, but rather the predictions of the new economy had failed to account for the necessary growing pains of underlying new technologies. Instead of a linear process of predictable growth, an evolutionary

⁶⁰ Yes, of course, corporation routinely figure out ways around these ‘laws’ but it’s a form of self-harm, as ardent capitalists like Raymond Baker are at great pains to tell us, see his assessment of *Capitalism’s Achilles Heel* (2005).

⁶¹ Nils Pratley, “Google Shares are a Bubble Waiting to Pop” *Guardian*, June 10 2005, <https://www.theguardian.com/technology/2005/jun/10/city.newmedia>.

model of profit growth was expanded off the back of a similar evolutionary understanding of the internet itself. To those who had the most to recoup from the fallout, the bust had been a necessary shake-out after which original predictions could be dusted off, reimagined and reapplied—if and only if everyone did everything they could to keep the conditions favorable to that very specific kind of growth.

Through this cycle of myth making, it becomes possible to read the last decade of the 20th century in the US, during which the internet and the web were first situated in the popular consciousness, as a period of one more speculative bubble in a long line of capitalistic paroxysms which pre-date the internet. The immediate effort to recover some portion of the losses incurred paints market failure and underlying technology with the same brush. Faith in the underlying tech is carried over, similarly bound up with investors, hedge funds, and venture capital. Market volatility and internet technology as one operation sets up the conditions for a perspective that circumscribes possibility for continued functionality of the internet and the web. In basic terms, what the standard narrative of the internet misses is that ‘utopian visions of the internet were promoted and tried in the past’ and ‘investors lost their asses’ start out as two unrelated statements, but quickly collapse into one frame of reference for understanding content on the web moving forward after the DCB.

Cataloging and indexing the browser-accessible image, text, and video is the second frontier of the first iteration of the web and is an extension of the technical

operation of digitalization. While browsers make visualization of the files on the web possible, search follows as a way to be more specific about using those files. The kernel of datafication is in search engine optimization and serving ads on queries. There are numerous search engines developed between 1995 and 2005. Each has a unique approach to its task and an angle of becoming profitable.

Google was an early adopter, so to speak, of gathering data on what pages people visited, for how long they lingered, where they came from and where they went next, and then selling that information.⁶² This reveals Google as what media theorist Jonathan Beller calls an attention company, as opposed to an advertising or search or even web services company. In Beller's *Cinematic Mode of Production*, advertising businesses are attention merchants. Under an attention rubric, traditional media like television, radio, or periodicals give something in exchange for the attention. This is usually information of a sort, such as light entertainment or current affairs. The up-front exchange trades information for attention. When an audience is established, through sales or survey research, the broadcaster turns to the advertiser and offers to slip in a message for a fee. All broadcast-based entities are therefore competing for an audience commodity represented as tokens of that audience's attention via market research

⁶² Mitch Wagner, "Google Wants Your Attention" *InformationWeek*, November 15 2005, url: <https://www.informationweek.com/google-wants-your-attention/d/d-id/1038027>.

output and statistical projection.⁶³ Google takes an alternate path by looking for what people are already paying attention to, rather than trying to get attention directed at something. With the knowledge of what people are already paying attention to, Google sells seats as close to the path of totality as possible. As a result, less time and money is spent shifting and holding the attention of a potentially slippery audience. Analysts of the day were keenly aware of this strategy. It is no secret that in exchange for free services and software, Google just wants to watch everything users do. In the early days, however, what use attention data can be put to beyond serving ads was not entirely clear from the outside.

Seth Goldstein spent several years thinking through attention commodities from the perspective of financial markets. After the DCB, he saw that while open networks made a convincing argument for transparency, they were a poor case for privacy. The wholesale acceptance of digitalization and the development of sophisticated search algorithms made attention a valuable commodity. In order to avoid giving over total control of this commodity to “paid search and performance marketing...that has begun to anticipate our intention for its proprietary gain,” attention data should be traded as an

⁶³ Drawing here on Dallas Smythe’s audience commodity, but also on Christian Fuchs, Adam Arvidsson and Eleanor Colleoni. See conclusion below.

asset.⁶⁴ In order for this to work, the next iteration of the web will need to retain certain libertarian propositions regarding individual sovereignty and rights. As Beller notes,

these rights are imagined in terms of proprietary rights, but interestingly do not extend beyond the parameters defined up to but not including our outer skins. The vestigial space of interiority is to be preserved, for now, but our images, it seems, are up for grabs in the proprietary world.⁶⁵

What both Goldstein is presaging and Beller is commenting on is the separation between digitization and datafication that grows over the first two decades of the 21st century.

While at first the two need to function closely together, a gap between them will form the predicate for the full operation of a regime of governmentality. When commercial interest was peripheral, datafication was minimal. The turn of the century was also the turn of the web, from a medium of publishing to a medium of advertising.⁶⁶

Commodifying attention became central to the web. Datafication increases, becomes distinguishable from digitalization, after the bubble popped and there were losses to recoup and assets to strip.

⁶⁴ Goldstein, "Report from /Vaultstock!: Access is Everything" *Transparent Bundles* February 1 2006. https://majestic.typepad.com/seth/2006/02/report_from_vau.html.

⁶⁵ Jonathan Beller, *The Cinematic Mode of Production: Attention Economy and the Society of the Spectacle*, (Chicago: University of Chicago Press, 2006), 303-4.

⁶⁶ Goldstein, *Transparent Bundles*, March 2004.

Conclusion

The dot com bubble was made possible by the materialization of an idea for free, open sharing of information for its own sake in the form of an internet and World Wide Web protocols. The expansion of the bubble was caused by market speculation upon a primary, technical operation that I have been calling digitalization. Silicon Valley is not an incubator of genius, but a geographical inheritance of post-war information science. The ability to render many forms of information as files that could be separated, transmitted, parsed and reassembled between two or more computers was necessary to achieve a public repository of knowledge which early network engineers and programmers imagined from around the world for a century. A critical mass of like-minded users established the tenets of the early web. However, transparency is not a good market proposition because greater profit derives from greater opacity.

A wider profit margin is produced when no one really knows how and why some gambles work and some don't. In this opacity is an endorsement of exploiting asymmetrical knowledge of markets. When it becomes too obvious what costs are and where investments are safest, less soft-money flows to information peddling middlemen and competition increases for the controlled bets. These elements are further endorsements of a finance logic that prime pumped a speculative bubble in the tech sector of the US economy at the end of the 20th century. Post-bubble valuations were an attempt to recoup losses and fortify positions by the same operators who lost money

when the market collapsed. These assumptions about speculative value were made on the grounds of perceived fidelity of algorithms. The multiplication of platforms, which frames the next chapter, should be understood as an advancement of the monetization goal, not the evolution of the internet goal.

Chapter Three: Platform or Perish

*One thing we've been struck by is
how porous the space is between
social media, the media and law enforcement.
We assumed that if random people on Twitter
were sitting in their pajamas saying,
'Here's this kid missing in Providence that's skinny,
and here's something horrible that happened
because of a kid who's skinny,'
that speculation would be contained
within a certain space.*

-Sangeeta Tripathi; father of Sunil Tripathi, 2013¹

Introduction

A granular imbrication of data mining with everyday life was not a forgone conclusion of packet switching technology or computer systems, any more than suburban sprawl is a necessary artifact of internal combustion. Advertising need not be the only support system for communication or media arts, even if a corollary attribute is immediate, interactive digital interface. One need not be considered reactionary even if they seem to endorse the eradication of entire economic and technological way of life. Thus far I have sketched the imposition of a moment in the event of Web 2.0, whereby network protocols, marketing strategy, and financial speculation were woven together.

¹ Jay Caspian Kang, "Crowd-Sourcing A Smear: When an Insidious Rumor Went Viral In The Aftermath It Laid Bare The Dysfunctional Codependence Of The Boston Marathon Bombing, Between New And Old Media." *New York Times*, Jul 28, 2013. <https://login.proxy.lib.duke.edu/login?url=https://www.proquest.com/historical-newspapers/crowd-sourcing-smear/docview/1815014633/se-2?accountid=10598>.

Producing new users for the second iteration of the web became crucial for scaling proofs of concept to their initial public offerings. As a result of the conflation of intentions following the collapse of a speculative bubble, audience economies gave way to data economies. Under this arrangement, notions of transparency, privacy, and fungibility are integrated into both mundane and esoteric practices. In short, internet consumption is so profitable that everyday life must be monetized. If the previous chapter lays the ground for an imposition of marketing and finance, this chapter explores the cryptogamic expansion of those terms through channels of power and knowledge. The second coming of the internet makes computational life possible. Platforms that follow establish content as a force of veridiction and serve to bring the data shadow into coherence.

In this chapter, I unpack the data shadow at the intersections of users, platforms, and policing that emerged in the four days that comprise the event of the 2013 Boston Marathon Bombing. I am particularly interested in the vigilantism which welded state agents, legacy media, and platforms into an amorphous and mutually reinforcing apparatus of soft-surveillance. I will expand on this mode of surveillance below, but briefly, it refers to a process that recruits individuals to the task of their own surveillance through comparatively less violent, but often more intrusive, means. Through multivalent uses such as citizen journalism, platforms supply additional layers of mediation through regular operations, and in so doing magnify the degree to which

repeatability and repetition of a statement combine to approximate something approaching the function of truth under disciplinary society. What I am interested in with the Boston Marathon Bombing is how revised disciplinary tactics worked seamlessly with the authority of news outlets and reporters, how an air of expertise is conveyed through that authority as it circulates on the platforms and how, at the level of content, a way to distinguish between a platform's discourse and the news cycle is made ultimately irrelevant. The crisis of truth that has garnered so much attention of late is not a result of no longer knowing what is real, but is about the products of truth falling under new management—namely the news, now equalized as a content provider. If the information age produced the internet, a context-free internet seems to have produced the disinformation age.

In the hazy, groundless space of the shocking event of the Boston Marathon Bombing, voluntary and deputized agents of truth intersect in surprising, promising, and frightening ways. After several days, Dzhokhar Tsarnaev was named as a legally chargeable suspect. His identity was validated through a self-reinforcing network of traditional news, policing, and digital platform content, all in conjunction with a near-total lockdown of twenty-blocks of metropolitan Boston. During this same four-day period, Sunil Tripathi, a non-suspect was subjected to a parallel network of truth. Tripathi was a student from Brown University, reported missing well before the bombing, who was imbricated in the drama when a social media forum incorrectly

identified him as a suspect. Although missing, he was nonetheless made present through this speculation while such presence generated material harassment for his already beleaguered family.

Parallel truth might sound like disinformation, or worse, another nonsense phrase like fake-news, but the term indicates a lack of intentional deception otherwise present with both fake-news and disinformation. Instead, the information circulated here within is taken to be an honest contribution to communal knowledge, which if proven false expects to be discarded as an honest mistake. Thus, when the abhorrent treatment of Tripathi and his family is put under the gaze of hindsight by the same media that willingly contributed to the false narrative, individualized representatives of the parallel network of truth are often nonplussed.

From the moment of the bombing, ensuing police action was heavily monitored. Emergency Management System (EMS) communications and the hierarchy of press statements were mediated by both legacy and social media platforms. EMS communications including automated public notification, first responder radio scanners, and official releases from local, state and federal agencies, seeded press statements distributed across wire services like the Associated Press, Reuters, and United Press International and—crucially—established a flow of evidence for platform content. Of particular interest for this chapter is how social media users migrated from tertiary to

primary disseminators of information, in many ways authoring the narrative of the unfolding story they were also summarily commenting upon.

The event of the bombing shows how the financially motivated decisions captured under the heading of Web 2.0 enable platform to operate as both as competing media outlets and as a source for breaking news. Legacy media, traditional broadcast outlets like radio or television networks wrap around the bombing, while social media platforms, or what I will also refer to simply as *platforms*, weave in and through by privileging user engagement via content sharing. Social media and Platforms will be used interchangeably because it is useful to call attention to specificities of social mediation and the general features of platform ecosystems.

In the terms of a business enterprise, platforms are a model for facilitating interaction between internet consumers. In corporate literature, platform generally refers to parts, interfaces, and processes shared among a products. Contemporary web discourse is nothing if not an amalgamated concern of corporate strategy and information technology, so a general understanding of platform begins to emerge: The internet consumer, more generically termed a user, is on one hand, obliged to interact with others to fulfil the platform's potential. On the other hand, they are permitted to use the platform's technology to create and produce without interacting with anyone. The ecosystems of platforms and content providers will be central to this chapter. Some platforms function by letting users publish text, image, video (broadly, content). Content

providers are often found offering the same kind of things, whether created themselves or purchased elsewhere. The difference between a platform and a content provider, as business models, comes down to who originates the content: users (on a spectrum of intimacy with the company) or the company itself. Although some e-services (email, online banking, cloud storage, sms/mms) are related to or are themselves platforms, the discussion at hand will use platform in a more limited sense to maintain focus on the intentional facilitation of information sharing through posts and tags, i.e. social media.

The cultural changes at work through soft-means illustrated by Gary Marx's concept of soft-surveillance are described as "diffuse, subtle, and unseen" challenged only through "dialogue and education" which, I contend, are subsequently routed more and more through entities in control of the very developments which expand modes of soft surveillance—more platforms, multiple user IDs, and cross-referencing login credentials.² Additional coercion is evident in passive-aggressive signs informing us of our consent to terms of service prior to our conscious apprehension of those very terms. Although a tacit acknowledgement becomes more difficult, this means of surveillance still produces anxieties. Users of platforms are the object targets of a particular gaze that they are provisionally empowered to command to the extent that the focus a user directs on another pales in comparison to the focus placed on that user by the very activity of

² Gary T. Marx, "Soft Surveillance: Mandatory Voluntarism and the Collection of Personal Data." *Dissent* v52n4, (2005), 36-43. doi:10.1353/dss.2005.0074.

interfacing with a platform. What makes soft surveillance and digital platforms so amenable is the sense of space these platforms constitute through relations that further the goal of corporate data harvesting.

Structures of hive minds and docile bodies abound in the wake of the 2013 bombing. A normalized regime of soft surveillance and the relationship between users and their platform are not dependent upon one another to the extent that it fits to call them co-constitutive. Instead, I want to suggest that the obscured relations benefit, sustain, and discipline one another. I want to further suggest that the ease with which users gravitate toward platform-organized vigilantism and/or co-operation is because of the momentary relief it offers from managing our own self-surveillance. In the case of the bombing in 2013, I argue that practices subsequent to the dot com crash are not only functional, as discussed in the previous chapter, but scalable in periods of crisis, rupture, or extreme spectacle.

This chapter takes off from a discussion of Foucault's analysis of discipline in chapter one and my reading of the dot-com bubble in the previous chapter. I understand disciplinary regimes as malleable and dynamic, but above all understand power as adaptable to any resistance complicating the efficiency of governmental logic. Consequently, I assume any catalytic responsiveness located in discipline is available in all relations of power/knowledge.

Despite its august status in digital studies, I suggest that Deleuze's theorization of control has been inadequately grounded in explanatory frameworks for technologies such as platforms, and must be paired with other lines of thought to account for the dimensions of power at work through platforms. In the proceeding chapter, I argue that platforms extend the disciplinary logic outlined by Foucault. Media studies in particular have been anxious to integrate Deleuzian concepts, even at the expense of Foucault's work on governmentality and subjectivity. Nevertheless, the persistent habit of substituting a regime of control for control as a technique within a regime of (bio)power obscures a line of thinking that can derive from Foucault's more robust theorization of discipline.³

It is not my intention to set blame at the invisible-foot of capitalism, or even specific capitalists. A Foucauldian framework commits me to the certainty of multiple, contradictory causes precipitating any new regime of governmentality. In turning Foucault toward a theorization of media, I want to suggest that a mode of governmentality has appropriated a regime of truth selectively constructed and maintained through platform ecosystems, particularly in social media applications. The agents of these platforms, my capitalist subjects, do not invent the governmentality that now maintains the conduct of our conduct. Tech CEOs are not men of occasion steering

³ Mark B. N. Hansen, "Foucault and Media: A Missed Encounter?" *South Atlantic Quarterly*, v111n3 (Summer 2012), 498.

this world. They are not the cause, and they are less important in the long run than users. However, the economics of the relationship therein are important as a condition of possibility that is affected by datafication—that is, the element of the governmentality at hand presents an opportunity to ostensibly print money, attribute value, and direct violence. In other words, this is a relation of power that potentially renders the nation superfluous through expressions of corporate sovereignty.

Any Given Update

Considering that the Boston Marathon was a known quantity, at least in terms of public interest and emergency management, its 117th running was in some ways a well-oiled machine. Public safety bureaus bulked their ranks and drilled crisis scenarios for months leading up to the starting gun. In the presence of such a sudden calamity as a bombing, we should not be surprised by a swift and robust police response—for instance, an administrative swarm that descends and envelops the event, or spectators who turn (in)to informal organs of surveillance. Yet, by the end of the first of four days, an investigation was off the ground linking federal agents to state and city law enforcement down a typically hierarchical chain of command. Within metropolitan Boston, local law enforcement precincts from towns surrounding the city were on high alert—although none were directly involved in the case itself. Conversely, uniformed and plainclothes officers from the greater New England Area flooded into the city in

cruisers and personal vehicles to volunteer themselves in the manhunt for a bombing suspect. This volunteer auxiliary was not called forth by Boston law enforcement, but rather drawn to the city by reports broadcast on the news and shared through digital media platforms which indicated the efforts to identify a perpetrator were progressing slowly and that an arrest was far from guaranteed.⁴

Of the many people drawn together and permanently effected by the 2013 Boston Marathon Bombing, I want to begin with Sunil Tripathi. His circumstance demonstrates that identification and facticity are amorphous in the platform space. Sunil was on record as missed and missing for roughly a month before the marathon bombing on April 15, 2013. A student at Brown University on voluntary leave, he was last seen outside his apartment in Providence, Rhode Island on March 16, 2013. Worried for his safety, his family had taken up a search through every possible means. This included neighborhood canvassing, media outreach, police liaisons, and an open case with the FBI, as well as a Facebook page to coordinate many of these efforts.⁵ The social media page also hosted expressions of a desire from Sunil's closest relations to find him safely.

⁴ Massachusetts Emergency Management Agency, et al. *After Action Report for the Response to the 2013 Boston Marathon Bombings*. Boston, MA: Emergency Management Agency, December 2014.

⁵ Jay Caspian Kang, "Crowd-Sourcing A Smear: When an Insidious Rumor Went Viral in The Aftermath it Laid Bare the Dysfunctional Codependence of The Boston Marathon Bombing, Between New and Old Media." *New York Times*, Jul 28, 2013. <https://login.proxy.lib.duke.edu/login?url=https://www.proquest.com/historical-newspapers/crowd-sourcing-smear/docview/1815014633/se-2?accountid=10598>.

By using social media to memorialize the disappearance of a missing person who suffer from depression, as Sunil did, his family was acting on advice from psychiatric professionals who claimed missing persons often search for themselves online—perhaps to observe if their absence is noted or if they are at all missed. With this in mind, the Facebook page centering on the search for Sunil also included testimonial posts from those who were eager to find him.⁶ On the Facebook page dedicated to resolving the disappearance, a toll-free number was listed to net any information volunteered by the general public that could help locate Sunil.

Police often solicit the aid of local citizens to generate leads in cases that have political or social importance, or which are headed toward an investigatory stall. Procedural dramas like *Homicide: Life on the Street* and *The Wire* have dramatized soliciting the public as a largely performative gesture which at best serves public relations and at worst inundates police with useless leads and crank calls. Nevertheless, folding of general publics into juridical processes is strategically valuable as it selectively reinforces within the citizenry the notion of police as a public good. Enabling and ennobling a citizen army can be understood as a force multiplier via temporary self-conscription. I am calling attention to the force-multiplier here because it attends two aspects of a synthesis between police, news, and platform content. Each aspect carries

⁶ Jess Bidgood, "Mistaken Identity After Blasts: [National Desk]" Late Edition (East Coast), *New York Times*, Apr 21, 2013. <https://login.proxy.lib.duke.edu/login?url=https://www.proquest.com/newspapers/mistaken-identity-after-blasts/docview/1330913425/se-2?accountid=10598>.

unique valances of care. The search for a missing person and the search for a criminal suspect deployed the same apparatus to produce a body for radically different purposes. That these two goals became so intertwined should not be reduced to cruel irony. Instead, the rapid conflation of identities can be seen as one mode of subjection in a mode of governmentality that functions through datafication.

By 2013, it was de rigueur for people and institutions to record and distribute self-centered information across various digital media platforms. Thus, on April 15, 2013, it was within standard expectations that the Boston Marathon was shuffled in among other bits of information transmitted across numerous platforms. The most utilized platforms at the time of the bombing were Facebook, Reddit, and Twitter. Reddit branded itself as “the front page of the internet” and hosted over a hundred million active communities in forums on its site.⁷ In a cursory sense, Reddit’s format is a combination of link-aggregate and discussion forum called social news. Like Digg and Slashdot before it, Reddit plays host to user interactions under a seemingly endless variety of topics. Registered users, known as redditors, create topic forums called subreddits within which other users can share links to images, pictures, other websites, or converse with one another. An upvote and downvote system ostensibly gives each user one vote on every single post in nearly all subreddits.

