Recursive Romanticism: Media fantasies in Silicon Valley tech

by

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Abstract

Silicon Valley, despite its mantra of "innovation," marks a strange historical recursion. Its emphasis on transformative imagination, individualized genius, and self-directed transcendence revives Romanticism, the 19th century literary movement. Key to both Romanticism and Silicon Valley is a subject empowered to reshape self and world through new techniques of mediation. Yet, Silicon Valley's Romantic promises, made repeatedly since the 1970s, always remain distant, out of reach, on the horizon.

This dissertation analyzes the ways Silicon Valley continues to Romanticize media, and the ways these media fantasies mark a repetition of Romanticism across two centuries. Theorizing this as a recursion – or a system that constantly loops back to itself in order to develop – the thesis shows how this repetition of Romantic promises is structural to Silicon Valley power. Each time Silicon Valley's technologies fail to deliver on these Romantic media fantasies, the Valley takes recourse to Romanticism to develop new tech. Romanticism emerges again and again in new forms even as they fail; the recursive output is an endless series of upgrades and new phantasms of media liberation. Through this recursion to Romanticism, Silicon Valley creates a cyclical totality that works to close off other technological imaginaries. The thesis maps this system across various case studies, including technologies of self-recording and datafication, recommendation systems, social media, and brain-machine interfaces.

By staging its own recursion to Romanticism, this dissertation argues for a way out of the repetitive loop. Instead of returning to the same failed promises of heroic geniuses mediating the world in liberatory shapes, it returns to an alternate Romanticism in the work of Sophie Tieck, one of the major Romantic woman writers still neglected to this day. This new reading of Tieck shows her to be critical of her male, Romantic contemporaries and the overlooked misogyny in their visions of heroic self-transformation. This critical recursion offers an alternative Romanticism that calls its media fantasies into question, rather than repetitively try to actualize them. Instead of finding the right techniques that will finally create media-empowered users, it points to ways to break out of Silicon Valley's cyclical, totalitarian power.

Keywords: Silicon Valley; Romanticism; mediation; recursion; digital media; AI

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My time in academia begins with a poem: Phillip Larkin's *This be the verse.* In one of my first classes of undergrad at UBC in 2004, I recited this poem as part of a class discussion: "they fuck you up, your mom and dad / they may not mean to, but they do / they give you all the faults they had / and add some extras, just for you." This was the beginning of a long friendship and mentorship with **Steve Taubeneck**. Thank you, Steve, for supporting my fraught relationship with the university for 20 years, for appreciating my resistance, and always being an enthusiastic reader of my work. After 20 years in and out of academia, I am severely fucked up.

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Introduction

Our spirit ought to become a sense perceptible machine—not within us, but outside us (Novalis, 1798–1799/2007, p. 11, §69)

Digital Romanticism

The beginning of personal computing is also a return to Romanticism. Apple Computer Company's original, 1976 logo features a quote from Romantic poet William Wordsworth's *Prelude,* wrapped around an image of Isaac Newton and his apple. It reads: "Newton…a mind forever voyaging through strange seas of thought – alone." A direct lineage of Romantic innovation is established: the visionary creators of personal computing return to the visionary poet Wordsworth who himself returns to the visionary discoverer Newton for inspiration. Steve Jobs is waiting in the wings to take on the mantle. The logo depicts discovery, innovation, and technical progress as individualized pursuits, motivated by an internal genius. At the same time, it democratizes this creative force: with the right media – the personal computer – you too could join this illustrious line of genii, and journey into wonderous new worlds. Apple will be for you what the apple was for Newton.

While Apple's logo changed, Silicon Valley continues to offer similar promises half a century later: technology can recreate its user as a media-empowered, creative, self-overcoming subject, inhabiting an enchanted, meaningful world of discovery. This dissertation analyzes Silicon Valley's recurring Romantic promise across a variety of technological examples, understanding it as a technique for entrenching Valley power. Through a constantly deferred empowerment over mediation, users are hooked into a feedback loop that keeps this Romantic subject position always just around the corner.

From a stereotypical understanding of Romanticism, it may seem strange to think of this nature-loving literary movement as having common ground with high-tech consumer products. Yet, promoting Romanticism via technological means is not so new. As John Tresch (2012) shows, the "mechanical Romantics" of early 19th century France sought to use new technologies associated with factories to re-enchant the world, reorganize society, freely develop individuality, and achieve a harmony with nature (p.

22). This form of Romanticism took rationalized processes and sought to turn them to Romantic ends. Likewise Mark Coeckelbergh (2017) challenges the idea that technology is always motivated by rationalism and shows the ways it appeals to Romanticism in its design and promises.