⁷ As of Dec 2019, ranked #5 on Alexa, more than 430 million active users per month, and 21 billion average screen-views per month. See, <https://www.redditinc.com/press/>.

Simultaneous with the foot race, there were hundreds of thousands of exchanges taking place on all three platforms. These exchanges were similarly curated and held together by likes, upvotes, and hashtags but had no narrative relation to one another except for being networked by the unifying medium of the platform. The imbrication of parallel narratives is precisely how the two explosions that would recursively mark that year's Boston Marathon as an instance of domestic terrorism called The Boston Marathon bombing were captured and distributed live for anyone watching for whatever reason. Such a discursive convergence also provides a way of thinking about how social media posts circulate from that moment forward.⁸

A repetition of first-and-second hand accounts continued to unfold not only at the moment of the explosions, but spilled into the investigation proper. This included some of the grislier photos of the victims, many of which would have been editorially censored from traditional news coverage. When several days passed without a declared suspect, the natural turn to solicit public input was already underway on sites like Reddit, where a live-thread in the r/news subreddit had been gaining momentum since the first few moments of the bombing. Instead of directing suspicions through the filter of a police hotline, the activation of a general public called citizen journalists and web

⁸ Wikipedia, another platform with its own type of social mediation, exemplifies the separate status and nomenclature of the two events, https://en.wikipedia.org/wiki/Boston_Marathon_bombing.

sleuths to muster. As a result, Twitter, Facebook, and Reddit hosted waves of speculation.

Perhaps the most well-known and lamentable effort was located on the subreddit, *r/findbostonbombers*. On this subreddit, users posted and shared all manner of information related to the immediate bombing. CCTV camera stills were compared against personal snapshots. Photo editing software was used to add clarifying graphics, geometric extrapolations, and one-to-one comparisons of people, places, and things from the vicinity of Boston's Copley Square. To call this an investigation, even an amateur effort, is far too generous since there was no structural process for vetting assertion from supposition, nor any means of validating sources.

By sources, I mean specific posts and users rather than the journalistic or academic sense of an originating location of information. In the context of social media, a source is basically any form of content, or in this case, posts relating to the bombing suspect: a user conveys information, regardless of where that information was originally obtained. In light of this specification, it is especially egregious that reporters would choose to replicate such posts themselves. It is also important to consider the levels of mediation at work in the public search for a bombing suspect. Describing a concept called "second screening" Gil de Zúñiga, et al, argue that a normative mode of interaction for users includes a hybrid media process wherein layers of interface that

become locally unified.⁹ Second screening is present in the case of the bombing in its most basic manifestation: television news and a web-connected screen.¹⁰ As the situation unfolds in Boston, we find journalists acting very typically as users, only not in the practice of leisure consumption but in the practice of discursive knowledge production.

The point of calling attention to sourcing, layers of mediation, and levels of meaning is to show that from an originating location, say, police scanner broadcasts, information is represented as content in a social media post by a user whose social capital is a function of prior, often unrelated posts. Such social capital is itself accrued through frequency of engagement with/in a community and valorization by/of other users in that community. As it happens, users with high-level social capital gained from, say Hollywood Celebrity Gossip or Internet Culture Blog can traffic information about the bombing (at least initially) with a high degree of credibility—this is not a random example; this the actual progenitor of the Sunil Tripathi rumor. Granted, there are firsthand survivors of the bombing maintaining a high-post profile on their platform of choice, but there are also people hundreds of miles away from Boston speaking with nearly identical authority. In short, context becomes secondary to content.

⁹ Homero Gil de Zúñiga, Victor Garcia-Perdomo and Shannon C. McGregor, "What Is Second Screening? Exploring Motivations of Second Screen Use and Its Effect on Online Political Participation," *Journal of Communication*, v65, Iss. 5, (October 2015), 793–815, <https://doi.org/10.1111/jcom.12174>.

¹⁰ Gil de Zúñiga, et al, "What Is Second Screening?" 793.

Recall from the previous chapter that Web 2.0 at once decreased the importance of contextualized information for media distribution chains and increased reliance on the circulation of user-generated content as a means unto itself. Between 2006 and 2009, the changes Web 2.0 inaugurated were instrumentalized in pursuit of a different strategy centered on advertising and financialization. While each of the aspects of reconfigured disciplinary power and novel media discourse function on their own, they are still able to work in concert. The platform interface becomes an important site of analysis for cultural studies of technology in addition to the network effects and infrastructures of internets because platforms serve to re-commodify the internet after the dot-com bubble. The dot-com crash and the event of the bombing are each a spontaneous rupture that reorients specific technology and discourses around it.

The break constituted at the end of the dot-com bubble, through a convention organized by a key fabulist of the era, Tim O'Reilly, made room for several potential utilizations of the underlying technology of the internet through digital media platforms. The value propositions and low-overhead scenarios of social networks, among other factors, initiated the transition to a particular type of internet and second tech bubble by 2011. This transition has effects which are articulated through a reading of the various responses to the Boston Marathon Bombing in 2013. After the bombing, one of the key questions regarding truth and trust that continually presented itself during the initial adoption of the commercial web no longer needs to be answered. The

questions—What of this content is truthful? Who in this space can I trust?—remain at large, but the absence of an answer is no longer an impediment to circulation of content. It may well be that the lack of an answer is, in fact, a partial driver of continued production of content.

Platform development and its precedent change the present orientation and speculative horizon associated with the technologies discussed in Deleuze's most cited work on this topic. To this is added the problem of generalizing internet and web protocols from the perspective of a limited set of its utilizations, or mapping a specific critique of use onto the totality. A reassessment of Deleuze's oft-cited *Postscript on Control Societies* in the context of Foucault's prior work on governmentality is in order because while Deleuze's claim that discipline loses efficacy is true enough, deployments of his concept of control overgeneralize the problem and make a political assessment of any institutional waning and self-repair more difficult to pin down. Such overgeneralizations are a problem for addressing any distinction between user-generated-content and platform-content as each are brought into relief in a networked space that is more and more context averse.

Postscript on Control Societies opens with a historical sketch describing the development of discipline in the eighteenth and nineteenth century as having followed from sovereignty and likewise fallen into disrepair toward the end of the twentieth century. Most notable for the decline of discipline is the general breakdown of all sites of

confinement—prisons, hospitals, factories, schools, the family.¹¹ The theorized breakdown of confinement that inaugurates a control society is through reorientation from the level of the individual enclosure to the level of administration of variables. Consider that state officials, news outlets, and digital media platforms will all, occasionally, express the exact same variables. For example, as the bombing stretched into a prolonged spectacle, everything from the affective tone of reporting to the concrete requirement for residents to lock themselves inside their homes would be modulated not by which administrative site issues commands, but by how many points of overlap could be situated between them.

In practical terms, during the event of the bombing social media posts claimed police have named suspects. News (stations, papers, sites) reported claims of police naming suspects, but did not confirm or deny the facticity of those claims. This is reporting on the reporting of other outlets, including both news outlets and social media posts. Social media posts re-circulated the initial information, but eventually included corroboration from one or more news outlet. That is, social media participates in the repetition, while also co-opting the repetition and applying it as confirmation. Some news outlets were in a position to confirm with their own reporting, while others driven by lack of funding or pressure to scoop competition continued to re-iterate false or

¹¹ Gilles Deleuze, "Postscript on Control Societies." in *Negotiations*, trans. Martin Joughin, (New York: Columbia University Press, 1990), 177-182.

flimsy claims. Police issued statements in support or denial of particular stories, but their designation of fact is ultimately less important than the fact of a police statement itself. The evocation of police signified corroboration in the content cycle.

One result of these continuous, floating interiors is that people are disciplined, including self-disciplined, accordingly as the space is encoded or decoded. In the years leading up to the 2013, as the case of Boston shows, there is a model for power through diffuse authority, but in practice, activities like policing continually revert to disciplinary tactics.¹² These tactics are laid out by Foucault as having followed from the publicly visible expressions of sovereign power. Processes of interrogation and confession develop into the recognition of truth and acceptance of transgression, all of which are shown to extend through the body to manipulate, constrain, and prohibit to such an extent that juridical discipline compels the individual takes up the task of their own accord.¹³ The crucial difference is that whereas sovereign power is demonstrably emanating from an individual source, discipline disperses that power through “instrument of permanent, exhaustive, omnipresent surveillance, capable of making all visible, as long as it could itself remain invisible.”¹⁴ What is newly possible in the platform ecosystem is that disciplinary flexibility is gained by reintroducing an element

¹² Writing this in the thick of worldwide protest and pandemic seems to make the existence of a revised disciplinary governmentality more certain. But then again, the outbreak of conventional warfare in Europe throws some serious nineteenth-twentieth century chips up in the air.

¹³ Foucault, *Discipline & Punish*, 1-40.

¹⁴ *Ibid*, 214.

of visibility. Under the disciplinary scheme described by Foucault, both the presence and absence of activities are observed, examined and judged.

In the first chapter, I alluded to the relief a user feels in the momentary pivot of surveillance away from themselves onto others. What transpires in Boston is the other piece of that transfer, the dragging out into the streets those who must be punished to discipline society as a whole, literally and figuratively. In addition, citizens were momentarily arrested when police issued an order to shelter-in-place.

As late experiences of the pandemic seem to suggest, any effective *lockdown* hinges on surveillance in that the circumscription of a population requires an intensity of visibility and force. True, there is a distributed gaze, but is it fair to say that the source is unidentifiable to the extent that it resides in each of us? It seems more accurate to say that bodies and souls are made to utilize the networked gaze to observe newly public spectacles and processes of interrogation. Note that the former is not excluded by the latter, but is in my view magnified. In the wake of the bombing, Boston was a geographic and performative space within which I read the effective distancing of datafication from the technical operation of digitalization. What was a minor modification to digitalization extends into itself as a proper expression of power and social conduct.

From the perspective of power and resistance, the primary infrastructure of digitalization will have been augmented with a self-sustaining and expanding interior

through datafication. In effect, the infrastructural period Deleuze identifies as marking the end of confinements turns, by accident of history, to a different kind of confinement for subjects specific to a newly emergent governmental rationality. Two key functions of this moment are a discursive breakthrough achieved by digital platforms and the rapid expansion of the internet's user base. As a result of the Web 2.0 model having proven reliable, the advertising market privileges content over context and the number of users grows to more closely resemble (and in some cases wildly surpass) a traditional broadcast audience in numbers alone.

It is important to remember that up until around 2005, the web referred to a collection of protocols that were more or less decentralized and community-governed. Its users were also its builders, and most of the action was at the edges of the network. After 2005, more of what was built and more of the use was centralized and siloed by large corporate agents. A before and after spectrum for Web 2.0 would encompass decentralized and communal ethos, but low functionality before, and increasing functionality attending a centralized-corporate ethos after. The whole premise is founded on the idea of network effects: more users over time increases the value and functionality of the network over the same period. The time/growth matrix assumes that the early days are flush with cooperation between development and business, which attracts users. It further assumes that over time, a growth imperative necessarily increases competition and turns users into extractive resources. Once tech firms can no

longer afford to share users, they must get more from each single user beyond their presence and participation on the network. User experience gets more homogenous. Developers and founders formerly hailed as innovators chase short-term pivots as a strategy for acquisition.¹⁵

The evolution of datafication largely involves reorienting existing elements, with relatively few — although no less crucial — truly novel additions. These new elements are exaggerated in importance to the extent that their presence can occlude the movement of existing parts like platforms and users. When a user base expands rapidly, it simultaneously expands the discursive space of the platform. Within the confines of the bombing, the new element is platform content, as opposed to user-generated-content, having increasing currency. Users cosign platform content such that non-networked media are left no recourse but to accept the circulation of a platform's marginally accessible truth and knowledge. The occlusion here is a perception of more information than can ever be made sensible, but what it occludes is a population that relies less and less on a distinction between signal and noise. The example of the bombing shows that a digital-physical space is real in a way that we rarely consider — an operational, dynamic combination of abstract and concrete events.

¹⁵ As programmer/developer/founder Maciej Cegłowski puts it, "Recall that *advertising* is when someone pays you to tell your users they'll be happy if they buy a product or service. *Investor storytime* is when someone pays you to tell them how rich they'll get when you finally put ads on your site," (emphasis original). https://idlewords.com/talks/internet_with_a_human_face.htm. See also: Wendy Liu, *Abolish Silicon Valley: How to Liberate Technology from Capitalism* (2020).

There are no means of validation for sources that rise to any standard of an investigation—neither legalistic, journalistic, nor academic. This territory still allows for a large degree of flexibility, and social media posts still, regularly, fall far short of even this attempt to frame a standard for knowledge production. The posts are also inadequate to the standard of folk wisdom since the insularity of the community is not an expectation or a requirement. In short, what we find is merely an amplification of low-fidelity transmission. Low-fidelity transmission, as Xinghua Li describes is amplified within and across platforms as social capital by regular users and as current events by reporters.¹⁶ The interesting catch is that, among reporters, some are posting to personal social media profiles, while others are pivoting from what we might call journalistic categories of entertainment and culture beats to hard news. A prime example of the pivot is in the BuzzFeed newsroom, where throngs of hipster-listicle authors were positioned to scoop major media outlets because of an existing, embedded relation with social media platforms. This pivot could not have been possible if the territory had not been primed by engagement-focused content production over and above more traditional, contextual media distribution (both of which are connected to marketing and advertising).

¹⁶ Xinghua Li, "Whispering: The Murmur of Power in a Lo-Fi World." *Media, Culture & Society*, vol. 33, no. 1, (January 2011), 19–34, doi:10.1177/0163443710385498.

Since there was already a pipeline for audio, video, and image from the marathon, the bombing indicated a shift in content. Smiling faces, runners, and crowds turned into anguish, rubble, and gore. Many of the most stark and salient images that became iconic were originally posted to these threads on platforms, far ahead of any traditional media reporting on the event. The rapid (re)structuring of discursive space arguably starts and ends with social media, especially those platforms focused on in this chapter.¹⁷ Traditional news pulled from Reddit, Twitter and Facebook, plus EMS reports, but all aforementioned are cross-pollenating through competing platforms. The circulation of information is not just about the bombing and its investigation, but the immediate processing of trauma and civic actions like sharing resources for people to locate loved ones, reputable charities, and locations for memorials. While it risks sounding insensitive, I want to suggest that one of the major effects of the bombing is the full articulation of news into the industrial combine of platform content. This platform content model is helpfully illuminated by John Battelle, which I will address in a later section.

¹⁷ i.e., Facebook, Twitter, and Reddit. For instance, Reddit grew exponentially from a traffic spike following the bombing, drawing more interaction between existing users, pulling in more new users, and seeing wider brand recognition than at any point to that date since launch.

Painfully False

The Boston Marathon is a 26.2-mile point-to-point foot race that begins east of the city of Boston, in Hopkinton, Massachusetts, continuing through the towns of Ashland, Framingham, Mattick, Wellesley, Newton, and Brookline before finishing in Boston's historic Copley Square. The marathon is a popular, intra-municipal annual event attracting tens of thousands of amateur and professional competitors and hundreds of thousands of spectators from around the world into the metropolitan Boston area. The marathon is controlled by the Boston Athletic Association (BAA) itself formed in 1887 as a private club "to encourage all manly sports and promote physical culture."¹⁸

Inspired by Olympic running events, and fitting nicely within the club's tradition of track and field competition begun in 1890, the yearly repetition of the marathon has continued through the organization of the BAA since 1897. This makes the Boston marathon the world's oldest annual marathon. It is an anchor event for Massachusetts' observance of Patriots' Day and a capstone for weekend-long observance in greater Boston.¹⁹ The marathon's status as a well-attended and logistically complex attraction has given emergency management from around the world the opportunity to practice and drill response strategies.²⁰ It is also an enormously profitable event for attendees

¹⁸ For the Boston Athletic Club's *selective* history, see <https://www.baa.org/about/about-us>; <http://216.235.243.43/races/boston-marathon/boston-marathon-history/boston-marathon-facts.aspx>.

¹⁹ Patriot's Day is a loosely recognized, annual commemoration of the American Revolution.

²⁰ Massachusetts Emergency Management Agency, et al. *After Action Report for the Response to the 2013 Boston Marathon Bombings*. Boston, MA: Emergency Management Agency, December 2014.

able to rank for millions in prize money, and for those who benefit from association with the event, like chief sponsor John Hancock Financial. Contained within a single footrace, therefore, are politics, economic, and social legacies of city, state, and country which are all thrown into question and chaos by the event of the bombing.

When the first of two homemade bombs were detonated on April 15 at 2:49pm on Boylston Street, Copley Square's northern border and final leg of the Boston Marathon, the race was very much underway, but the 102-hour event of the bombing—from the first explosion to the arrest of Dzhokhar Tsarnaev—was only just beginning. Although the winner had crossed several hours earlier, thousands were still making their way to the finish line. Runners, race support personnel, spectators, and police packed the immediate area. Within minutes of the first blast, a temporary command center dispatched and coordinated police, fire, and rescue. Hospitals braced for an influx of patients. Emergency notifications pushed information to mobile devices around the city via purpose-built software platforms designed to allow licensees to deliver public safety and security messaging directly to networked users.

The event of the bombing rippled out over several days. EMS demarcated a territory around the explosion, a territory in which to inscribe a suspect. Since the epicenter was in Boston proper, law enforcement assumed the suspects would be found within that area—if they would be found at all. Thus, mass transit was halted to hinder anyone fleeing on foot. Publicly accessible traffic cameras and CCTV came under intense

scrutiny. As the investigation pushed into its second and third day, broadcast media and social media established a parallel territory, similarly prefigured a suspect, and engaged in a continually overlapping, and at times contradictory, ritual exercise for authority over the narrative.

On day three, platform anchored web sleuths, roving citizen journalists, and outright vigilantes besieged the physical and digital space of metropolitan Boston. Although there are several inroads to the problem—racist discourses on platforms, spurious news updates, influx of extra-jurisdictional officers from greater new England—the most salient is the path Sunil Tripathi took to the heart of the matter. As noted above, Sunil had been missing for a month before the bombing. His disappearance was widely noted in terms of regional media and police. When investigators released photos of the persons-of-interest, those images were immediately correlated to all manner of brown body. For a segment of the traumatized public, fuzzy images of a crowd functioned as a Rorschach test. Vaguely-foreign was probable cause. Among the flurry of speculation and confrontation, a connection was suggested by an old classmate of Sunil. A response to one of the crowd photos read, ‘this looks like a guy I went to high school with’.²¹

²¹ A live thread archive is located at https://archive-it.org/collections/3649?fc=meta_Subject%3AReddit. See also, Nicolas LaLone, Jess Kropczynski, and Andrea Tapia, “The Symbiotic Relationship of Crisis Response Professionals and Enthusiasts as Demonstrated by Reddit’s User-Interface Over Time” *Proceedings of the 15th ISCRAM Conference*, Kees Boersma and Brian Tomaszewski, eds. (Rochester: May 2018).

The following timeline is rooted in Alexis Madrigal's reconstruction published in the *Atlantic* on April 19, 2013, augmented with moment-to-moment news reports and social media posts comprising the four days under consideration. What I want to emphasize with this archive is the cross-pollination through different levels of periodical, different levels of platform discourse, and most importantly, different valances of truth.

Madrigal's telling begins with a phrase that could easily summarize the entire ordeal: Painfully False. The fount of information is the EMS scanner, from which reporters and posters were drawing info since the first moments of the bombing. *Someone* said they heard the names of the suspects over the scanner, *someone* said a blurry photo reminded them of an old classmate from high school. It should not be left to a parting note to mention the following, directly from Madrigal's postmortem:

A few things are for sure: the scanner chatter never mentioned the two false suspects together. The scanner chatter never mentioned them as suspects, either. The scanner chatter recordings contain no record of any mention. And no one has been able to produce any recording of the scanner mentioning Tripathi.²²

Based on photos of crowds in the vicinity of the bombing, two figures were isolated, one of which was attached to Sunil. From there, pictures of Sunil scoured from the web—not the least from Facebook and Twitter accounts maintained by his family in their efforts to locate him—were compared to the isolated-suspect image. Deemed close-enough by a

²² Alexis Madrigal, "#BostonBombing: The Anatomy of a Misinformation Disaster," *The Atlantic*, April 12, 2013, url: <https://www.theatlantic.com/technology/archive/2013/04/-bostonbombing-the-anatomy-of-a-misinformation-disaster/275155/>.

sufficient number of users,²³ Sunil Tripathi became suspected as an agent of the bombing. Not a suspect, which is a juridical category, but suspected as, which I am emphasizing here as a veridical category.

Madrigal traces Sunil's identification through Greg Hughes, who posted to Twitter at 2:42am, followed immediately with 'BPD has identified the names: Suspect 1: Mike Mulugeta. Suspect 2: Sunil Tripathi.' That Hughes retains authorship emphasizes the importance of being first to the line, a standard that platforms inherited from news dissemination. Madrigal clarifies: "The only problem is that there is no mention of Sunil Tripathi in the audio preceding Hughes' tweet. I've listened to it a dozen times and there's nothing there even remotely resembling Tripathi's name...It's just not there."²⁴

The problem to contend with is this: a recording of the scanner entered into the official record by virtue of its being hosted on the internet. It's the recording of a scanner broadcast from the night in question most often cited and shared. Yet, it is still possible, as Madrigal points out, that the name was spoken, someone did hear it, but it somehow did not reach a point of inscription outside of secondhand reference on platforms. The citation is asserted but does not exist upon investigation, so could it be that the outcome itself is the authoritative foundation upon which the motive rests? Is it the case that someone must have heard and someone must have said, because otherwise a large

²³ Note this correlation through clustered data points is the state of the art when applied to algorithmic prediction.

²⁴ Madrigal, "#BostonBombing," n.p.

number of people were just blowing smoke up their own asses? Regardless, peripheral observers were ready to cut through the noise and declare victory: “Fuck political correctness, good job reddit,” wrote one commenter. Said another: “Wow, just wow. And a Redditor was the one who made the connection to begin with. Internet FTW.”²⁵

Within minutes of Hughes posting, the information is re-posted (re-tweeted) by a user affiliated with a network (a cameraman for Hartford, Connecticut’s CBS affiliate). Now hash-tagged, more media adjacent figures were re-posting: from BuzzFeed, Digg, Politico, and Newsweek. Finally, at 3am, a content aggregator account—@YourAnonNews—repeated the information again. From this first wave, thousands of repetitions followed producing exponential verification. Within this flurry was a celebratory note valorizing new media over old media. This sentiment quickly overtook the narrative, relegating Sunil to a background or foregone conclusion. Both Sunil and Mulugeta were subsequently convicted through trial by platform. From @YourAnonNews: “If Sunil Tripathi did indeed commit this #BostonBombing, Reddit has scored a significant, game-changing victory.” And then later, he continued,

²⁵ See Andrew Kaczynski and Rosie Gray, “Reports: Chechen Brother—Not Missing Brown Student—Are Suspects” *BuzzFeed.News*, April 19 2013. <https://www.buzzfeednews.com/article/andrewkaczynski/nbc-reports-overseas-figures-not-missing-brown-student-are-s>., Telling, since the reported negation relies on an appeal to authority that was not necessary when the same outlet spread false information linking Tripathi to the bombing to begin with.

“Journalism students take note: tonight, the best reporting was crowdsourced, digital and done by bystanders. #Watertown.”²⁶

If indeed. Hughes’ post, pulled for emphasis in the Madrigal post-mortem, makes a claim about knowledge production on the internet. We must assume he means the web, and even then some portion trimmed from all the trolling and chatter. These messages from Greg Hughes highlight what is at issue. First, a side-step distancing into objective-mode; second, the standard-bearing for new media; third, imploring revision of j-school curriculum. The closing hashtag, #Watertown, shows just how maddeningly close to reality all of this was transpiring. Watertown is a township, sidling Boston proper. Within Boston’s metro demesne, but fully autonomous at least in terms of police jurisdiction, Watertown is precisely where police first encountered the perpetrators of the bombing.

It started in Watertown with a carjacking and attempted kidnapping. Forced into his vehicle by two men, the victim overheard his captors discuss the recent bombing. While stopped at a gas station, the victim effected an escape. He reported all above—the car, the kidnapping, and the talk of the bombing—to police. When a patrol officer stopped a vehicle matching the description of a stolen vehicle, nearby officers responded. The driver and passenger immediately engaged these officers in a brief

²⁶ In Madrigal, “#BostonBombing,” n.p.

firefight, in which one suspect was wounded and the other fled in the stolen car. All injured parties were taken to a hospital. In the emergency room, FBI agents identified and secured a confession from Tamerlan Tsarnaev. He later died in custody at the hospital, but his accomplice and brother, Dzhokhar Tsarnaev, was still at large. Although the Tsarnaevs are quickly replaced in the category of suspects, Tripathi remains connected to the event (as my writing here clearly contributes to).

It is important to consider the cyclic nature of fact and rumor with and against the intersections of speculation and confirmation that attend any extreme scenario. Between traditional news media and digital media platforms, these qualities become well sedimented within the first few hours of a spectacular event. It is not enough to simply indicate that each outlet represents a point of mediation. They are symbionts within the digital ecosystem. It is this bond which allows a mutually beneficial relation to form, but does not preclude parasitism in the long run. The existing relation between traditional media and police was bolstered, while digital media platforms forged a new relation with policing. Since no single mediator can claim final arbitration over truth and facticity, but also because at least one zone is always able to host truth and falsehood simultaneously, all three—policing, public discourse, and platform content—are able to become far more flexible in their respective messaging. The distinction between user-generated-content and platform-hosted-content noted at the start of this chapter

becomes a matter of strategy and branding once the space of discourse becomes, as noted through Battelle, less dependent on context.

All of the usual suspects were serving as great clearinghouses for information. Facebook, Twitter, and Reddit were concentration points for many third-party actors to glean and distribute information about the event. By 2013, it was not uncommon for freelance and staff reporters to use platform content as sourced information. Former marketer Ryan Holiday describes a tidy filtration system so integrated into the media ecosystem that its standard function and its exploitation are nearly identical. The existing media ecosystem and emerging platform ecosystem were, at this point, deeply integrated. As a result, news media outlets were able to participate in a simultaneous commodification of the event and a commodification of information about the event. Two streams of attention were then drawn back toward social media platforms.

To understand the inter-articulation I am describing here it's important to bear in mind that social media platforms are only one facet of the platform ecosystem, just as news is but one facet of the media ecosystem. How the news operates does not necessarily produce a summary effect across all broadcast media, and nor would this be the case for social media platforms. However, a network effect across each ecosystem and mutualistic symbiosis between the two is still possible and, in the case of the bombing, quite probable. The difference during the bombing is a concentrated focus on police radio dispatch that emerged on social media platforms under the banner of citizen

journalism. What makes this emergence possible and persistent is a habit of interaction that pre-dates digital media platforms, a practice intrinsic to the technology since the early stages of the internet's development. That is, during the period of digitalization, defined in previous chapters as a time when existing computers are being networked, and these networks are multiplying in universities, businesses, and homes—a moment when computational space is rapidly integrated into real world experience via a doubling of official documents, state archives, and person to person interactions through a digital interface. Digitalization encompasses the technical predicate for the internet industry from the 1970s through the prime-pump of the dot-com bubble and becomes the infrastructure for increasing frequency of communication taking place online thereafter.

If viewed from the metric of engagement, which is what produces more data from user interface and sustains the value of spaces in ad-auctions, major media properties like social media platforms draw in massive numbers of users, who use the platforms frequently, and constitute an audience on par with or exceeding traditional bastions of truth like newspapers and broadcast networks. Users on these platforms initially represent the latent, utopian potential of the internet left among the pieces of the dot-com bust, but are subsequently instrumentalized through their use to mark the limits of what platforms can and cannot do. However, since the underlying technology of networking and internet protocols were already integrated into everyday life through

digitization, business strategies branded as real or imagined technical limitations are rendered invisible. As platforms grow under these conditions, whatever lay beyond specific horizons of possibility is represented as beyond the capabilities of the technology, or perhaps even the capacities of our species.

Limitations as to what kind of story can be told about information technologies are routinely determined by the most investor-friendly future-tense. The tendency has been to frame computational networks, web protocols, database architectures, and so on as more powerful and more successful than might actually be the case because while a discourse and an imaginary form around these technologies, some portion of that representation is in service of capital investment and consumer adoption.²⁷ How these inflated descriptions build off of an overly optimistic prediction gives us a window into what fuels an increase in viral flows of information and a decrease in a transferrable truth. The case study of the bombing shows how, where journalism and advertising overlap in attention economies, the capital to accrue commodified attention is in and

²⁷ See: Technology Quarterly, "An Understanding of AI's Limitations Is Starting to Sink in," *The Economist*, June 13, 2020. <http://www.economist.com/technology-quarterly/2020/06/11/an-understanding-of-ai-limitations-is-starting-to-sink-in>; Max Read, "How Much of the Internet Is Fake?," *Intelligencer*, December 26, 2018. <https://nymag.com/intelligencer/2018/12/how-much-of-the-internet-is-fake.html>; and accompanying tweet-storm: <https://twitter.com/Chronotope/status/1078003966863200256>. Ellen Pao, former Reddit CEO, responds to Max Read's tweets: "It's all true: Everything is fake. Also mobile user counts are fake. No one has figured out how to count logged-out mobile users, as I learned at reddit. Every time someone switches cell towers, it looks like another user and inflates company user metrics...And if an unlogged-in user uses the site on multiple devices, each device counts as a unique user." – @ekp, December 26, 2018.

through a data economy. It also goes toward an explanation of why deploying new meanings for terms still circulating in that space remains such a lucrative tactic.

Making platform content into sourced news increases until interaction with content is considered vetting of sources. For a limit case, see any number of Twitter screen grabs or esoteric usernames appearing in national news coverage that are then followed by the post history undermining or distracting from the story itself.²⁸

Ultimately, citizen journalists become freelance web-sleuths or platform-deputized investigators. Of particular interest for the coherence of citizen journalism is the support for up-to-the-minute information posted to and shared on Reddit's multiple sub-forums. The contributions of other users are evaluated by a combination of the self-described hive-mind of Reddit's user base and a bundle of proprietary sorting algorithms. What reaches the actual 'front' or landing page of Reddit.com is determined by the alchemy of practice and programming. For instance, while representing user interest in a very basic way, the voting system also allows for any number of bot or sock-puppet accounts to foment engagement, legitimate users to form cross-forum vote armies (brigading), and backend weighting of up/down votes within certain thresholds of engagement. In short,

²⁸ See Abby Ohlheiser, "Ken Bone was a 'hero.' Now Ken Bone is 'bad.' It was his destiny as a human meme" *Washington Post*, October 14, 2016. <https://www.washingtonpost.com/news/the-intersect/wp/2016/10/14/ken-bone-was-a-hero-now-ken-bone-is-bad-it-was-his-destiny-as-a-human-meme/>. Ohlheiser tracks the rise and fall of human meme, Ken Bone: crimson-sweatered liberal hero of the second Clinton-Trump debate at Washington University, St. Louis. For purposes herein, it's less interesting that Ken became a meme and more interesting that none of the debate's media wranglers thought to check his post history for celebrations of pregnancy porn and luke-warm takes on Trayvon Martin prior to his softball question for the candidates.

the self-referential feedback loop on Reddit specifically, and social media more generally is a determinant of user interest.

Performatively True

Finding clarity on how and why arbitrated attention and falsifiable engagement come to support discourses of truth requires another brief excursion into marketing and advertising. For that, I turn to John Battelle, a journalist by training and serial founder by trade, who has helmed several flagship tech publications and who, along with Tim O'Reilly, organized the first Web 2.0 summit in 2004. His explanation of how making money from the intersection of digital and broadcast media changed in a very short time is helpful not only because he has first-hand experience, but because his perspective represents a business-mindedness that is often occluded by techno-libertarianism.²⁹ Battelle's description of the platform-as-business begins with the stipulation that the advertising infrastructure that makes money with the internet "is one of humanity's most marvelous creations" but is now kind of terrifying. It's not terrifying because it started doing something unexpected, but rather it has kept doing what it was praised for doing from the beginning, only now it does it at such scale, no one knows or

²⁹ Drawn from an archive of keynote addresses, interviews, and personal writings. All quotes from personal blog that either germinates or recycles aforementioned sources. url: <https://battellemedia.com>. See also, Battelle's *Search: How Google and Its Rivals Rewrote the Rules of Business and Transformed Our Culture* (2005).

understands how it actually works. Tech giants are as valuable as they are ubiquitous in his view, but they are advertising companies at the end of the day. I will append Battelle's advertising matrix to the before/after spectrum above.

Before the dot-com bubble in 2000, advertising was an easy, naturalized business practice. Identify a target audience, develop a creative message, determine a delivery method with a media plan. A media plan would map target-audience engagement across publications, tv, and radio using demographic research and best guesses. These ads all run in the general category of Media Outlet and can only traffic in appropriate speech. What speech is appropriate is determined by strict rules made by federal regulation. The Federal Communications Commission says you can't be obscene, whatever that means. The Federal Trade Commission says you can't blatantly lie to people, say things to con them out of money or make them sick. The Federal Election Commission deals with the political component of advertising, i.e., candidates and elections. Regarding the FEC, this used to be about knowing who was paying for what messages about which issues or candidates, but Citizens United and dark money sort of make it all moot. Koch, Mercer, and any other billionaires with time can pool money into Political Action Committees and basically flood the zone as Steve Bannon has called it, especially once context evaporates and everything becomes content.

After 2000, mainly between 2004 and 2014 in increasing degrees, the business of the internet completely obliterated the old framework. Moreover, the approach to The

Internet as an object of profit more so than a technological problem leaned toward avoiding regulation because it was seen as damaging to the fundamental structure of open networking. Benjamin Bratton's *The Stack* would seem to address the problem of a fundamental structure of a thing that is both material and immaterial, but it does not sufficiently account for discursive shifts between 1990 and 2020, wherein The Internet, The Net, the web, The World Wide Web, and the internet are all floating about, alighting upon different referents. My schizoid capitalization here is an intentional gesture to general and specific categories by appropriating the convention for proper and common nouns. Although the problem I am entangled with is somewhat abstract and material, Bratton's strategy illustrates a problem of the purely media-theoretical approach.

As online ads gained steam, they appeared to overcome limitations of old media, such as lack of precision targeting for audience or the gamble of a creative metaphor connecting with its audience. The crux of this problem, whether it is platform advertising or the platform's role in the end of western civilization, and where Battelle will return again and again, is context. Context is a critical element of the Old (offline) Model that Google overturned when it launched AdWords in 2000. From Battelle's view, AdWords was the divine spark for a new cosmology of precision audience targeting. As long as companies and users were content to remain within Google's ecosystem, the two could be seamlessly joined via advertisement. At first this meant using Google search, but as the ecosystem grew, more of what an average user was doing online was

somehow folded into Google. The main benefit, and gold standard as far as Battelle is concerned is the search page connection. Connections made through the search page were superior because the ads were always embedded within search results. That is, the organic result of a search query contained both the-thing-searched-for and an ad designated for anyone who searched-for-the-thing:

If your ad was contextually relevant to a user's search query, it had a good chance of 'winning' — and the prize was a potential customer clicking over to your 'landing page.' What you did with them then was your business, not Google's.³⁰

The next iteration of the program was AdSense, which “placed AdWords on publishers' pages around the internet.”³¹ Battelle describes this as a pretty-good-but-less-effective version of the prior deployment because the ads were still contextual. Websites were scanned/crawled for text and ads were placed therein with a goal toward relevance between the content on the page and the content of the advertisement, i.e., establishing and reinforcing context. The revolution between both AdSense and AdWords was apparently the ability for small business to compete for audience share with large brands. I take this to mean that if I am looking at a hiking website, the ads could very well be for a national chain of outdoor equipment stores, or My Own Local

³⁰ John Battelle, “This is What Happens When Context is Lost: ‘Google: Millions Flocks to Self Service, Rise of the Algos,’” *searchblog*, September 15, 2017. n.p. <https://battellemedia.com/archives/2017/09/this-is-what-happens-when-context-is-lost>.

³¹ Battelle, “This is What Happens,” n.p.

Independent Outdoor Equipment Retailer. This seems like the start of diminishing returns in the invitation to small business.

Unlike a search query for tents that returns an ad for tents, the ad served on the hiking site might be for a tent. Since I already own a tent, that ad buy has zero chance of conversion to a sale. A small business has less flexibility in terms of failed or impossible conversions, especially compared to large firms with equivalently large marketing budgets. But this is a simplistic example, because as Battelle points out:

AdWords didn't let advertisers target individuals based on their deeply personal information, at least not in its first decade or so of existence. Instead, you targeted based on the expressed intention of individuals — either their search query (if on Google's own site), or the *context* of **what they were reading on sites all over the web**. And over time, Google developed what seemed like insanely smart algorithms which helped advertisers find their audiences, deliver their messaging, and optimize their results.³²

Note that even from the beginning, the user is being extrapolated and correlated across the network. One problem that arose from the AdWords/AdSense revolution was the ability to game the algorithms by false-contextualization. According to Battelle, with Google's IPO in 2004, the assumption was that rough one-fourth of all of the ads on the platform were fraudulent.³³ Battelle stresses that it wasn't exactly a secret. At the time, no one who mattered cared. It was the most valued tech company in history and would remain so until Facebook came along.

³² Battelle, "This Is What Happens," n.p.; Emphasis mine.

³³ Battelle, "This is What Happens," n.p.

The mini-origin of Facebook doesn't need rehearsal, but suffice it to say the concept is a user base offering personal information and the business model is connecting that data to an advertising platform. Facebook didn't have to re-invent anything, because AdSense/AdWords were already out in the world—not the proprietary code, but the characteristics of what those systems did. Facebook simply added more data that was more personal data to the equation. While Google set the pace, in the disruptive space of Silicon Valley someone would have pushed the envelope if Facebook hadn't. Even though the specs of Google and Facebook's ad-tech were hidden, the systems were functionally open. Anyone could sign up to auction and start buying ads algorithmically generated and targeted to audiences.

The ad system Facebook is built on allowed for marketers to target their audience directly using Facebook's data. This deeply personal information allowed audience-targeting with a precision that astounds even veterans of the publishing and tech space like Battelle. A massive chunk of the advertising economy congealed around Facebook's platform to take advantage of its database of personal information on millions of users and a raft of proprietary algorithms. During the dual revolutions of Google and Facebook, there was little to no government regulation. This would start to shift slightly in 2011, which was when the idea of regulating platforms became possible.

The interest of legislators seemed to follow from an imperative that campaign ad buys were more and more routed through platform-controlled ad auctions. Before then,

internet ads were exempted from regulation concerning political speech distributed through non-digital, broadcast media. Among the lobbying efforts to avoid such creeping legislation, both Google and Facebook have argued that their ads do not qualify for disclaimer mandate under the same impracticality exemption as pins, buttons, stickers, and sky-writing.³⁴ Facebook petitioned the FEC to make a ruling ahead of the 2012 election cycle. The FEC asked knowledgeable and/or interested parties to comment on whether to make rules and if so what rules to make, but stated in the *Federal Register* notification that no one expected any of it to impact the (then) upcoming election cycle.³⁵ After the petition and solicitation, nothing happened on this front for several years. In 2012, Facebook issued its IPO and at the time casebook approved numbers indicate only 1.5% of its accounts were fraudulent. Nevertheless, advertisers and marketers were already complaining that 90% of the eyeballs they were paying for were bots or phony clicks. Court filings also show Facebook overstated engagement/impression metrics by 900% in some cases.

In 2013, Google started to catch up in the personalization-market arena. At this point, everyone wanted to be some version of Google/Facebook—an ad servicing platform. This initiates a more intense application of the Programmatic Advertising

³⁴ Federal Register, "Federal Election Commission 11 CFR Parts 100, 110 and 114 [Notice 2005-10] Internet Communications," in *Proposed Rules*, v70 n63, April 4, 2005, 16967. See also: Ibid, [Notice 2006-8] in *Rules and Regulations*, v71 n70, April 12, 2006, 18589.

³⁵ Federal Register, ""Federal Election Commission 11 CFR Part 110 [Notice 2011-14] Internet Communication Disclaimers," in *Proposed Rules*, v76 n198, October 13, 2011, 63567.

from the dot-com bubble (tracking cookies, mobile IDs, and tons of related data gathered from users as they surf the web). The central mechanism of programmatic advertising was audience-buying, as opposed to audience-targeting. Again, according to Battelle, most of the audience-targeting business was driven by fraud and faulty metrics, but nobody much cared. As Battelle will detail again and again, advertisers no longer needed to use media outlets to get to audiences anymore. Media outlets that used to draw an audience with the intention of selling them off were finding fewer buyers. Audience targeting caused media companies to drop like flies because advertisers no longer bought spots. If an ad dollar was spent on anything digital, chances are it was going to either Google or Facebook. Billions of dollars of ad buys, little-to-no political transparency, and context was dead or dying. The world of commercial-cultural discourse (i.e. Ad Supported Media Content) is perhaps a curiosity in 2013, in light of the horror of the marathon bombing, but is of key importance for understanding platforms today right alongside the expressions of the event discussed above.