Recent readings of literary Romanticism have also shown that this literary movement is far more fixated on media and technology than was previously understood. Roughly coinciding with the beginnings of Web 2.0, there has been a growing trend in literary criticism that reads Romanticism as developing a "media theory *avant la lettre*" (Brooke-Smith, 2013, p. 345), or even "a proto-cybernetics" (Hui, 2019, p. 69). Kevis Goodman (2004), Maureen N. McLane (Langen & McLane, 2008; 2008), James Brooke-Smith (2013), Leif Weatherby (2014, 2016b), Dalia Nassar (2014), Yuk Hui (2019), and Bryan Norton (2024) have all shown the ways both German and British Romanticism advance a Romantic theory of media. Though these scholars differ in their conclusions, they generally see Romanticism as interested in an active intervention in *mediation*. Mediation can mean the way beings are brought into relation or connect with each other, as well as the way things are conceptualized, or come into being as discrete phenomena. Mediation is what dissolves and recreates separations in the world, and media are ways of mediating. In this reading, Romanticism seeks out techniques for the mediation of self, world, and the relationship between the two. The Romantic subject becomes a *mediator*, creatively developing himself, mediating this self-growth into the world, and bringing new realities into being through these mediations.[1] This visionary mediator sees new ways to combine and separate the world, and is empowered to enact these mediations through Romantic techniques. Far from a hyper-rational take on technology, this Romantic view depicts a visionary individual who can creatively refashion self and world through an empowerment over mediation.

What I am calling *Digital Romanticism* is a specific relationship, or desired relationship, to media, which both emerges through and structures digital consumer technologies. This Romanticism imagines an individualized user who is able to use

[1] I intentionally use he/him pronouns throughout the dissertation when discussing these kinds of Romantic visions, as they are explicitly male in many of the Romantics' writings. I discuss this in detail in Chapter 1.

technology to mediate and transform self and world, and promises to actualize this user-tech relationship through new media designs. It both offers users the power to mediate, and is itself a certain mediation of the relationship between user and technology. This desired relationship influences not just technological design, but also the concept of the user, ideas around what technology should be for, and assumptions around how technology relates to social change. This dissertation argues we've gotten stuck returning again and again to this Romantic desire as the horizon of our political imagination of technology. Understanding the ways this Romantic relationship to technology circulates not only through Silicon Valley technological products, but also in critiques of contemporary tech, is vital for articulating alternatives.

Apple's logo was not just a one-off coincidence. It was a symptom of a deeper Romantic relationship that continues to structure the technological imaginary of Silicon Valley's products. Indeed, the logo didn't last long enough to have much of a chance to promote Romantic ideas itself; instead, these ideas were implicitly embedded into the design, promises, and visions of these new media. The logo was drawn by Ronald Wayne, that third Apple founder who few people remember by name, with Steve Jobs looking over his shoulder and acting as art critic (Moritz, 1984/2009). However, by the time the Apple II launched in 1977, advertising had been contracted out to the firm Regis McKenna, who had come up with the spiffier bitten-apple logo used to this day (Nooney, 2023). While this explicit reference to Romanticism was short-lived, I'm following other scholars of Silicon Valley in seeing Romanticism operating more as a structure of feeling that is both historically influential and ideologically important for Silicon Valley (Coeckelbergh, 2017; Coyne, 1999; Streeter, 2011; Turner, 2006). Such explicit references to Romanticism (including Ted Nelson's "Project Xanadu," discussed below) show a historical influence of Romantic ideas on early Silicon Valley designers; but even when Silicon Valley does not explicitly declare its own Romanticism, it is still returning to it as an organizing framework. As technologies are designed with Romantic values in mind, these technologies themselves come to structure a Romantic relationship to technology.

Apple's original logo shows that Romantic ideas and images were circulating in the Valley of the 1970s, ready to form the ethos of the new technologies being designed.

One origin of this influence can be traced to the Romantically-inflected counter-culture of 1960s California. As Fred Turner (2006) has influentially shown, a new cultural understanding of technology emerged in this era, born out of the mutual influence of this counter-culture and early computer research at Stanford and elsewhere. This merger of hippies and cybernetics produced a social movement that influentially re-imagined technology as allowing "a simultaneous transformation of the individual self and its relation to others" in a way that "echoes…the Romantic nineteenth century voices of Emerson and Whitman" (Turner, 2006, p. 36). Silicon Valley's early designers took up the 1960s critique of a centralized, bureaucratic concept of technology, and sought to offer an alternative that was horizontally-organized and individually-liberating (O'Mara, 2020).