What starts as a question of transparency in political advertising, or responsibility for what an outlet publishes opens rapidly on the issue of paid speech and its intrinsic importance for capitalist markets. In conflict are fundamental clearances for speech enshrined in constitutional and contract law, and countless situations where companies require opacity around advertising efforts. The stakes cover business practices that support valuations of tech companies deeply imbricated in long-term

capital investment, presumptive interplay of democracy and capitalism, and the civil and social role of algorithms.

The commercial relationship between content producing media companies, marketers, and the audience was fairly reliable in the old, pre-targeting model. This old model is comprised of media company, marketer, and audience. The new model adds platforms to the structure. In either case, media companies draw audiences with content and sell that audience's attention to marketers. Marketers buy into the speculative audience draw of a media company's content. This is a bare articulation of the commerce and risk relationship from the perspective of business. Battelle sees this as a brisk and equitable proposition for all involved mainly because context is the fiber that binds all three agents together. Content, in this model, is always produced and distributed within a context that attempts to secure audience engagement. Curated context means that while watching my choice of media, I am offered desirable commodities. When platforms become part of the ecosystem, they consolidate audiences, turn to predictive-targeting, and context becomes less important and more variable.

The waning of context requires media products to adopt a more conversational stance, one that focuses on audience in general and data-derived audience metrics specifically. Tech companies well-entrenched in the world market capture attention and monopolize distribution, while at the same time establishing a corollary monopoly on

digital advertising. In a data economy, attention is a commodity traded on heavily arbitrated speculative audience markets. By arbitrage, I refer to the finance practice of commodity exchange across different markets to exploit price fluctuations on a singular asset. If arbitrage sounds familiar, it might be due to perennial scandal from Savings & Loan to Enron, or credit default swaps and mortgage-backed securities. Thus, advertising models offer a window into two contemporary mysteries in the US in the midst of what seems like a national discursive breakdown: Why do platforms host endless varieties of false narrative and hate speech? Why would distinguishing between platforms and publishers emerge as such a thorny issue? It is here that Battelle insists that the solution is not governmental (i.e., repeal of section 230 of the 1996 Communications Act), but commercial (i.e., adjust the business model). In the next chapter, I will argue that both forms of redress are radioactive with reference to domestic politics and paid speech. For now, I want to connect the commercial imperatives of the platform back to the spectacle of the bombing.

Soft-Surveillance, Control, and the Governance of Computational Life

During the bombing investigation, one of the primary concerns for the FBI was that releasing a description of any potential person of interest would indicate to *that person* their status *as suspect*, and thus increase the likelihood of the suspect fleeing the immediate area. Nevertheless, a confluence of social media platforms, twenty-four-hour

news cycles and increasing harassment of numerous suspected-suspects like Sunil, eventually led the FBI to concede. The circulated description of a suspect generated effects on three levels. Broadcast news followed the story and various stories about that story. Newly minted bombing-buffs traded content on their platform of choice in discussions both germane and irrelevant. These two lines then intersected in the grave error of targeting Sunil Tripathi, whose status of missing-while-brown elevated suspicions to the extent that his immediate family was intimately harassed by citizen-journalists, veteran reporters, and the trolls who came to occupy the mean on that spectrum.

Police responded to news inquiries and posted corrections to official social media accounts, both of which surfaced on platform-hosted live conversations, augmented by secondhand reports from scanner chatter and anecdotal histories posted in kind. Traditional media and platforms broadcasted what people were saying about the event, and this information was true in its own limited sense. Police, in turn, confirmed what was false against a far slimmer version of truth. In the meantime, fewer than ten miles from the Copley Square epicenter, in Watertown, MA, the local police had received a report of a stolen vehicle whose owner connected the theft to the bombing suspects.

After the initial hyper-focus on the bombing, policing in the areas around metropolitan Boston returned to regular duties. Even under better circumstances, when the Boston Marathon concluded as it had 116 times before, there were all manner of

misdemeanor and felony taking place in the area around the race. The marathon was not unlike many other public events across the US in that it required a strict demarcation of space and a heightened police presence. The surrounding areas of Boston made no immediate connections between standard emergency calls and the ongoing investigation. It is worth remembering, too, that when the particular vehicle was reported stolen, the bombing was three days past. Serious consideration was being given to the idea that the suspect was no longer anywhere near Boston. A lone stolen vehicle was unlikely, in this case, to make its way to any part of the bombing case. At roughly the same time, a *description of potential suspects* was linked to a *description of a stolen vehicle*.

The initial description of a stolen vehicle came through to a patrol officer. Informing dispatch of the sighting, patrol was told of the additional information. The suspicion that bombing suspects were involved was the last item mentioned, and although it qualified as a high-risk stop, all that designation warranted was additional units for backup. The stop immediately became violent because Tamerlan and Dzhokhar assumed they were caught and got out of the stolen vehicle before being ordered to do so. Police opened fire, wounding Tamerlan. Dzhokhar fled.

There was nothing about the stop in which one person was shot that suggested standard police tactics were at all hindered or extended by the prevalence of digital technology. It is only after Tamerlan was at the hospital being treated for his wounds

that he apparently admitted to a role in the bombing. This gave police enough info to claim Dzhokhar as the second suspect and move forward as if he were still in a certain vicinity of the traffic stop. The ensuing dragnet included a shelter-in-place order for metro Boston requesting businesses close and residents remain in their homes. The order halted all mass transit, while in the more immediate area of Watertown, it prohibited traffic of any kind. Police searched door-to-door within the lockdown zone. By this time, however, platform users turned into extensions of the state by actualizing a massive, panoptic surveillance system. Adding to the confusion were more police than could be effectively coordinated.

Hundreds of police personnel from greater New England flooded into the Boston area, including-Newtown,-Watertown, Belmont, Waltham, Brookline, Cambridge and Somerville to volunteer for the presumptive manhunt. Many of these extra-jurisdictional officers gathered at the mall parking lot turned forward operating base, where their numbers quickly overwhelmed facilities. Others of these ranks arrived in the area and began patrolling with no more input than the updates over police-band radio. These patrols were deployed on foot and in both marked and unmarked vehicles. On one hand, there was a standing order to deputize incoming, out-of-town officers who would then report to local precincts to join roving units headed by local officers. On the other hand, much of the excess manpower remained unaccounted for. As a result, some law enforcement was initially mistaken for persons of interest because they were

travelling within the circumscribed “no-go zones” established by the shelter-in-place order. All the while, both the search and its excess unfolded continuously over police radio, and thus garnered attention from digital media platform users and news reporters. Although no information could be gathered and reported on the suspect in a juridical sense, there was a surplus of veridiction in content presenting things happening related to the bombing—including images and text sketching the data shadow of Dzhokhar Tsarnaev. By day four, Tsarnaev was still at large. A siege state which included tanks rolling through suburban streets and media dragnet that amplified police presence failed to lead to capture.³⁶

The technology which supplants the jurisdictional element of our contemporary apparatus augments the means of veridiction by which existing relations of power are reinforced, refined, and redeployed. When presented with this call to action, we might expect digital platform users, traditional media and police to increase activity that allows pass-throughs to function in the more efficient, voluntary manner. Instead, the space opened to disciplinary techniques. The police response, for example, mirrors the platform-user response in the case of Sunil Tripathi. These agents of governance discipline more, not less as a waning of discipling power might suggest, and even failures to reach a stated goal were overshadowed by the volume of their respective

³⁶ Philip Bump, “This Is What It Looks Like When the Police Shut Down a City” *The Atlantic*, April 19, 2013. <https://www.theatlantic.com/national/archive/2013/04/boston-lockdown-residents-are-asked-shelter-place-while-cops-sweep-watertown/316096/>.

deployments. When negative attention was drawn to Tripathi, his family took down Facebook and Twitter accounts. Instead of distancing them from the bombing, it drew them further in when social media and news speculated that the move was confirmation of involvement and preparation for a coordinated media response.

Eventually, the Shelter-in-Place order and no-go zones were rescinded. Mass transit was reinstated. The naming of Dzhokhar and Tamerlan Tsarnaev as suspects led to photos and information about their family circulating through digital media platforms and news reports. In this case, Facebook became both a source and a disseminator of this content. Dzhokhar Tsarnaev was becoming known to a degree inversely proportional to his physical confinement. Information about him culled from platforms was used to strike a border around the empty space where the suspect should be. Ironically, this data shadow seemed to count in lieu of physical or corporeal confinement. Knowledge of his education, his family ties, employment history, status as naturalized citizen and more seemed to calm and assure all involved that capture was secondary to conviction.

When a single call to emergency services offered suspicion of a trespasser in the hold of a boat stored in a Watertown residence, the police responded in number because their suspect was already more than present. Here, and especially as datafication is more deeply articulated over time, the absence or presence of a corporeal body is a mere formality. The imbrication of traditional and new media reveals unseen similarities, but

these get sidelined for the allure or pull of difference that sustains content production. While traditional media are equipped to report on breaking news, the investigation and the discussions thereof hosted on social media divide the event of the bombing in a way that traditional media struggle to account for. The news can't tell the investigation and its discussion apart. Ultimately, however, the bombing only gets us so far. It reveals certain important things about datafication, but understanding the historical terms requires leaving the scene to consider broader questions.

The need for a distinction between digitalization and datafication, in the specific example of platform interfaces offers a possibility of no longer thinking about interfacing with digital platforms as mediated versions of already existing social relations or as the representation of local social interrelation at scale. Once committed to understanding these platforms first, as tools of data harvesting corporations, and second, as constituting a specific space, the emergence of an apparatus which complicates some of the basic presumptions about visibility, personal identity, and political subject-object relations becomes easier to grapple with. A platform and its content produce truth and knowledge, but the pairing also doubles the space of governance when a user base expands. At this point there is already a data shadow, if faint and faulty, but it moves more or less in tandem with us.

Once datafication is more deeply articulated, we will more and more conduct ourselves to its movements. Once deviation is no longer a question of collective

inequalities, it becomes a problem of individuals in relation to a set of norms. I see this as relating to the current case through a possibility for subjects who do not (or cannot) voice complaint about their position in an unequal society. A normalization through discipline works at the level of subjectivation to make complaint illegible, or at least a wasted effort—but there is a third mode of non-complaint which combines aspects of illegibility and futility, for example, in empty requests that tech companies take charge of the problems they have in large part developed from the dawn of platforms through to today.

While computational media diverge a great deal from the prison or other spaces of confinement—although a disjunction from carceral methods is less certain—Mark Poster argues that, if understood as structing systems, the internet can be understood as a disciplinary institution insofar as it constitutes subjects, produces definitions for identity, and effects the orientation and configuration of individuals and cultural objects.³⁷ I follow Poster when he insists that people are fixed in space and time at these points of interface because, by and large, we live with data interfaces as physical mediums, not computers, televisions, or phones, or even storage devices. While I am here now, it is my data shadow that is in one place and another. If, as Ben Highmore has it, everyday life is an endless field of singular moments held loosely in place by the

³⁷ Poster, *Deleuze and New Technology*, 260.

threads of the overarching power, governance, etc.," then computational life emphasizes the relationality of the everyday by quantifying and augmenting our unadministered activities along with our routines and habits through analysis and prediction anchored to a set of normative practices determined through the same overarching threads of power and governance.³⁸ In terms of governance, I am referring to any

form of activity aiming to shape, guide or affect the conduct of some person or persons [which] can include relations between self and self, private interpersonal relations requiring some form of control or guidance, relations within social institutions and communities and, finally, relations concerned with the exercise of political sovereignty.³⁹

Governance is therefore not just a point of application, but also the fundamental conditions that make such applications thinkable and operational for both the practitioner and the target of practice. While many key elements uphold the rule, I am interested in specifics of the constitution of knowledge around digital platforms. The specific definition of governmentality at work here is

...the tendency or line of force, that for a long time, and throughout the West, has constantly led towards the pre-eminence over all other types of power—sovereignty, discipline, and so on—of the type of power that we can call 'government' and which has led to the development of a series of specific governmental apparatuses (*appareils*) on the one hand [and on the other] to the development of a series of knowledges (*savoirs*).⁴⁰

³⁸ Ben Highmore, *Ordinary Lives: Studies in Everyday Life*, (London: Routledge 2010), 2.

³⁹ Colin Gordon, "Governmental Rationality: An Introduction." in *The Foucault Effect: Studies in Governmentality*, Graham Burchell, Colin Gordon, and Peter Miller, eds. (Chicago: University of Chicago Press, 1991).

⁴⁰ Michel Foucault "1 February 1978" *Security, Territory, Population Lectures at the Collège de France 1977-1978*, Michel Senellart, ed. Graham Burchell, trans. (New York: Palgrave, 2008) 108.

This mode of knowledge production will show the particular way a computational life is conducted, made possible as governance.

An important factor to consider in relation to the bombing is a convergence of real world and internet discourse, and how this puts the lie to such bounded distinctions—in spite of the persistence of the supposed difference maintained as late as 2020, through misogynistic firestorms like Gamer-Gate, only then ruptured by the discursive spillover from Q-Anon posts from image boards and social media. The two domains of cyberspace and meatspace have been in play since the emergence of digitalization, but the bombing makes apparent a moment that is otherwise difficult to grasp. The relationship of the internet to real-life under digitalization is one of the real and the unreal, and is most adequately described by poststructuralist media theory and the out-of-body expressions of virtual reality technologies explored through the genre conventions of cyberpunk. What emerges in the period under discussion in this chapter is that virtual space is realized in the sense of being widely recognized as materially consequential.

When police and media draw maps of the territory of the bombing and set platform users to locating a suspect, representation becomes problematic, because even if one space is already largely a realm of continual mediation, we must contend with two coherent views to a single milieu. The streets manifest on the desks, in the laps and hands of thousands of interface users who perform double duty as audience to the

public spectacle and dispersed subjects second, third or fourth screening their way through news of the day, watching live streams of tanks rolling just outside their windows. In other words, the everyday is refracted through not one topology, but two. The complications of this ordeal will come into more stark relief in the following chapter, where my analysis of the Facebook-Cambridge Analytica Scandal shows that under datafication, both spaces continue to be just as real as the other, but lately constitute a divergence through which each asserts the primacy and dominance of its point of view and (ad)vantage point. Collecting all data is easy—for the collectors—since users are given the choice of taking the easy or the hard path of agreeing to terms of service or being barred from joining the conversation. The actual expressions and experience on and of the platform are never quite so limited.

The dismal treatment of Sunil Tripathi's family on Reddit after the bombing, magnified by reporters chasing leads, narrates the platform as neutral matter utilized to unfortunate ends by bad actors.⁴¹ Such a characterization of social media serves to deflect critique of platforms by downplaying the specific culture of a platform or limiting the effects a platform might have more broadly. I am trying to illuminate the emergence and ley lines of co-dependent vigilantes who are so frequently drawn

⁴¹ For years after, but long before it enters the national consciousness as a severe problem, Facebook is just such neutral matter widely utilized to unfortunate ends across Latin America and South Asia. See, *Zucked: Waking Up to the Facebook Catastrophe* (2019) by early investor and mentor of Mark Zuckerberg, Roger McNamee or the chilling German documentary *The Cleaners*, directed by Moritz Riesewieck & Hans Block (2018).

together through digital media platforms. The vigilantism referred to here is not limited to the police volunteers who swarmed metropolitan Boston from around New England, nor to the web sleuths who mis-identified Sunil Tripathi, but also must be extended to include the primary drivers of platform legibility, which to say, all of us who post, share, like and subscribe.

The more legible a platform's discourse becomes, the wider the application of that discourse, the deeper the normalization of soft-surveillance conducted through that platform. As an example, we could turn to the vast graveyards of platforms that prefigure Facebook, and whose rise and fall all but assured an identical trajectory for Facebook. Longevity can be attributed to financial dominance, but market share is unsustainable without the continual affirmation of and consent to the platform by elements completely outside the platform, elements operationalized in front of and behind the interface. Each separate element is self-contained, even as each requires input from the others to maintain legitimacy or legibility. It is by this structure that platforms subjugate users, who in turn subjugate themselves and each other via profile and post-histories. As a whole, this amorphous and mutually reinforcing apparatus unfolds as follows: Digital platforms recruit users toward the goal of data harvesting through a bundle of soft surveillance strategies. These strategies lock users into a loop, wherein they are both the manifestation and target of a surveillant gaze. In the end, we subsume

our own agency through repeated use to such a degree that we voluntarily approximate that agency in strictly delimited spaces.

Platforms circulate useful, fun information, but also utter nonsense. That was already the case on the web before the dot-com bubble. Platforms made content production into trade under algorithmic management. By injecting news into this cycle, we see what has always been the case: Yesterday's news is tomorrow's fish & chip paper. In the ad-tech space of platforms, all that matters is being first, because the only other place is last. In the process of being first, the news organ strives to be right, but only because the first-delivery maintains its credibility and thus sell its wares—broadsheets or ad slots—by being right most often.

Broadcast news and marquee papers are valorized in the US for editorial independence, allowing the porous boundary between news desk and boardroom to serve as fodder for drama. In many ways, the news was always a mediating tool that followed from the functional engines of truth via social, political, and economic institutional authority. Clutching pearls over fake-news or demanding that platforms grow-up and take responsibility for themselves, are projections of far more consequential shifts. That is, any question of eclipsing old media by new media misses the mark.

Jay Caspian-Kang writes in the New York Times, two months after the bombing, calling attention to “the dysfunctional codependence... between new and old media.”⁴² Reconstructing the event from the perspective of Sunil’s family reveals that within a few hours of the mistaken identity, reporters with major network credentials were calling for background info. As the truth of Sunil’s involvement was inscribed, the reporters needed to know if he had been around Boston, when, why, with who. As noted above, Sunil’s parents pulled Twitter and Facebook accounts dedicated to finding Sunil to protect him from seeing grisly comments from strangers that had flooded in once his name was attached to the bombing. This sudden absence was reported on as corroborative of Sunil’s involvement—a gesture of circling the wagons prior to a formal statement that made perfect sense to media savvy players.

It’s impossible to put a number to how many times Sunil was mentioned in connection with the bombing, named as one of two suspects who were never wanted by the FBI, but it should be noted that large among the social media posts in this maelstrom were accurate and factual: these were posts indicating that a name was being mentioned, that a certain person’s involvement was gaining traction on social media and mainstream news. In strict terms, those are true facts. As Caspian-Kang notes, however,

⁴² Jay Caspian Kang, “Crowd-Sourcing A Smear: When an Insidious Rumor Went Viral in The Aftermath it Laid Bare the Dysfunctional Codependence of The Boston Marathon Bombing, Between New and Old Media.” New York Times, Jul 28, 2013. <https://login.proxy.lib.duke.edu/login?url=https://www.proquest.com/historical-newspapers/crowd-sourcing-smear/docview/1815014633/se-2?accountid=10598>.

the factual accuracy of saying that someone has said something ignores the “multiple, amorphous meanings” deployed through “the internet’s lexicon.”⁴³ Yet, this statement itself belies the fraught history of newspapers and tabloids since at least the early 20th century, during which general publics expected the news to lie and navigated current events based on preferred biases or outright amusement.⁴⁴

From one view, platforms offer a service for newshounds in the form of a reprieve from corporate gatekeeping. Dedicated pages and active communities democratize the process of gathering and distributing information of current events. But persistent engagement does not a journalist make, as the dean of any j-school will likely confirm. Platforms have an intentionally amorphous editorial discretion. Subreddits have moderators, but they are not obligated to perform any degree of vetting, uphold any uniform rules beyond the site’s edicts, which like internal communication rules, can change at will. Popularity drives posts through tiers of engagement, making certain statements easier or harder to distribute to a wide audience. Platforms like Reddit are largely frivolous, but as the engagement from the bombing shows, much of the content does have public and journalistic interest. An elevated post can garner “tens of

⁴³ Caspian King, “Crowd-Sourcing” n.p.

⁴⁴ Journalistic standards that will later become sacrosanct (at least in the aforementioned dramas) are not so much ethical obligations but rules drawn up by professional organizations to forestall the threat of government regulation. See, Lawrence Grossberg, *Under the Cover of Chaos: Trump and the Battle for the American Right*, (London: Pluto, 2018), 122-131.

thousands, even hundreds of thousands of page views for the originating post.”⁴⁵ User expertise varies widely, but if something happens and lots of people are interested, there’s a good chance many more people will be reading and contributing to a conversation about it on one platform or another.

The means of knowledge production for the platform ecosystem includes exploitable loopholes and intentionally maintained shortcuts. An average news cycle provides an important insight into how Sunil became embroiled in the bombing and why it is a tragedy for more than just his immediate family. The structure outlined above clarifies my point that platforms have made content inextricable from marketing, which as the last chapter demonstrated has already been reoriented toward practices of speculation and arbitrage. From the perspective of the reporter, a press release is a formal mode of institutional speech, and social media is a reliable (read, relied-upon) index for public interest. All that needs to happen is for one flagship paper to make mention of a topic posted to a platform in an early-morning newsletter. This topic can be elevated to the next tier by sock puppet accounts used to make new posts about the topic as it is now in the news. Citing the flagship paper as the source, if the topic draws attention, the algorithm takes over. Legitimate users are recruited, and the marketer’s

⁴⁵ Caspian Kang, "Crowd-Sourcing" n.p.

charge becomes the news of the day. Breaking news is a reliable tempest, perhaps more so now due to the volume of information suppliable by platform users.

One of the last messages to reach Sunil's family was left by a man named Pete Santilli, who inquired about a matter of "high-level importance" seeking to "share information, gather information, and relay information, of course."⁴⁶ Santilli is a chimera for our age, an idol forged from decentralization and pure aggregation; a self-styled investigative journalist who utilizes livestreams and social media posts to be the eyes and ears of populism's people. After Boston, Santilli can be found in the weeds of patriot-branded coverage of the militia occupation of Oregon's Malheur National Wildlife Refuge in January 2016, and the January 6th insurrection at the US Capitol in 2020. It's easy to dismiss tabloid muckraking but harder to avoid it if it is distributed on the same conduit as straight-news. In other words, stripped of context, all content is simultaneously the best and the worst. This is a vision of journalism's gamification. All information is scored according to its engagement.

In a space that is agnostic about value judgements on content, on platforms as opposed to from publishers, the only barrier for transmission appears at first to be local jurisdictional edict—is it legal or illegal? One of the reporters who spread the false Tripathi story, Dylan Byers, said that "he does not necessarily endorse everything he

⁴⁶ Caspian Kang, "Crowd-Sourcing" n.p.

retweets,” adding, “I’m just using twitter as a tool to get out what information is out there and tracing it back to the source.”⁴⁷ Caspian-Kang suggests that this mea culpa only holds “in a space where everyone understands exactly what the rules are and why.”⁴⁸ This is a point that remains relevant to any discussion of platforms today because it is essentially saying that we can’t continue to distribute information in this way unless we find a way to make sure we are all properly disciplined. To call for such a disciplinary reckoning in the wake of the bombing insists on a market imperative and the subsumption of juridical under veridical techniques. Making platforms cop to being publishers isn’t going to get very far because the determination between old and new media is a distraction. The codification of rules is already underway, in ambivalent interactions between reporters working for mainstream companies; journalists and writers of various tutelage compiling and interpreting news for online outlets; and millions of autodidacts conjuring a world from an assemblage of information.

Conclusion

It must be noted that the call for public participation in the bombing investigation was something of a formality. The reason for this is the specific media saturation around the marathon itself. It was not so much that the sporting event drew

⁴⁷ Caspian Kang, “Crowd-Sourcing” n.p.

⁴⁸ Ibid.

more mediation, as much as more-mediation had already been an attendant element of public discourse since 2006 when platforms started to emerge. Since then, many mass events could be experienced through a kind of convergence or integration of parallel narration, in particular as posts to social media networks. News services of varying sizes all had a social media presence. Standard broadcast journalism was often paired with breaking updates on live-threads. Those updates could be linked across multiple accounts with hashtags. People on the ground at an event could stream video, post pictures and reply to other who were doing the same. Those at great distance from the event could actively take part in an experience that was folded into the event.

Noteworthy occurrences around the world became something of an advertisement for social media. The Boston Marathon draws a foundational level of platform engagement as a patriotic event, in a patriotic city, which is in many ways what makes the marathon a perfect site of representation for a pair of Muslim-Chechen dissidents.

For Gary Marx, the success of soft-surveillance rides on the willingness of a population to participate with the activity of observation and the ease with which this aides collection of personal data. The operation of collecting personal information through a benign request relies on soliciting compliance through an appeal to the communal against the dispossession of the individual. Marx uses the example of offering DNA samples for a police database. Collection is made quick and painless and therefore minimally invasive. Present in the equation are two implications of violence:

first, a more invasive and complex process of getting the same result, e.g. blood tests or the arduous trauma of central booking; and second, the perceived benefit in proportion to the less invasive and seamless means—that is, a slight invasion now instead of a more overt invasion later. Marx points out that there is no inverse relation between hard and soft forms of control. The former does not decrease, creating a void for the latter to expand into. Hard forms of control remain, while soft forms increase into spaces where its other cannot function or functions inefficiently, for one reason or another. We are all likely involved in some version of corporate soft surveillance through loyalty reward programs or applications that allow us to use things we already paid for. If we are trained to think of our own participation within the apparatus as actualizing a desired outcome, the more likely it is that we assume neutral or objective designs of that system.

Taking the most generous view, it seems plausible to say that platforms introduce an editorial role which was heretofore unattainable for the average user. Gathering all coverage from major outlets, along with developments on the ground would have taken an inordinate amount of time and resources long before platforms fed us news. The oft-championed crowd sourcing of users applied to a breaking news event suddenly makes even average users momentary subject experts—not only promoting participation, but valorizing its volume. What gets disseminated through these non-traditional outlets still gets burnished with a credibility embedded in tradition, even if we all know that the news is always to some degree editorialized. There is an editorial

responsibility skirted when a platform can selectively interpret its status as a publisher. Debates over Section 230 of the 1996 telecom bill appear to tackle this problem, but are a blind alley without a clearer understanding of the territory and parsing of the terminology in play.

The designation between platform and publisher has become increasingly relevant, but marketing and advertising are crucial elements in the debate. Platforms cannot regulate themselves, nor can the state execute the will of a population, until everyone fesses up to the fact that these companies are in the business of advertising. Until then, there will continue to be exploitation of terminology, especially in highly lucrative arenas like political advertising. Big data tech-giants are advertising companies at heart, but these companies are not the heart of the internet. They simply own the internet for the time being, and have opted to utilize the technology to generate massive profits by turning the world it is connected to into a pit of manipulation and unregulated speculation. Since this is the core business model, any solution to the supposed ills the company is causing must address this business model, even if the critique also considers the problem as technological and political.

Discussions of technological problems focus on the operation of the machine because it forms a discourse network. Discussions of political problems focus on governance and regulation because technology is just a tool. The milieu in which these questions are being asked must be taken as the starting point. A manifold challenge to

datafication will appropriate internal reform measures and place them in tension with external abolitionist demands. Each will weaken the consistency of a logic that preemptively excludes a radical, emancipatory politics from consideration. For example, if capitalism is a monstrous death machine that will destroy everything, and nothing will ever change, it might be possible under datafication to recruit this permanence to force the instrumentalization of capitalism, i.e. businesses and business-people, to hurt us less or each other more, each day over time. In short, none of what I'm on about here is paranoid in any intellectual sense. To borrow a phrase from Grover Norquist, I don't want to abolish capitalism; I simply want to reduce the population of capitalists to the size where someone over the horizon can drag them into the bathroom and drown them in the bathtub.

The individualism at the core of a platform is strengthened with recourse to strictly defined or coded difference maintained through zones of obscurity generated by a distinction between how humans and digital interface are understood. What this means is that to confront problems arising from a platform, the content posted and circulated therein can be read as tantamount to free speech of an individual. To confront the inequity of one relation is to be shunted to a different relation, or waylaid in any one of many zones of obscurity. That is, the elements constituting a digital platform will be understood as an individual social media characterization. Isolating the incident, individualizing it, will thus deflect critique of platforms by downplaying a specific

platform culture or limiting the effects a platform might have more broadly. Although multiple relations are constantly at work in any digital platform, a social media framing creates explicit zones of visibility and obscurity through which criticisms can be re-routed toward a specific individuality—leaving any emerging socio-cultural concern no recourse other than through a series of bad actors whose transgressions are framed as being at odds with or at least separate from the platform as such. A specific creator, or type of user, or a particular type of content is problematized instead of (or perhaps even by) the platform.⁴⁹ I am not suggesting that one is targeted when it should be the other. I am saying that a liberal framework of individual autonomy itself is ill-suited for getting to the object of study which satisfies the sense of urgency that epistemic crisis connotes. A key reason for the impasse I am trying to navigate is the mode of individualization at work in platforms that generate, through their very inter-connection with everyday life, multiple levels of meaning. That is, multiple levels of content displayed as if it were meaningful.

The exchange of stress and relief through users produces a feedback loop. The spectacle produced on digital platforms puts emotional intensity to work. Framing of activities as outside of the platform does not hold if their explicit purpose is to generate content and/or capital for the platform.⁵⁰ Concerns initiated on the platform are

⁴⁹ Facebook/Zuckerberg has more trouble on this front than, say, Twitter/Dorsey, Reddit/Ohanian.

⁵⁰ SEC filings for Google and Facebook IPOs state revenue generation and valuation are functions of ad services, see SEC, above.

articulated through the intensity of emotion and its effect as if the platform is neutral and how we communicate on it is the problem to solve. The events following the bombing can be articulated differently: A non-neutral platform drives a certain kind of communication, one that commits its user-base to participation that generates more and more information about a statistically imagined public. The activity of an online community needs to be considered in relation to the information produced by that activity. It is for this reason that platforms should be distinct from the type of communication we imagine might be productive in the blanket category of internet or digital communication. A focus on non-neutrality is why I do not dwell on scholarship about user experience in the form of pro-sumption or digital labor, or limit the operation of power to surveillant networks. I do not contend with any user, in its own right, imagined or actualized in the moment of platform use. I am less interested in what manifests between users, than what is between the user and the platform. What took place in Boston after the bombing is an ideal case for thinking about just such a porous space—an interface entangling social media, news, and law enforcement.

Through the case of the bombing, I have shown the operation of two techniques crucial to a contemporary regime of power. By the running of the 2013 marathon, new processes of visibility and affirmation were available to media distribution. Digital platforms and users are two key factors for the evolution of datafication, under which different ways of disciplining populations and individuals become possible.

Chapter Four: Power to the Platform

clickbait, n.

Brit. /'kɪkbeɪt/, U.S. /'kɪk,beɪt/

Origin: Formed within English, by compounding.

Etymons: click n.¹, bait n.¹

Etymology: < click n.¹ + bait n.¹
colloquial.

Internet content whose main purpose is to encourage users to follow a link to a web page, esp. where that web page is considered to be of low quality or value.

1999 *Network Mag.* Dec. 38/1 A 'clickbait' Web page with the message 'Click here to become a millionaire in five minutes' was shown.

2010 *Wire* (Nexis) 23 Nov. We've decided to emphasize Matlin's point about the dangers of the slideshow in slideshow form, accompanied by the best clickbait this family-friendly site can provide: adorable kittens.

2012 *Wilson Q.* Summer 69/2 (*caption*) Baby animals are just one form of click bait on the site.

2015 *Press* (*Christchurch, N.Z.*) (Nexis) 12 Mar. 14 People keep saying that long-form journalism is dying because of online clickbait but I don't believe that is true.

—OED ¹

Introduction

The first chapter of this dissertation dealt with the veridical elements of the platform. By establishing how select narratives about the technology and its many points of interface become true, I was able to draw out tensions between mythologies and lived experience on the web. In the subsequent two chapters, I offered two case

¹ "clickbait, n.". OED Online. March 2022. Oxford University Press. <https://www-oed-com.proxy.lib.duke.edu/view/Entry/37263110?redirectedFrom=clickbait&> (accessed April 02, 2022). Note, according to OED, "This word belongs in Frequency Band 1. Band 1 contains extremely rare words unlikely ever to appear in modern text. These may be obscure technical terms or terms *restricted to occasional historical use*, e.g. abaptiston, abaxile, grithbreach, gurhofite, zarnich, zeagonite." [emphasis added].

studies that describe the emergence and the maturation of what I have been calling datafication, and alongside offered a sketch of computational life and the data shadow that obtains therein. The terms and conditions established in the first case study showed how marketing and finance inscribe strategies for recouping capital with the web following the dot com bubble. The second case study showed how identity became distributed and enforcement of law became participatory. The deep imbrication of marketing and financialization sustained through the two prior case studies brings me to the practice of psychometrics, and the final case study of the Facebook-Cambridge Analytica Scandal that manifested after 2016.

The processes I have been describing in this dissertation constitute the web as a kind of narrative space where text and images are substructures of the same language. The language I am referring to is not the symbolic notation of code, nor the grammar of English that sometimes polices American social media outlets. The language I mean to highlight is composed and trafficked on platforms, defined in the previous chapter as content. This language is truthful only according to specific authority and conditions but does not as a result become permanently contextualized by these elements. Platform content is necessarily without context because in media distribution terms, context specifies and isolates audiences. As long as there is context for image, video, and text, we will find producers, consumers, and distributors circulating in an attention economy. The process of datafication that I have been articulating frames contemporary platform

operations as stripping context from the equation because context impedes data as a resource. When the impediment is lifted, attention is commodified as the base token of exchange in a data economy.

In such an economy, a data industry is comprised of a series of firms dedicated to maximizing the insight a client might derive from particular stores of data.² This is, on the surface, datafication in the sense of its deployment following the dot-com bubble, when the Big Data paradigm, or what Bernard Harcourt calls the expository society, is rapidly normalizing.³ In the context of my deployment of the term, the Facebook-Cambridge Analytica Scandal represents a mature operation of datafication.

Cambridge Analytica came to public attention after the 2016 US presidential election as a result of investigative reporting by British television station Channel 4 and Carole Cadwalladr, reporting that benefitted from whistleblowers like Christopher Wylie and Brittany Kaiser.⁴ The anchoring event of this chapter is the Facebook-Cambridge Analytica Scandal. The archive for this case study is drawn from investigative reporting published from 2017 through 2021, augmented with testimony

² A fascinating list of these insight companies is compiled in the appendices of David Beer's *Data Gaze* (2020).

³ Bernard Harcourt, *Exposed*, 15.

⁴ See Channel 4 News, "Data, Democracy, and Dirty Tricks" March 19, 2018, <https://www.channel4.com/news/data-democracy-and-dirty-tricks-cambridge-analytica-uncovered-investigation-expose>; and Carole Cadwalladr's ongoing investigative journalism at <https://www.theguardian.com/profile/carolecadwalladr>.

provided to US and UK legislative committees, and legal complaints filed with the US Federal Election Commission.

In broad strokes, a data scientist accessed Facebook's API in 2013 to build correlative psychological profiles using the data of Facebook's users. API is an acronym for Application Programming Interface. APIs are what connect platform software together. Mobile devices, IoT devices, and software applications connect to second-party servers through APIs and API management systems. An example of the API protocol is when one is prompted to log-in to a platform by conveniently using the credentials of a different platform, e.g. Use Google, Facebook, or AppleID to log-in to Doordash or Grindr. In the case of the scandal, a data scientist developed an app that connected to Facebook and requested profile data from the platform whenever a user was logged in. Later, a consulting firm called Cambridge Analytica used the same data to develop strategy advice for various political campaigns. Cambridge Analytica was a UK-based political consultancy firm and subsidiary of Strategic Communication Laboratories, a data mining and analysis firm formed in 2012 with the express mission of entering the US election market.⁵ With personal data as its stock-in-trade, Cambridge Analytica used

⁵ The two main figures who overlap both Cambridge Analytica and SCL are Alexander Nix and Julian Wheatland. It's probably nothing, but Steve Bannon was the vice president of Cambridge Analytica while Rebekah Mercer and Robert Mercer were primary investors. Both SCL and Cambridge Analytica were shuttered following the scandal. Similar services can be contracted through Emerdata, which employs many of the same executives from SCL and Cambridge Analytica. See Gareth Corfield, "Cambridge Analytica's Administrators Mised Judge, High Court Told" *The Register*, December 7, 2018, https://www.theregister.com/2018/12/07/cambridge_analytica_crowe_llp_mised_judge_allegation/ and Jesse Witt & Alex Pasternack, "The Strange Afterlife of Cambridge Analytica and the Mysterious Fate of its

techniques like psychographics and microtargeting to advise nearly 50 midterm elections in 2014, and several candidates in the 2016 primary and general presidential election. The main strategies combined disciplinary concepts from anthropology and psychology with methods from marketing and advertising along with the personal data of millions of platform users to attempt to influence or sway public opinion and individual voters. I read this as a strategic targeting of both population and individual.

By using readily available industry tools and practices long relied upon by marketing and advertising agencies and industrial designers, Cambridge Analytica applied a method that can be understood as synthesizing both a norm and its modulation. To be more specific, where simple demography targets the population and tries to convince a certain proportion therein to act, psychographics ascertains the relative norm on a topic, then locates pressure points to shift that norm through the process of microtargeting. In terms most familiar to the topic (and sundry inquest subpoenas), consider voting. Based on the aggregation of all data pertaining to specific persons, to people around them, and to people analyzed as similar to them all, any portion of potential voters is nudged—the industry term—for or against a proposition by some degree. A correlation strategy will then produce necessary valances through images and keywords for campaigns to distribute through their media content. This

Data" *Fast Company*, July 26, 2019, <https://www.fastcompany.com/90381366/the-mysterious-afterlife-of-cambridge-analytica-and-its-trove-of-data>.

chapter will show how the full deployment of datafication's rationality operates in the US through an entanglement of advertising and political speech. These imbrications are shown to be quite familiar. The platform space is shown to introduce new variables, thus complicating tactical literacy and activism in relation to digital interface.

A Digital Southern Strategy

The scandalous nature of what Facebook and Cambridge Analytica did is well defined by standard operations of marketing and platform companies, perhaps even vast swaths of any firm in the data industry. The practice grounding the offense is the gathering of information from and about people. The act responsible for shifting this from a kind of resource extraction to scandal is the exploitation of data by specific parties to further concentrate power. The problem in confronting this issue is that since at least as early as 1900 the field of advertising has proudly—and most importantly legally—exploited desire to foment shifts in popular and marginal opinion, which arguably touches the issue of power concentration. If advertising cannot be said to power, then certainly it is a persistent blessing on us all.⁶ What is scandalous for

⁶ “Advertisements do even thrice bless; they bless you, Mr. Reader, for they bring meritorious goods to your notice (the best goods are always those advertised); they bless the advertiser, for they create a market for his goods, and thirdly, they bless the publisher of the book, for the cash received from them enables him to give you more for your money than he could otherwise,” in William Borsodi, *Financial Advertising: A collection of words, phrases, illustrated advertisements and financial talks as successfully used by banks, trust companies and other financial institutions; arranged so as to facilitate the expression of ideas and assist in the preparation of attractive financial advertising*, (New York: Bankers Publishing Company, 1909).

Facebook and Cambridge Analytica seems to turn on the promotion of a worldview that fractures institutional hegemony.

The scandal is of interest to my project because it seems to fall across key techniques of control associated with disciplinary power. Hierarchies of observation, normative and normalizing judgements, and strict, persistent examination all function in the use of platforms and in the data mining practices that make them profitable. In the first chapter, I discussed digitalization and datafication as creation and implementation of data, using a definition of digitality borrowed from David N. Rodowick's theorization of digital images. There, Rodowick's definition of digitality involves the algorithmic manipulation of symbolic functions, i.e., code, and is outside of human perception until compiled and represented otherwise.⁷ As a cultural logic, according to media and cultural theorist Seb Franklin, digitality does not only absorb the everyday but also informs our conceptions of self and the world. Franklin argues that a logic of control is visible at an atomized, granular level through the circulation of metaphors for primary social interactions and colloquial classification similar those I have been stressing throughout the dissertation—herein: internet, web, platform.

In *Control: Digitality as Cultural Logic*, Seb Franklin states that a logic of digitality refers to “the emergence and normalization of the conditions of knowledge that make

⁷ David N. Rodowick, *The Virtual Life of Film*, (Cambridge/London: Harvard University Press: 2007), 125-127.

concepts such as ‘the information economy’ thinkable.”⁸ He goes on to point out that concepts circulate through social spaces in materially deleterious ways.⁹ The emergence is located, in part, in a governmentality that takes root in the nineteenth century, is well entrenched by the latter half of the twentieth century, and reaches full deployment in the late-twentieth and early twenty-first centuries.¹⁰ This digitality functions under the “sign of control” where control is the foundation for imbricating

literal practices of computation, the new organizational and infrastructural concepts these practices facilitate, and metaphors derived from the electronic digital computer and its processes with a system of value production that can produce profit only by exploiting and dispossessing human life.¹¹

Franklin’s conceptualization of digitality describes a fundamental condition and asserts existing is being digital and therefore makes an ontological claim. The approach he takes theorizes digitality through a series of practices, formations, and ideals from texts, disciplines, and management styles by mapping them “onto the disciplinary and control societies that Deleuze places in succession.”¹² The primary goal for Franklin is to tease out a digital ontology via the cultural logic of digitality organized according to Deleuze’s model of control.

⁸ Seb Franklin, *Control: Digitality as Cultural Logic*, (Cambridge: MIT Press, 2015), xiv.

⁹ Franklin, *Control*, xv.

¹⁰ *Ibid*, xv.

¹¹ *Ibid*, xviii-xix.

¹² Franklin, *Control*, 140.

The basis for Franklin's theorization utilizes Deleuze's engagement with control, which necessarily draws on Foucault's development of biopower.¹³ These are similar foundations for Alexander Galloway's theorization of control as protocological in *Protocol: How Control Exists After Decentralization*. For Galloway, protocol is the management style of the apparatus of control, "a principle of organization native to computers in distributed networks."¹⁴ These de-centered, mesh- or web-like networks are said to be diagrammatic of contemporary society, and thus Galloway traces out a third historical period to follow classical-sovereign and modern-disciplinary societies theorized by Foucault, whose characterizations of control are oriented historically.

Galloway explains that

[in] former times control was a little easier to explain. In what Michel Foucault called the sovereign societies of the classical era, characterized by centralized power and sovereign fiat, control existed as an extension of the word and deed of the master, assisted by violence and other coercive factors. Later, the disciplinary societies of the modern era took hold, replacing violence with more bureaucratic forms of command and control.¹⁵

Here, Galloway emphasizes that societies of control emerge after disciplinary societies, based on a reading of Deleuze's *Postscript*. The shift follows from novel

¹³ See, Michel Foucault, *Society Must Be Defended: Lectures Collège de France 1975-76*, David Macey, trans. (New York: Picador, [1997] 2003), *Security, Territory, Population: Lectures Collège de France 1977-78*, Graham Burchell, trans. (New York: Picador, [2004] 2007), *The Birth of Biopolitics: Lectures Collège de France 1978-79*, Graham Burchell, trans. (New York: Picador, [2004] 2008), and *The History of Sexuality, vol 1: An Introduction*, Robert Hurley, trans. (New York: Pantheon, [1976] 1978).

¹⁴ Alexander Galloway, *Protocol: How Control Exists After Decentralization*, (Cambridge: MIT Press, 2004), 2.

¹⁵ Galloway, *Protocol*, 3.

technologies that surpass the previous shift from mechanical advantage to thermodynamics—or the shift from sovereign to disciplinary power.¹⁶ Deleuze ultimately asserts that computers, specifically the productive power therein, will be valuable explanatory models for the social and political relations at the turn of the century.¹⁷ Galloway argues that the work of mapping social formations can be aided with recourse to certain diagrams, or coextensive maps that are integrated into the social field.¹⁸ For Galloway, protocol is not isolated to digital worlds. Again drawing from Deleuze, protocological management is described as marking and ordering “of bodies within in social space and the creation of these bodies into forms of ‘artificial life’ that are dividuated.”¹⁹ What I have been referring to as the data shadow is not the result of a process of dissolution of individual identity into expansive networks. Through our data shadows, information is extrapolated to make a population-level clusters of our performative expressions. The data shadow is a murmur of an individual’s multiple expressions of identity. Through the data shadow, I argue the control made visible is of a disciplinary sort, rather than one charted from Deleuze’s articulation of the concept.

¹⁶ Gilles Deleuze, “Postscript on Control Societies.” in *Negotiations*, trans. Martin Joughin, (New York: Columbia University Press, 1990), 180.

¹⁷ Galloway, *Protocol*, 4.

¹⁸ Gilles Deleuze, *Foucault*, Seán Hand, trans. (Minneapolis: University of Minnesota Press, [1986] 1988), 34, cited in Galloway, 11.

¹⁹ Galloway, 12.

Control defined through more media-centric terms, like that of Galloway and Franklin, builds from an assumption that control is successive to discipline as an episteme. My own sense is that if the degree to which functions of everyday life can be constituted, biologically and socially, through computational associations like transmission, storage, processing, and programming and sufficiently mounted at scale, then what is made visible is an apparatus of governmentality that reconstitutes elements of disciplinary society. Reconstituted this way, a problem like heteronormativity can be superseded by a different flavor of normativity, one which embraces differential performances but insists on good and bad categories for the performance. Here, computational life does a fair amount of smashing the binary, but makes new, amorphous boundaries for social formations that must nevertheless operate in a physical space routinely inscribed by class, race, and gender. What I have been calling the data shadow can mark far more expressive and differentiated performance than the associated person can hope to express. It also draws attention to why previous strategies of resistance in digital space might be complicated for the worse.

Drawing again from Galloway's work on protocol and control, I want to point to his use of biopower and biopolitics as twin concepts. Biopolitics is "the endeavor, begun in the eighteenth century, to rationalize the problems presented to governmental practice by the phenomena characteristic of a group of living human beings constituted

as a population: health, sanitation, birthrate, longevity, race.”²⁰ Thus, vital statistics and biometrics are all biopolitical operations—in the context of the US that is an early-20th century endeavor that accelerates to this day.²¹ And biopolitics “tends to treat the ‘population’ as a mass of living and coexisting beings who present particular biological and pathological traits and who thus come under specific knowledge and technologies.”²² From the above, Galloway suggests biopolitics connects to a population-level knowledge comprised of statistics and correlated metrics.²³ Even so, he stresses that Foucault’s equivalent weight on technologies and knowledge in the definition of biopolitics gives up a certain opacity in terms of which technologies are thus biopolitical.

For Galloway, biopolitical technologies are “the distributed forms of management that characterize the contemporary computer network and within which protocological control exists.”²⁴ This turns attention to contrasts in respective concerns over life between disciplinary and sovereign power. What is first directed at the presence or absence of life, shifts to a concern over the creation and destruction of life. From this, we get the familiar adage of let-live/make-die and make-live/let-die.²⁵

Galloway emphasizes Foucault’s differentiation of symbolic power between death and

²⁰ Michel Foucault, *Ethics: Subjectivity and Truth*, ed. Paul Rabinow (New York: New Press, 1997), 73, cited in Galloway, 13.

²¹ See also, Colin Koopman, *How We Became Our Data: A Genealogy of the Informational Person*, (Chicago: University of Chicago Press, 2019).

²² Foucault, *Ethics*, 71, cited in Galloway, 13.

²³ Galloway, 13.

²⁴ *Ibid.*

²⁵ Foucault, *History of Sexuality*, 138, cited in Galloway, 13.

“the administration of bodies and the calculated management of life” then turns to Deleuze’s *Foucault* to express the importance of resistance—specifically as a piece of evidence for the presence of a power relation.²⁶

Biopower has apparent modes of control, but we can also identify modes of resistance and can thus distinguish errant conditions of possibility from emerging logics of power. Regarding biopower as a site of resistance, Deleuze points out that power which takes life as its object target at the same time turns life against power—the power of life is the resistance that is not limited to “species, environment or the paths of a particular diagram.”²⁷ From this revelation, Galloway determines a strategy of refusal as that which re-directs protocological technologies toward emancipatory or participatory media, or through the system and not against the system. Recall that the protocological is defined by Galloway as “a system of management historically posterior to decentralization.”²⁸ I have been arguing that we are caught up in a moment that is consistent with disciplinary society, not part of a movement that has proceeded from it. My approach to digitality, and thus datafication, insists on the strategic question of how each performance or category of performance is captured and utilized, how identity is hyper-individuated and then partitioned by the exercise of power specific to this regime.

²⁶ Foucault, *History of Sexuality*, 138-140, in Galloway 13.

²⁷ Deleuze, *Foucault*, 92, in Galloway, 16.

²⁸ Galloway, *Protocol*, 20.

A rigid categorization of performance made possible in platform communities seems to imply limitation or arrest of expression through an ironic proliferation of outlets for expression. Previously resistant practices of tactical media will not continue to work where encoding and decoding is simultaneously interwoven with contextless content. This is of paramount concern if it is true that big data and advertising can influence elections. However, even if false, I think concern is still warranted as long as people with billions of dollars continue to think the propositions of psychographic election strategies are functionally true. At the bare minimum, it means a specific kind of person will continue to loiter around democratic institutions. For this reason, I make no hard lines between either position—enough people have faith that this process is effective, and enough people act as if its effects are material for it to be a valid site of analysis.

I am trying to emphasize that what Cambridge Analytica shows us is not dystopian magic, but a craven extension of a business practice which is itself no less scandalous. Behind all the deep-analytics and prediction, Cambridge Analytica and its parent company are only telling people what to do with their money—what ads to buy, what causes to push where, which candidates to back when, etc. The open question is: What then? Once sold, how do these dirty tricks hit the pavement?

In simple terms, the political actualization seems to work like this: politically engaged and financially agile donors put money into initiatives and foundations. These

organizations then contribute money to political action committees and non-profits who share and support their goals. The relevant media angle comes from similarly affiliated outlets which publish material sourced from the PAC/Non-profit level. Popular figures at the media level then attend and head conventions organized by the PACs and non-profits. As far as US elections are concerned, nothing about this arrangement is at all partisan or suspect. In order to dig into the more problematic practices, specifically those which involve data and platforms, what follows will doubtless appear deeply partisan and suspicious—but my own partisanship and suspicious nature are quite beside the point. Ultimately, it's important to understand that there are no heroes in this story.

Recall that what Cambridge Analytica does is election campaign consulting, and what they sell are tactics and strategies for parties and people trying to win elections. As noted above, and indicated by the label *Facebook-Cambridge Analytica Scandal*, the platform looms large. Not only does the data initially come from Facebook's 700 million user base, but the ad buys and media tactics utilize social media platforms like Facebook, Twitter, and Reddit. That means not only targeted ads on as many websites and platforms as possible, but crucially sponsored and unsponsored posts. Wrapped up in this is a kind of weaponized version of what the previous chapter discussed regarding Reddit and the Boston Marathon Bombing. A bevy of rhetorical traps, ironic subversions, and bad-faith arguments are deployed across platforms in addition to meme-like ads that fit a more traditional propaganda matrix.

Much like the Southern Strategy before it, conservative operatives employ racist dog whistles and culture war tropes to control the narrative. This strategy refers to a coordinated effort to stoke racial resentment in the US south following civil rights legislation in 1964. Republican National Committee chairman Lee Atwater and campaign advisor to Nixon, Kevin Phillips, among other self-proclaimed dirty tricksters like Roger Stone and Roger Ailes advanced covert and overt narratives to build a republican majority south of the Mason-Dixon line and as far west as Texas. The strategy was effective for the RNC and for Nixon and held through 2012. Or as Hortense Spillers eloquently summarizes,

the deliberate appeal to states' rights and anti-black sentiment, sits at the very heart of Republican politics as a counterweight to the Civil Rights Movement, an outcome that Lyndon Johnson, in the aftermath of the Civil Rights Bill of 1964 and the Voting Rights Bill the following year, presciently understood *avant la lettre*.²⁹

Between the two, the goal is consistent: couch white supremacist positions into various coded talking points and then discursively seed them to recruit otherwise non-vocal but racially motivated voters to the cause.

²⁹ Hortense J. Spillers, "Fly Me to the Moon (from the ground) *b2o: the online community of the boundary 2 editorial collective*, December 11, 2020, <https://www.boundary2.org/2020/12/hortense-j-spillers-fly-me-to-the-moon-from-the-ground/>. See also, UC-Berkeley Center for Othering and Belonging report at <https://belonging.berkeley.edu/new-southern-strategy>, and Rick Perlstein "Exclusive: Lee Atwater's Infamous 1981 Interview on the Southern Strategy" *The Nation*, Nov 13, 2012 at <https://www.thenation.com/article/archive/exclusive-lee-atwaters-infamous-1981-interview-southern-strategy/>; and Perlstein's sequence on American Conservatism 2008-2020.

In practice, there is some symmetry with the marketing techniques highlighted in the last chapter, with reference to Ryan Holiday's description of how to seed topics in the morning to get national news coverage by the evening deadline. By using sock-puppet-account tactics, a group in Texas sourced 80% of the racist propaganda tracked on Twitter in the 2016 US election.³⁰ One user operated ten different accounts, some purporting to be 'woke' strawmen for the other accounts to argue against with talking points on race and crime. Twitter handles run by white supremacists in Texas posed as black men, atheist Arabs, and queer teenagers, peppering their histories with casual criticisms of black, Arab, and queer folks and adjacent issues. For example, posting as a native Californian, one sock-puppet account regularly posted local, southern California network news affiliate stories and support for LGBTQ causes, while also posting negative comments about pro-LGBTQ candidates running in California. On platforms like reddit, posts having to do with gay pride were brigaded by seemingly straight-pride supporting gay users.³¹ Some of the most popular (read highest ranked by the algorithm) include: 'There is no reason to be proud to be gay.' 'Im not proud to be gay.' 'I'm gay, and i support straight pride.' 'it's okay to call things gay.' (Sic) and so forth.

³⁰ Badaway, et al. "Analyzing the Digital Traces of Political Manipulation: The 2016 Russian Interference Twitter Campaign" *IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM)*, (Barcelona: 2018), 258-265. doi: 10.1109/ASONAM.2018.8508646.

³¹ Recall from last chapter, brigading is a coordinated by bad faith actors to flood the comments with unwanted or irrelevant discussion. The goal is to drown out legitimate discussion or to make the record the discussion appear to the uninitiated as something more organic, if only temporarily divisive.

Coordination for these operations take place on other platforms and websites, perhaps more often than email or other more direct lines of communication.³² Often, the amplification is outside of direct intention. Sitting Texas Governor, Greg Abbott repeated a conspiracy meme that misidentified an actual military training exercise as a preliminary step to martial law. A former state representative published an open letter decrying the situation as one in which he had to “choose between the possibility that my governor actually believes this stuff and the possibility that my governor doesn’t have the backbone to stand up to those who do.”³³ To be clear, this is an outer ring of chaos agents. Only some of them are on the payroll that connects them to campaigns, and only some of those campaigns are paying Cambridge Analytica. But this is part of the problem—the kind of microtargeting and psychographics Cambridge Analytica pitches accounts for some element of chaos and fray as value for money. Alexander Nix is heard to remark in the Channel 4 investigation, “We just put information into the bloodstream of the Internet and then watch it grow, give it a little push every now and again over time to watch it take shape. And so this stuff infiltrates the online community, but with no branding, so it's unattributable, untrackable.”³⁴ These injections are not as controlled

³² Anonymous image boards like 4chan, 8chan, et al are popular with the alt-right, white supremacists, gamer-gate misogynists, and Qanons where they don’t in fact overlap. See screenshots at <https://imgur.com/a/yeP9T6S> and here <https://imgur.com/a/efvQqve>.

³³ Full letter hosted by Texas Tribune at <https://static.texastribune.org/media/documents/TSmithLettertoAbbott.pdf>.

³⁴ “We just put information into the bloodstream of the Internet and then watch it grow, give it a little push every now and again over time to watch it take shape,” Nix says. “And so this stuff infiltrates the online

as ad buys or specific stories on media sites like *Brietbart* or *DailyWire*, or as intentional as the repetition of those stories across platforms.

Steve Bannon, erstwhile banker and film producer, once keyed into both Cambridge Analytica and *Breitbart* brags about using these tactics repeatedly. He is seemingly enamored by the power of young, white men with no anchor to society who congregate online. Bannon realized very early that they could be radicalized toward a populist, nationalist agenda. He had seen these communities at work in online games like *World of Warcraft* while developing virtual investment instruments for Goldman Sachs. An army of disaffected, angry young white men could be recruited “through Gamergate or whatever and then get turned onto politics and Trump.”³⁵ *Breitbart* and Cambridge Analytica receive funding from foundations supported by the same billionaires behind Ben Shapiro’s *DailyWire*, Turning Point USA, and Young America’s Foundation. The latter closes the loop by commissioning research like the Youth

community, but with no branding, so it's unattributable, untrackable." From the Channel 4 report, see n4 above.

³⁵ Although I am loathe to cite either, both do rank as culturally relevant news outlets in the US media landscape, so see: Noah Friedman, Josh Barro, and Lamar Salter, “Here’s how Steve Bannon used angry white gamers to build himself up to Trump’s chief strategist” *Business Insider*, July 21 2017, <http://www.businessinsider.com/steve-bannon-white-gamers-seinfeld-joshua-green-donald-trump-devils-bargain-sarah-palin-world-warcraft-gamergate-2017-7> and Mike Snider, “Steve Bannon Learned to Harness Troll Army from ‘World of Warcraft’ *USA Today*, July 18 2017, <https://www.usatoday.com/story/tech/talkingtech/2017/07/18/steve-bannon-learned-harness--army-world-warcraft/489713001/>.

Patriotism Index, which then gets pride of place in a feature story on *Breitbart* regarding how college makes young people less patriotic.³⁶

New Dog, Old Tricks

The previous section detailed the processes at work that made Cambridge Analytica a scandal, but I argued, by way of analogy to the Republican National Committee's Southern Strategy that took off in 1964, that what the consultancy did was not exactly novel. Nevertheless, whistleblowers like Brittany Kaiser and Christopher Wylie are correct in warning, respectively, that what the firm was up to was fascistic and tantamount to psychological warfare. In this section, I want to push further and suggest that what does seem novel about the scandal—the exploitation of user data for what amount to propaganda purposes—is also less than satisfying. By saying the technology isn't being exploited in a negative sense, this section will relate to my broader concerns by illustrating expansive application of data mining and analytics as simply being routine according to obvious specifications. Whether specific use cases are nefarious is an entirely different question.

There is a robust history of hiding or obscuring sponsorship of seemingly organic discourse. What might be termed political marketing is commonly referred to as

³⁶ Tom Ciccotta, "Survey: College Makes Young Americans Less Patriotic" *Breitbart* July 2, 2020. <https://www.breitbart.com/tech/2020/07/02/survey-college-makes-young-americans-less-patriotic/>.

Astro-turfing. For example, global warming or climate change debates have been successfully muddied by such campaigns. The result has been greater success for business interests over environmentally protective positions and measurable damage to authentic grassroots movement in the meantime.³⁷ The problem at hand, and what specifically dovetails with Cambridge Analytica and US electoral politics is what *seems* authentic *seems* to work. Maybe Trump's campaign and the RNC did contract Cambridge Analytica, but that doesn't mean the Bernie Sanders memes were crafted by anyone other than supporters willing to exploit digital culture for their own ends. I hate to stir Bernie Sanders into the mix, so perhaps a more palatable and more recent example will suffice: Michael Bloomberg.

In 2020, the Bloomberg campaign paid for meme posts. The plan was to reach under-25 voters through a coordinated group of posts made over two hours of an evening, so young people doom-scrolling their phones would learn Bloomberg's name before they went to sleep.³⁸ The result of the meme campaign coordinated by a presidential campaign was confusion. Many users were unsure whether the posts were genuine or paid for, which is of course, entirely the point. The advertisements, because at base that's exactly what they were, recruited existing influencers to make pro-

³⁷ C.H. Cho, M.L. Martens, H. Kim, *et al.* "Astroturfing Global Warming: It Isn't Always Greener on the Other Side of the Fence." *Journal of Business Ethics*, v104, (2011), 571–587. <https://doi-org.proxy.lib.duke.edu/10.1007/s10551-011-0950-6>.

³⁸ See BBC News "Mike Bloomberg Campaign Pays Influencers for Memes" February 13 2020. <https://www.bbc.com/news/world-us-canada-51493403>.

Bloomberg posts that were self-composed or provided, and to direct attention to similar efforts through Twitter's hashtag system. The plan's success was precisely the confusion over whether it was real.

Strictly speaking, the content was not real. The messages were cheeky and suggestive in all the ways Michael Bloomberg was not. In another sense, they were not only real, but true: the posts were memes-for-hire. The influencer network recruited had a combined reach of 60 million followers. It didn't matter if I believed the post expressed support for Bloomberg, or if I thought that the campaign was bribing people—some of the posts indicated the payment structure and encouraged people to get their share. The whole transactional network of paid posts, inauthentic support, authentic hustle, and snarky commentary was a product of a political campaign. The intended purpose was to accrue positive opinion for the candidate by constructing “a self-aware ironic character around Mr. Bloomberg.”³⁹ Perhaps the \$150 bounty to influencers who could claim between 1,000 and 100,000 followers is not such a far cry from the \$20 I once made for standing in a crowd outside of a bar so a state representative's media team could get some pictures of their candidate inspiring the working stiffs. Similar, maybe, but I suggest the difference is in what is being pretended.

³⁹ Taylor Lorenz, “Michael Bloomberg's Campaign Suddenly Drops Memes Everywhere” *New York Times*, February 13 2020, <https://www.nytimes.com/2020/02/13/style/michael-bloomberg-memes-jerry-media.html>.

The memes were not meant to convey electability. It also seems doubtful that the play was for authenticity. As it turned out, the result was less than spectacular—the internet hates it when everyone is in on the joke. Nevertheless, history seems to indicate that if advertising works, it does so through disinterested recognition. I’m here reminded of Hortense Spillers writing at the end of that same presidential campaign during which many people in the US lost something, Michael Bloomberg included. She speaks of televisual logic, which given the equivalency of screen and interface, I want to appropriate to the data logic I have been trying to make sense of. Spillers says this logic

as though detached from human choice and thinking, proceeds on autopilot in the pursuit of top ratings and advertising dollars. Exactly what debt of sociality is owed to the public by various media constitutes not only a critical inquiry concerning cultural production and its widest distributive patterns—in other words, how their dissemination and content participate in processes of educating—but it is also the nexus that is denied: a breach falls between them with media and their decisive commercial interests on one side and the public and its stake in *bildung* and literacy on the other, as never the twain meets.⁴⁰

Several keywords stand out, and I want to use them to guide my thinking through the rest of the section.

Obviously, advertising dollars, but also the debt of sociality that I read as being generated in the chasm between the commercial interests of media and the requirements for public literacy. Then, what I read as an axiomatic statement: never the twain meets. If never is as long as I think it is, then the intersection of nefarious purpose and technical

⁴⁰ Spillers, “Fly Me To The Moon” n.p.

utility is built over what Spillers refers to as “the nexus that is denied.”⁴¹ There is no solid ground to sink the bridge pylons because distribution and amplification are not the same as literacy, and commercial interests are not social requirements.

At the very start of this dissertation, I flagged the question of who could take over editorial power if it were stripped from platform owners and corporate boards. Delineating the power of arbitration still leaves the question of exactly what would be under its purview. In the framework of the Facebook-Cambridge Analytica Scandal, there at least three positions drawn from the examples above. I want to discuss each with the breach and bluffs from Spillers in mind.

First, there are agents of hate who blame othered groups as the source and persistence of myriad woes. This activity instrumentalizes racist tropes, casts aspersions about suitable intelligence to function within—thus undermining loyalty to—the homeland. Next, the agents of investment foment markets and gin up demand for their products through sales channels facilitated by doubt, conspiracy, and populism—each an area where agents of hate are well established. Whether about sober business or the selling of snake oil, the means are justified through a profitable end. Third, agents of the fray move in and through institutions by mimicking content, but misrepresenting context. They can be recruited by anyone/thing that appeals to imprimaturs or

⁴¹ Spillers, “Fly Me to the Moon,” n.p.

credibility. Once recruited by investment or hate, agents of the fray can be targeted toward undermining institutional authority. Together, these symptoms, in one name or another, have been part of the diagnosis of a misinformed citizen.

The scandal of Cambridge Analytica is that the production of misinformation was evangelized through memes and weaponized through news. Both operations are assumed to have taken place through user-generated content, social media sharing, and direct messaging. But there is also a case to be made that it is not the fault of users at all, and instead the responsibility lay with software and the platform. If the interface coaxes users into staying engaged, like a slot machine in the casino, then look no further than YouTube, Facebook, Twitter, and WhatsApp.⁴² However, this software can't run without hardware, here meaning servers and the like. All of that equipment is owned and operated by large technology firms for their daily business (which software and users are in service of, but not an end itself), and so perhaps the focus needs to be on Alphabet, Inc. (GOOGL), Twitter, Inc. (TWTR), and Meta Platforms, Inc. (FB). It is claimed by those who did the work and backed up by subsequent investigation that at best, Cambridge Analytica partnered with well-funded, politically interested parties to steer the outcome of elections, and at worst fomented disorder to make elections untenable. I am comfortable calling this nefarious, and it seems unlikely that the goals

⁴² See: Wendy Chun. *Updating to Remain the Same: Habitual New Media*, (Cambridge: MIT Press, 2016); Natasha Dow Schüll, "Abiding Chance: Online Poker and the Software of Self-Discipline." *Public Culture* v28, no. 3 (2016): 563-592.

could be met without data mining and analytic insights at scale. The scandal is indicative of a struggle to bridge the impossible nexus.

Suppose it is true that the internet democratized information. With the web and now platforms, what was once under the domain of broadcast networks and newspaper circulation has become the province of everyday people. It is also the case that the opening of access to information and subsequent broadening of the public sphere has led to a situation of increased manipulation of information under all kinds of motivations. Is it a new dawning when larger audiences can be more misled? Or is it simply that the license to mislead has been widely distributed?

Platforms with a large enough user base and a concomitant presence across other platforms and cultural spaces are in a position to confer legitimacy on certain users whose activity on the platform garners enough attention. The goal of issuing some degree of meaningful stigma for actions outside of normal conduct has recently been put to both government and corporate agents. Solutions to the platform problem seem to fall under roughly two juridical proposals. First, a reconfiguration of first amendment rights. Second, subjecting tech companies to a strict regulatory framework.⁴³ The route through jurisprudence is questionable.

⁴³ Mark Verstraete and Derek E. Bambauer, "Ecosystem of Distrust" *First Amendment Law Review* 129 (2018), *Arizona Legal Studies Discussion Paper No. 18-17* (March 30, 2018), 16. url: <https://ssrn.com/abstract=3157885>.

Instead of anchoring the problem of misinformation to recent changes in technology or institutional relation, legal scholars Mark Verstraete and Derek Bambauer suggest that the cause is in “long-term political and sociological changes” in the United States.⁴⁴ The kind of operation Cambridge Analytica was able to deploy at scale is, from this perspective, the repetition of symptom and effect from widespread dissolution of institutional trust in the US that Verstraete and Bambauer see as persistent over the last fifty years. If so, why not call it a failure of governance? And if a failure of governance is legible in terms established by a near-permanent separation of commercial interest and public requirement, is the Facebook-Cambridge Analytica Scandal the reconstitution of governance made real through the most amendable venue of public discourse?

Sovereign Status Updates

One of the reasons for looking into platforms and unpacking datafication as a process is that a good deal of vital infrastructure is now more or less owned or at least controlled by tech companies whose officers hold very specific ideas about how society should run and how technology should be put to work. In the previous section, I asked if nefarious and scandalous uses of data weren’t distracting attention from other positions and players. I ended by suggesting that the tone of scandal was a way to package the arrival of a renovated mode of governmentality. In this section, I want to

⁴⁴ Verstraete, and Bambauer, “Ecosystem of Distrust” 16.

build on that arrival through the problem of ownership and control and think about how to distinguish these tech companies from nations and states.

Big Tech companies are recipients of military contracts, which is no different from any large corporation in the US. Research consortium, Crescendo found that between 2007 and 2020, the US Department of Homeland Security contracts to tech companies including Facebook and Google increased 50-fold.⁴⁵ Over the same period, the Department of Defense and the State Department saw similarly precipitous increases, with the Department of Justice contracts showing a marked jump from 2016 to 2020. A caveat in the methodology here is that information can only be assessed from fully disclosed public contracts. Full disclosure is a formal designation leaving partial and undisclosed contracts off the table and thus does not include any tier of classified contract. The point is that none of the contracts in the Crescendo database are, strictly speaking, an illegal or deeply nefarious transaction. Nor does the documentation identify technology companies as commercial partners in the PRISM program, as revealed by Edward Snowden in 2013.

The slide decks released by Snowden and subsequently parsed by journalists show a high degree of overlap and embeddedness between Big Tech and Intelligence

⁴⁵ Crescendo gathers work from anti-corporate racial justice organizers, Muslim digital advocacy activists, and a watchdog group itself comprised of activists, lawyers and academics, to aggregate public information into searchable datasets for journalists, researchers, and organizers; <https://bigtechsellswar.com/#yearbook>.

Tradecraft.⁴⁶ For example, one UK Government Communication Headquarters training manual entitled *The Art of Deception: Training for a New Generation of Online Covert Operations* details the passive collection from YouTube views, Facebook likes, and site visits for use in understanding and shaping human terrain through the optimization of influence at scale. Specifically, the manual instructs agents to compose and structure messaging campaigns for virality using Web 2.0 delivery systems. This tactic falls under the broad strategy of influence and disruption other slides refer to as Information Ops that explicitly endorse utilization for “pushing the boundaries and action against hacktivism.”⁴⁷ The mentioning of hacktivism in the manual brings two points to light. One, it names an enemy and a zone of conflict. Two, it expresses the main conceptual operators for each side of the presumed conflict. The latter can be summed up by simulation and dissimulation, or respectively the showing of what is false and the hiding of what is real.

Through dissimulation and simulation, using insights gleaned from data mining deployed through platform interfaces, state agents achieve deception through the capture of attention and perception by content that weaves a curated expectancy into

⁴⁶ Drawn from a searchable database maintained by Canadian Journalists for Free Expression at <https://www.cjfe.org/snowden>, with commentary and additional reporting by *The Guardian* at <https://www.theguardian.com/us-news/the-nsa-files> and *The Intercept* <https://theintercept.com/documents/>, supplemented by a repository that auto-updated global news stories between 2013 and 2018 at <https://github.com/iamcryptoki/snowden-archive>.

⁴⁷ *Ibid.*, see GCHQ manual archived at <https://theintercept.com/document/2014/02/24/art-deception-training-new-generation-online-covert-operations/>.

individual or group affect and sensemaking. The intention is to achieve an immediate, almost intrinsic thinking-twice that restarts the circuit of attention and perception.⁴⁸ The second cycle of attention and attribution means to produce activity or behavior closer to a desired outcome. All of the above takes place across the spectrum of communication. Beginning with the most personal, through the communal, and finally the global, these include: text, instant messaging, internet-relay chat, phone device, Facebook, email, Twitter, blogs and websites, social networking, and lastly, news media. Most telling about the deception manual, for my purposes, is the overlap with marketing. The middle of the slide deck substantiates its claims with proof of concept from brand awareness and new product adoption. Tens of billions of dollars made by big tech in cooperation with state agencies, passively and actively utilizing techniques as familiar to COINTELPRO as they are Proctor & Gamble. The techniques noted above comprise a drawing together of a state formation from remaining, functional elements following an apparent failure of governance.

Various loci of power are being linked up to new routes across old territory—the two sides of the chasm referenced above in Spillers. A war of maneuver is underway through juridical aspects of datafication, while a war of positions is taking place through

⁴⁸ Ibid. GCHQ manual, slide 24. See, <https://theintercept.com/document/2014/02/24/art-deception-training-new-generation-online-covert-operations/>.

its aspects of veridiction.⁴⁹ Cultural theorist Stuart Hall describes the two operations as the hard work of legitimation, whereby dominant groups stage contestations for control over resources and institutions. This includes the work of presenting respective victories as both “legitimate and necessary in the eyes of the vanquished.”⁵⁰ Hall further enumerates the process by explaining how discontented populations are offered requisite concessions and antagonisms are papered over with cultivated alliances. Above all—for their duration—the dominant groups perform routine maintenance of simulating the containment of opposition while dissimulating the fact that no social pacification is anticipated through the structure of order. I don’t find fault with Hall on any point here. I want to suggest that, when read together with a widely distributed, public license noted above, the Facebook-Cambridge Analytica Scandal can be understood as part of the work of legitimation. Further, the outcome of this work appears directed toward the empowerment of tech companies as sovereign entities.

Consideration of the platform and its management as an expression of sovereignty is where my investment in Foucault’s framework of power/knowledge is essential. Biopower and control are more deeply entrenched as modes of power, but vital components of prior modes of power that have not been the dominant form are reconstituted. Always present to some degree, modes of discipline find new techniques

⁴⁹ Stuart Hall quoted in Lipsitz “The Struggle for Hegemony,” *The Journal of American History*, v75, no1, (June 1988), 146-150.

⁵⁰ Lipsitz, “The Struggle” 147.

and applications where datafication has been fully deployed. The practices of Cambridge Analytica are specific instances of general data mining, analysis, and political legitimation. While in no way uniform or totalizing, platforms in US culture are socializing and disciplining because the data that makes the platform possible and profitable is ultimately biopolitical. The amalgamation of forms of knowledge and modes of power are articulated in an apparatus of governmentality. Here, I return to one of the two animating ideas of this project, computational life.

I understand this apparatus as capable of producing a synthesis of the norm and its modulation. The prior relation of norm and modulation was one of establishment and adjustment. This is often explained through risk management, where populations are statistically analyzed for optimal production of society and the risk of falling outside of that optimized curve is hedged through deployment of actors, targets, and assessment via scientific and economic knowledges. I understand the theory of making-live and letting-die an actual practice of risk management. Contained by computational life, the data shadow moves freely, into and out of correlative constellations determined via algorithmic selection, social engineering, and aggregation. In a similar fashion as expired travel documents negating institutional presence and visibility of a visiting scholar, data shadows confer presence or absence of the person in multiple spaces. Less and less of any performance matters save for that which is digitalized and made subject to datafication. The political and economic leverage obtained by tech companies that own

what amounts to the materiality of a digital infrastructure represents a striking concentration of power. Computational life is in this sense a grid or a territory that makes-live and makes-die, or more practically, produces a choice between subjugation and ceasing to exist.

Subjects of Engagement

Having discussed the coherence of a de facto sovereign in the previous section, I will take up two ways of understanding the subjects of datafication, which I have been calling data shadows. I proceed through the work of media and cultural theorist Olga Goriunova. I am drawn to a mutual affinity for what Goriunova calls “discursive particularities of the internet” which show how, as design theorist Olia Lialina notes, “words themselves become interfaces, and every change in vocabulary matter.”⁵¹

The data shadow, as digital subject, is the result of relations between human and aggregates of data. I have been trying to offer examples, applications, and variations of how the shadow comes to precede its person, because once it does, the person is more likely, in more situations, to follow the lead indicated in the data. I have already discussed the mutual affinity for different kinds of data shared by marketing companies,

⁵¹ Olga Goriunova, “From Text to Media: Discursive Peculiarities of the Internet” n.d. https://www.mediaartlab.ru/books/east/english_version/texts/from_text_to_media.htm; Olia Lialina, *Turning Complete User: Resisting Alienation in Human Computer Interaction*. (Heidelberg arthistoricum, 2021) 7.

platforms, and nation-states. These include records of interface like tracking cookies, demographic statistics, psychographic projections, and purchase records. This data is continuously gleaned from points of consumption on the internet and in geo-spatial locations; that is, when I click through a site for grocery delivery and when I walk the aisle in person for a weekly shop.

The advertising model derived from data creates a kind of address for the delivery of an advertisement to a specific user correlated to the objective of the ad. These (ad)dresses are sorted by categories. For example, all of the different people in 27705 postal code area vs. only people in that group who also own home, are married, have 1+ children, etc. The difference between what might be called standard credit-rating via demographic statistics and datafication is the assumption that by transforming big data aggregates to individual profiles, and discrete profiles into massive data sets, there emerges a better than average chance at actually predicting the differences between households, street by street, in the 27705 area. The predictive differences in each household are subjects of datafication.

Digitalization produces a double of the self. State programs like the defunct-or-renamed National Security Agency program Total Information Awareness trace a totalitarian containment of the individual.⁵² Goriunova refers to these as stages of

⁵² See: ACLU factsheet, analysis, and report 2003 at <https://www.aclu.org/other/qa-pentagons-total-information-awareness-program>.

completeness and holism and adds that neither are requirements for the subject of data. She explains that through pattern formation and rapid analysis, the subject is enacted in the pattern. The patterns are functional for making connections, as explained in the previous chapter, between my internet search for camping supplies and an ad for tents next to a news story I look up later that day. In demographic terms, there is already a separation between the subject addressed by the ad for tents and me. Attaching claims of an ethical, political, or social valance to pattern-selecting-interest-in-tents is a wider separation still. The equivalent in terms of Cambridge Analytica would be organizing a campaign for the president by asking who has most recently drunk milk—except here, milk means white supremacy. Prediction could mean prophecy, or it could mean rough estimate. The difference in my mind comes down a relation of power between sender and receiver.

Goriunova sees the patterns as identifiable specks that cohere in a minimal subjectivity. This subject is produced by software, distributed on platforms, and collated under one unit or sign, user. Platform software sustains a tension that exists in the location and exploitation of fractures, pulling in through commonality and pulling apart through division. This subject is not representative of the world, there is no direct mirroring exercise, because the digital subject is a product, it does not just occur through the exercise of natural or material movements.

The data shadow is a political subject insofar as the collected data in an experiential surrogate for the person who produced the data, the places they travelled, and their points of interaction. To live with a data shadow is to write a story about oneself with a computational vocabulary that definitionally changes. The terms and conditions can be made to expand and contract but cannot be disaggregated from data or the platform interface. What this means is that the data shadow, in addition to pacing out the steps to follow, can be set afar from or against the body in terms of distribution of force or legibility. Harassment and abuse online can be individualized and coordinated but in either case swift and destructive.⁵³ Likewise, appeals to justice or demands for representation can be distant and slow. Or vice versa depending on the engagement metrics.

Conclusion

Scandals involving personal data appear to be transgressions of an assumed boundary, rather than a breach of ethics. It could be argued that all ethics are assumed

⁵³ For assessments of coordinated harassment writ large, see numerous appraisals of Gamer-Gate in Massanari, (2015); Chess & Shaw, (2015); Perreault & Vos, (2016); Ruxton, (2017); Anonymous, (2017); and O'Donnell, (2019). Chess and Shaw were explicitly folded into the event by participating in a "fishbowl conversation for the Digital Games Research Association conference (DiGRA)" that ended up being sourced in the Gamer-Gate discourse as proof of "The Feminist Ideological Conquest of DiGRA." For individual coordinates of harassment, see Jules Gil-Peterson, "From Gender Critical to QAnon: Anti-Trans Politics and the Laundering of Conspiracy" at <https://thenewinquiry.com/from-gender-critical-to-qanon-anti-trans-politics-and-the-laundering-of-conspiracy/> and Porpentine's "Hot Allostatic Load" also in *The New Inquiry* at <https://thenewinquiry.com/hot-allostatic-load/>.

boundaries, but in this case the assumption is not brought about or sustained through social and cultural exchange. The boundary emerged through an insistence upon the fantasy of digital platforms by the companies that own them. For example, Coca-Cola does not produce smiles, but in fact contributes to tooth decay. A childish example, yes, but illustrative of the situation where a marketing pitch is accepted as a description of technological capacities. This chapter shows that the grand innovation of data mining in politics was a natural extension of using data to specify individuals and correlate populations already underway. The amplification of spurious information was not borne of Silicon Valley, it was here applied at scale. The problem identified over the course of this dissertation is dealt with in this chapter by puncturing the dismay expressed when powerful institutions operate according to their own aims at every turn.

Epistemic crisis that has recently plagued cultural and political discourse is intrinsically tied to digital platforms and data mining. The pitch is that we are not in our right minds because bad actors have hijacked communication networks. In light of the transgression, the people who ought to be in charge of keeping our digital streets clean have seemingly abdicated responsibility. If so, then extracting this new technology from politics and regulating speech within the networks of communication ought to solve the problem. As I argued in this chapter, there are two primary operations underway in the crisis that are less scandalous and more standard operating procedure. Surely the

standard is a mutation of good intention and democratization of information that follows from widespread adoption of social media platforms.

It used to be the case that experimentation with identity beyond the body in digital spaces struck a liberatory note, as Joanne McNeil shows in her recent ethnography of the early internet, *Lurking: How a Person Became a User*. Artists and theorists alike from Legacy Russell to Mindy Sue, and Bonnie Ruberg have all described an increasingly steep terrain of computer interface.⁵⁴ Each offers a narrative of exploration and experiment. Though contentious in its own right, digital interface was less starkly marginalizing than the world away from the keyboard. Russell in particular talks about being able to translate her experimentation into everyday life in a mostly positive way, even as her multimedia installations provoke reflection on the embedded assumptions of whiteness and masculinity that structure digital culture. It would be a mistake to say that the space was all good and became all bad. It would also be a mistake to say that the opportunities to play and explore haven't gotten worse all around.

Participation in these spaces became less voluntary as it became more contentious. This is not to say the free domain of cyberspace was ever a bastion of freedom. At best, the experiences recounted by the aforementioned authors show that

⁵⁴ See, Legacy Russell, *Glitch Feminism* (2020), Mindy Sue, *Cyberfeminist Index* (2022) also maintained at <https://cyberfeminismindex.com/>, and Bo Ruberg, *The Queer Games Avant-Garde* (2020).

elevation beyond marginalized communities was not instant or assured. There does seem to be a past tense where demonstrating a level of savvy accrued enough social capital for relatively open travel. Of late, the question of harassment or abuse is almost as necessary for digital interface as a persistent internet connection.⁵⁵ Anecdotal, perhaps, but every student in a recent course reported anticipating some level of racist and sexist harassment whenever they were online, while also affirming that between social media and recreational activities like gaming, very little waking life was offline. In this same class female identifying students from the US who expressed their gender online described the harassment as exclusionary, while a cohort from east Asia confirmed that they were more likely to confront infantilizing harassment when expressing gender. Although platforms, by and large, deliver this violence and platforms are a consequence of Web 2.0 orienting, the preceding has argued that this is not a movement of technology and culture. Instead, I have been describing a moment within wider conditions that makes a type of exploitation possible. Advertising supported platforms are one reason we're likely to have a bad time online, but they are only symptomatic of the epistemic crisis we are experiencing. Both marketing and speculation predate the web, just as political manipulation predates the data economy.

⁵⁵ Anecdotal, perhaps, but every student in a recent course reported anticipating some level of racist and sexist harassment whenever they were online, and also affirmed that between social media and recreational activities like gaming, very little waking life was offline. While female identifying students from the US who expressed their gender online described exclusionary rhetoric, a cohort from east Asia confirmed that they were more likely to confront infantilizing rhetoric when expressing gender.

The intersection of persistent elements is of greater concern than platforms and how we use them in the moment—even if that alone has proven to be an absolute catastrophe.

Conclusion

Present, tense.

This dissertation coheres in present and reflective description. My analysis of events like the Web 2.0 Conference, the Boston Marathon Bombing, and the Facebook-Cambridge Analytica Scandal draw upon both initial descriptions, and later ever-evolving reflections. My methodology takes its cue from Elizabeth Grosz's description of genealogy: "an exploration of sources and sites often unrecognized or unknown...a way of reviving things that either we have forgotten or that were never developed, elaborated or perhaps even born, things that were stillborn or fragmented."¹ Read in this way, phenomena like the conference, the bombing, and the scandal are constructive of professional, discursive, and memetic standards. It will then present some degree of symmetry to conclude with reference to a thus far unnoted but no less important signifier of contemporary knowledge, the podcast.

To set the stage for my concluding remarks, I will briefly relate the content of a generally well known, pop-news podcast: *How to Fix the Internet*, produced by the Electronic Frontier Foundation (EFF).² At once socio-psychological and techno-political,

¹ Elizabeth Grosz and Vikki Bell "The Incorporeal: An Interview with Elizabeth Grosz" *Theory Culture & Society*, May 22 2017, <https://www.theoryculturesociety.org/blog/interviews-elizabeth-grosz-the-incorporeal>

² EFF was founded in the 1990s by John Perry Barlow, John Gilmore, and Mitch Kapor to champion civil liberties in the digital realm of cyberspace after early challenges to speech and privacy made by people and institutions perceived by the founders to have no functional understanding of the technology at hand.

this podcast claims neither of those categories but is well grounded in a common sense, laptop class tone. The episode I want to focus on is titled “Data Doppelgängers” and features a three-way conversation between hosts, EFF executive director Cindy Cohn and special advisor Danny O’Brien, and public policy professor/dot-com veteran Ethan Zuckerman.

The central concern for “Data Doppelgängers” is a troubling, core paradox of the internet. On one hand, the internet plays a crucial role in what the podcast participants take to be a natural human endeavor to grow and change into ever better versions of ourselves. On the other hand, the internet requires some degree of permanence in memory and storage in order for subsidizing advertisements to be as precise and profitable as possible. If people are going to keep using the internet to better themselves, the internet needs to be a better place, and that starts with fixing the imbalance of surveillance advertising and online speech.³ One piece of the puzzle is an immovable object, while the other piece is an unstoppable force.

At the outset of the episode, there are a few points to frame the debate: Fixing the internet is hard because we don’t know what is wrong. Tech companies operate proprietary software and stymie independent research by evoking trade secret protection. Within these provisions, the guiding assumption of the episode’s discussion

³ Ethan Zuckerberg, interview by Cindy Cohen and Danny O’Brien, *How to Save the Internet*, EFF, January 25, 2022, <https://www.eff.org/deeplinks/2022/01/podcast-episode-data-doppelgangers>.

is that, regardless of research on or cooperation with tech companies, how we understand speech on the internet needs to change. In order to effect the change, we have to re-imagine the space. I take re-imagining to be one of the key habits at work in and around the internet during the period I have covered in this dissertation.

Imagination here involves reorienting the problem toward more amenable terms, rather than asking questions intended to destabilize problematic ground. Within the conversation staged for the podcast, the participants reiterate a fundamental lack of knowledge regarding what is wrong with the internet while nevertheless insisting that this same territory can be mapped. The mapping operation here is a social scientific approach of hypotheses, experiment, and repeatability. The approach is complicated or foreclosed by the same combination of secrecy and legal protection that governments have used to stall organizations like the EFF in challenges to surveillance via general purpose computers.

At several points in the dissertation, I have gestured toward section 230 of the Communications Decency Act (CDA). This bit of legislation amends part of a revision to the 1996 Telecommunication Act, itself a major revision of a Roosevelt-era law that created the Federal Communications Commission. Note too, that the CDA was motivated by the presence of pornography on the then-emerging information

superhighway, and thus is a result of moral panic over indecency and obscenity.⁴ In the CDA, the US government formally names several positions that remain vital to internet cultures: provider, user, content intermediary and interactive computer service, all in contrast to publishers and authors. Based on section 230, businesses in the interactive computer service sector are not responsible for user-generated content, its hosting, or its algorithmic mediation.⁵ Within the context of such regulatory history, Zuckerman sums up an evolutionary development where “we've gone from worrying about government censoring the net, to worrying about platforms censoring the net, to now in some cases, worrying about platforms not doing enough to censor the net.”⁶ By addressing to some extent how business is conducted in an emerging market, i.e., the period noted from government censorship to platform censorship, Zuckerman is inadvertently situating the question of free speech on the internet as part of the dot-com bubble. He adds, “this is not how we should be running a digital public sphere” and I want to suggest that this is an equally inadvertent appeal to authority aimed at platforms.⁷

Centering platforms as police is reverse engineered by the following problem statement: nowadays, there is a choice between censoring more and censoring less,

⁴ Robert Cannon, “The Legislative History of Senator Exon’s Communications Decency Act: Regulating Barbarians on the Information Superhighway” *Federal Communications Law Journal*, v49 Iss. 1, Article 3. (1996) Available at: <https://www.repository.law.indiana.edu/fclj/vol49/iss1/3>.

⁵ Arthi Vadde, “Platform or Publisher” *PMLA*, v136 n3, (2021), 456. doi: 10.1632/S0030812921000341.

⁶ Zuckerberg, “Data Doppelgängers” n.p.

⁷ Ibid.

along with an understanding that the apparatus of censorship is either the government or the platform. In Zuckerberg's statement, there is an explicit mistrust for both. He sees the real solution as the development of extensions to existing technology or reduction in the size of platforms until they can be self-governed. If government censorship is a non-starter and the solution is small-scale platforms, then mistrust of platforms is moot. Without scale, platforms are still walled gardens—only smaller.⁸ Just as we can't abide government censorship, the framing assumes we can't abide a world without platforms. From these collected premises, I see the public's reliance on whistleblowers to reveal misconduct as an expression of sovereignty by tech companies. In turn, our own expectation that the remedy to such misconduct requires a movement of self-determination squarely within the free-speech-zone of digital platforms is a public admission of the same corporate sovereignty.

O'Brien illustrates what I take as the dominant thought on the matter of corporate sovereignty when he refers to scaling down as "very much the idea and the feeling of the early internet. We had a lot of these small communities and did thrive and people could move between them. But then they withered away."⁹ The case I make in my discussion of Web 2.0 shows how this withering took place, but the podcast

⁸ Politically, this is devolutionary and to my mind remarkably similar to the states-rights ideology of most domestic conservatism. What I find particularly interesting about the parallel is how the delegation of authority in this case increases power for whoever owns the platform, i.e., it seems to increase economic leverage over markets and control over discourse.

⁹ Zuckerberg, "Data Doppelgängers" n.p.

conversation from the beginning of 2022 shows how deeply that past has been naturalized as evolutionary (free-market) competition. Credit where credit is due, Cohn, O'Brien, and Zuckerberg are more or less in agreement that advertising and venture capital have not been ideal funding structures for internet companies. Zuckerberg summarizes the problem as having

a lot to do with how capital markets have been structured. We've had three things happen simultaneously: we've moved from an open web where people start lots of small projects to one where it really feels like if you're not on a Facebook or a YouTube, you're not going to reach a billion users, and at that point, why is it worth doing this? Second, we've developed a financial model of surveillance capitalism, where the default model for all of these tools is we're going to collect as much information as we can about you and monetize your attention. Then we've developed a model for financing these, which is venture capital, where we basically say it is your job to grow as quickly as possible, to get to the point where you have a near monopoly on a space and you can charge monopoly rents.¹⁰

Restrictions on general purpose use of the open web isn't the problem, it's a general fear of missing out that preempts participation. The advertising model isn't the problem, it's the surveillance capitalism that emerges at scale. Venture capital isn't the problem, it's the incentive on rapid growth over sustainable return that happens at scale. In each case, the critique is bounded by the accidental emergence of worst-case scenarios that just happen to be naturalized through continuous repetition. If scale digs a hole, it also

¹⁰ Zuckerberg, "Data Doppelgängers" n.p.

generates and sustains the titular data doppelgänger that has fallen in. With this figurative double, the EFF podcast wraps up its problem space.

Zuckerberg describes data doppelgängers as attending all people who use the ad-supported internet-web-platform space. Roughly analogous to an imaginary twin-sibling who keys us into products we might be interested in, the data doppelgänger is useful for targeting ads. In the podcast, the logistics that instrumentalize such a figure are framed as permissible so long as data collection isn't intrusive and isn't scaled into permanent surveillance. The process of imagining a different internet is boiled down to a series of exchanges. Platforms aren't doing anything wrong by this estimation; they may well be victims of circumstance just like users and the people behind that use. The task for our age, accordingly, is to work together to make the whole situation less creepy and intrusive. My main critique on this point is that we're about twenty years too late.

Digital duality can be credibly traced to the nineteenth century, but in spite of its persistence, critiques of interface and computation fail to historicize its present manifestations. The premise of a data doppelgänger hopefully resonates with my own terminology, the data shadow. As a result of being caught up in the Web 2.0 eddy described in chapter two, there is a tendency to begin at and thus naturalize the pairing of the person and their data. If the only possibility is the current scenario at any given point in time, then no relation can undergo sufficient scrutiny. Instead, the force of resistance can only be directed to the degrees, extents, and responses in an ostensibly

permanent arrangement. Computation moves from being something we utilized to an entire functional milieu—or what I have been calling computational life.

The relations of power over computational life do not operate through familiar deployments of discipline or control. It does not need or want to know the truth through jurisdiction and veridiction. This is a mode of governmentality specific to computational life that trains us to follow the leaderboard, to present absence, to make truth out of what is obviously false. These techniques are specific to corporate sovereignty as it is manifesting under datafication—it builds a truth, creates it as needed, through a revised disciplinary apparatus.

Through the historical genealogy of seventeenth- and eighteenth-century power conducted by Foucault in *Discipline & Punish*, a comparatively traditional discipline tracks and monitors populations to facilitate necessary maintenance of society. As a result of intensifying observation and archiving that follows from wider applications of this disciplining power, people comprising populations are summarily produced as individuals. These very techniques of individuation articulated by Foucault are, through datafication, deployed as part of a more sweeping, granular tracking and surveillance while also constituting new processes of spatialization on platforms. Where formerly, discipline created individuals as a figure emerging out of recording and tracking, contemporary articulations of discipline neither individuate nor divide, but instead diffuse into highly malleable collations. I have claimed at various points in this

dissertation that datafication generates and reinforces power relations wherein we are all subjected or cease to exist. This statement can now be further clarified—or perhaps more accurately said—as: we are subjected to the extent that we fail to exist within a regime of data’s total autonomy. The culminating event of data’s agency is what I have been tracing through the evolving configurations of the data shadow.

By telling this particular story about the internet, and concluding with a challenge to representatives of the longest standing champion of digital rights in the US (the EFF), I am not arguing against the inherent creepiness of it all. Nevertheless, I can’t accept the move from a creepy city to a smaller, quaint, creepy town. This option might offer more freedom, perhaps, but that freedom will still be defined by the terms and conditions of the platform. We will not be able to explore self-expression and restraint, but rather be subjected to a mutated type of authority that no longer requires inputs of self-repression. Dropping this requirement makes such power highly favorable to the capture and redirection of resistance. A scaled-down platform with limitations placed on circuits of resistance will likely serve the same market imperatives as the current, scaled-up internet in need of fixing because the same corporate sovereignty remains in control.

Given my research so far, I find that the arrangements of marketing and advertising linked content and context with signifiers or messages long before platforms, the web, or the internet. A funding model that is settled for broadcast media by the end of the century gets entangled with financial speculation because this practice

is inextricable from venture capital that has thus far managed tech firms. Marketing and financial speculation predate the internet but are folded into the Web 2.0 moment, and one result is that content formerly situated in and around established contexts gets foregrounded. Where context is no longer serving a primary function in the process of meaning making, it goes from being intrinsic to being made invisible. It seems safe to say that presently, the process of contextualization has become highly variable. It might be helpful to think of content primacy as a form of branding set loose from marketing within a moment defined through Web 2.0. Momentary though it may be, the duration is as yet uncertain. It remains to be seen if context will become superfluous or entirely absent.

Within my analysis of a waning of context—what could even be called a hacking of belief—I have tried to sustain a parallel vector of interest in the peculiar afterlife of Deleuze's *Postscript on Control Societies*. This parallel line is useful to further to explain how discipline is revised and transformed under the period I have been calling datafication, when data shadows emerge and conduct is managed according to the mandates of computational life. A revision of discipline—not an extension of citations—is an important site for interrogation because it portends a power without resistance. My position might appear as anathema, bordering on sacrilege, but I am nonetheless compelled by my own commitments to Foucault's theorizations of power.

Given my insistence on drawing down the importance of control as an organizing principle for society, I am directed back through prior descriptions and diagrams offered by Foucault during the lengthy period where he directed a genealogical methodology to the task of theorizing the concept of power through operations of power/knowledge and bodies. My application of this work makes allowance for securitization, risk, and indeed even control as techniques all active in biopower, though none rise to level of displacing an overall disciplinary apparatus. I do not mean to suggest that the breakdowns of confinement noted in the *Postscript* specifically were not happening, nor that they are not worthwhile extrapolations of the technologies of the day. My dissertation has explicitly structured that point in time, however, as a first stage of something that developed apart from the predictive gestures made within that short text. This is why I find the importance placed on *Postscript on Control Societies* in media theory to be overstated.

Regardless of whether examples of discipline breaking down can be located in late-nineties-new media, the development of these specific technologies and their circulation in culture has not followed to predictive logic laid out at the time. My task over the preceding pages has been largely descriptive in order to avoid entanglement with the *Postscript* itself. Instead, I have relied on strategic reference to Deleuze's writing on control and Foucault's writing on discipline in order to unpack how a mode of governmentality specific to the present has appeared. The conclusions I draw from my

analysis of datafication, which include relations to data shadows and subjectivation under computational life have already been noted above as expressing corporate sovereignty. I have further suggested that platform discourse compels adaptation to a performative kind of restraint. If the data shadow is prefigured by the absented-presence of the panoptic guard tower, this elective curtailing of freedom will no doubt echo the references to dressage in Foucault's account of docility produced by discipline.

Writing in *Discipline & Punish*, Foucault notes that bodies become an object-target of power through specific means. Anatomo-metaphysical properties are targeted by techniques of submission and use, while technico-political properties are targeted by techniques of function and explanation. These techniques produce different sorts of bodies, the former bodies for use and the latter bodies for intelligibility. Although distinct and purpose built, there are points of overlap between these disciplined bodies. In this overlap Foucault locates an overriding technique of training, or dressage, grounded in docility. It is the docile body which is subjected, used, transformed and improved through manipulation and analysis.¹¹ Above all, discipline in this originating form produces bodies trained as individual sites for relations of power, and through multiple, measured combinations of force these same individuals are triggered by a command signal to either conform or resist. Turning to the historical configuration of

¹¹ Foucault, *Discipline & Punish*, 136.

people, users, and the internet reveals that individuals and bodies are no longer adequate alone—nor can a individual and various forms of digital embodiment satisfy the becoming autonomous of data.

An autonomous data process is one effect of datafication. When I distinguish between digitalization and datafication, and when I point out how companies like Amazon leverage their own proprietary databases by licensing two distinct sources of data and combining them under a third iteration, I do so to stress how data proceeds through at least three levels of exponential growth. The first is a period of collection to record actions and relations in the physical world, what I understand as part of a long history of record keeping and archival practice that only lately utilized digital computers—hence digitalization. The practice continues today, but it is my contention that a parallel process developed alongside. The second extrapolation of data is roughly the first sighting of datafication, whereby proliferating databases were merged, and new stores of data were produced as a result. This new aggregated data was then updated with the prior, continuous digital inscriptions, creating new and/or updated databases. A third extrapolation takes place, still alongside the first, but extending the second by engineering and analyzing endless streams of data for correlative insights. At this stage, practices of everyday life are routinely converted into data, the data is aggregated into multiple databases, and new data is generated from the many permutations and relations between databases and the ongoing expressions of life. The vast territory of

data and metadata known as Big Data might well have come to pass through concurrent processes, but it is sustained by simultaneous and coterminous participation. Here it is vital to recall the extent to which data is insinuated into the economic foundations of both marketing and finance, and the extent to which speculation has been plied in both industries as best practice.

If a greater proportion of my complex daily life than not requires direct or oblique connection to networks and platforms, then those activities will have contributed to the base token of value in an arena where the slim section of companies relevant to this dissertation alone represent a market capitalization of roughly eight trillion USD.¹² When such a fact is stipulated in the argument regarding pervasive expansion of datafication and corporate sovereignty since the beginning of the twenty-first century, it becomes unfortunately easy to frame the person as representative of not only the data their activities generate, but the data correlated thereafter. The cumulative result is that data has agency in the most basic sense that it moves and congregates according to motivations that are not entirely external (think black box analytics). So long as the existing incentive structures for collecting data exist, I assume this scenario will only become more explicit.

¹² That is, companies doing business somewhere between the internet and platforms, specifically Apple, Microsoft, Amazon, Alphabet (Google), and Meta (Facebook). This is just part of Big Tech/Data, and even then, only the publicly traded, domestic behemoths. See: Wall Street Journal, <https://www.wsj.com/articles/how-big-tech-got-even-bigger-11612587632>.

Insofar as data is autonomous, it moves through the shadows of our diffused actions and experiences. The object target of computational life is not everyday people, but the data they are trained to speak for. At work here is governmentality as management of the diffused person, a figure that is not a result of individuation, dividuality nor any collection thereof. Management of diffused persons puts techniques of jurisdiction and veridiction to work in startlingly efficient ways. It is this state of affairs that compels me to make the stark assessment that datafication subsumes all to the extent that we comply or cease to exist. De-emphasizing control, reimaging discipline, and using Foucault to theorize media is part of a larger agenda, this dissertation focuses on one potential cause among many multiple and contradictory conditions that make it possible for an apparatus of governmentality to emerge where data accelerates old and new operations of truth and power.

Throughout the dissertation, I have been referring to this overall rationality as datafication. If conduct-of-conduct appropriates its regime of truth, but does not create it, then the platform paradigm that develops within Web 2.0 is a regime truth, but the companies in charge of the platforms do not constitute a regime of power. At best they appropriate it. I think it is more likely that these companies and the capitalists that helm them simply benefit from being so close to the hearth of blind speculation and wealth consolidation. Thus, while datafication does produce a milieu in computational life and an object target in the form of the data shadow, it is by no means as totalizing in its

articulation of power and truth as, say, the divine right of kings. Suffice it to say, I do not think the dissertation is the entirety of the matter at hand.

My recruitment of Foucault to think through digital interface is not only in line with but indebted to, and hopefully a worthy extension of, Mark Poster's framing of the mode of information. Here Poster is concerned with reconfigurations of language and subjectivation without rational individuals. My own affinity for productive pessimism seems to fit with what Poster describes in the mode of information as electronically mediated subjects and communication that "may lead to a fundamental challenge to modern social institutions and structures."⁹ I am also compelled by the inter-articulation of critical theory and post-structuralism in the context of the US that Poster establishes early in his work.¹⁰

I have been trying to understand the problem of datafication from the view of both culture and media because I think separating them does damage to the result. Therefore, I assume that in a basic sense, a culture centered approach will be concerned with uses and abuses of the object, while a media approach focuses on operation and meaning of the object. Taken together, I am positioned to think along two parallel lines: first, the operation of use, which has taken shape in my consideration of the interface threshold, and second, the abuse of meaning, which has emerged in my consideration of speculative marketing. An abuse of meaning takes place through exploitation of the interface threshold that for a user is situated behind the screen but in front of the

computer. Such abuses cannot be confronted at the level of screen representation or the level of computation—read, algorithm—alone.

Based on what has actually transpired from my effort, one future direction to move the project forward could be to go deeper into an analysis of marketing as violence. This line would keep Foucault and Deleuze involved with computational life but would likely background people, users, and data shadows in favor of interface design as a practice. Another option would be to develop a line that starts with interface thresholds discussed thus far but draws on visual culture and ways of looking in order to suggest a relation with space and an orientation toward the world within the boundaries and, by effect, beyond the boundaries of landscape painting, third-person video games, and the selfie. The reader will be relieved to know that such work would continue to reference Foucault albeit with correctives from Luce Irigaray's critique of the theory of the subject.

But trying to figure out roads not taken or what comes next is perhaps too clearly a way to avoid that terrifying moment when I must actually stop writing. A global pandemic, insurrectionary nationalism, tech company malfeasance, a war in Europe, and a bushel of other ongoing problems, both global and local: I shudder to think where

my mind will wander once the portion of cognitive capacity on loan to a dissertation project is returned and graded for condition.¹³

¹³ FR; very worn, soiled, torn, or barely holding together, lacking supplementary materials.

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