Even without explicit reference to Wordsworth, the development of personal computers and subsequent consumer devices were informed by these Romantic ideas. Indeed, the very emphasis on technology as something *personal* shows the influence of this approach to technology in the following decades. As Thomas Streeter (2011) shows, Romantic values such as personal growth, exploration, individualism, and adventure were essential to the very idea that computers should be something geared towards individual, open-ended use. This Romantic relation to technology continues after the 1970s and is key to the trajectory of Silicon Valley's innovations, from computer, to smartphone, to self-tracker, to whatever comes next. At the same time, Silicon Valley itself cultivated an image filtered through Romantic tropes, such as heroic individualism, as seen in the glorification of Steve Jobs as a visionary genius (Streeter, 2015). These histories show the ways Romantic ideas were appropriated by Silicon Valley, and how they continue to influence both technological products and the values that are attached to them.

Because this Romantic view of computation structures much of our everyday experience of technology, it can be hard to see the significance of this change. Yet, before the 1960s, no one thought that computers could be "personal," and before the 1970s, this was a niche idea. Even when this Romantic view of computation emerged during these decades, it remained marginal. The dominant view was still of computers as rational, centralized, and prediction-driven machines, associated with bureaucracy, factory organization, and military command and control hierarchies (O'Mara, 2020; Streeter,

2011; Turner, 2006). Early mainframe computers were large, expensive, and centralized, while access was limited to government agencies, research labs, and military institutions. Computation was conceived as a purely logical process, governed by deterministic rules. The promise of these rational machines was precisely the opposite of Romantic: they would exclude the flaws of individualistic, human subjectivity, allowing decisions devoid of bias and mistakes (Schönthaler, 2024). This was the "first-order" cybernetic model of computation developed during the Second World War to predict the course of enemy aircraft, the better to shoot them down (Galison, 1994). As Peter Galison (1994) shows, this model of computation also offered a model of human subjectivity as a servomechanism, a predictable cog in a larger bureaucratic apparatus.

The 1960s American counterculture criticized this rationalistic view of computation not only for its hierarchical conformism, but also its active use to plot bombing targets in South Asia (O'Mara, 2020; Schönthaler, 2024). This critique found an alternative in the second-order cybernetics, developed by Heinz von Foerster, but popularized in North America by anthropologists Gregory Bateson and Margaret Mead (Hayles, 1999). Second-order cybernetics emphasized the role of the subject in relation to the system, and how the two interacted to mutually determine each other. Instead of a predictable servomechanism, the subject here became a self-reflexive, developing individual, who stood apart from but in relation to the system. As Fred Turner (2006) and Thomas Streeter (2011) both show, this milieu informed the early cultures of Silicon Valley and its view of technology. Figures like Ted Nelson, Stewart Brand, and Steve Jobs drew on second-order cybernetics to develop a Romantic idea of computation. They emphasized an alternative technology geared towards individual freedom and growth, which found a resonance in American culture's deep-seated Romanticism that dates back to Emerson, Thoreau, and Whitman (Streeter, 2011). I'll argue through this dissertation that what sets Silicon Valley's recursive cybernetics apart is its Romantic sense of mediation. Where second-order cybernetics emphasized an *observer,* whose observation changes the system being observed, Romanticism focuses on a *mediator* (or user), who can direct this change.

As noted above, this idea was still marginal in the 1960s but found growing resonance in the following decades. While the cultural work of people like Ted Nelson

and Stewart Brand paved the way, there are also economic reasons for the rise of Romantic computation. As Laine Nooney (2023) argues, the personal computer was successful primarily because it was pushed by investors, who wanted to promote the profitable idea that everyone should have their own computer. In this way, the idea that computers would liberate their users by allowing them to explore strange and wonderous worlds was also an advertising campaign. As more and more technology is produced according to this Romanticized model, it helps further propagate the idea that this is what computers are really for. A marginal idea in the 1960s, the Romantic concept of technology as individual, fun, liberating, exploratory, and unpredictable had become culturally dominant by the 1990s.

These Romantic ideas of computation also found resonance in the rise of neoliberal economics and politics. Silicon Valley has long been entangled with the financial capitalism that characterizes neoliberalism, and played a key role in this becoming "the dominant logic of capitalist accumulation" through the 1990s (O'Mara, 2020; Uluorta & Quill, 2022, p. 26). Financial capitalism focuses on speculation rather than production, meaning it makes money through betting on the future value of stocks rather than directly profiting from selling commodities. This meshes with an industry that claims to produce new, never-before imagined technologies, and relies on venture capital funding to finance their development. Speculating on cutting-edge technology means that investors bet on a vision of change, rather than a company's demonstrated productivity. As Uluorta and Quill (2022) show, money flowed into Silicon Valley's technological products in the 1990s, not because they were profitable, but because of "the perception that the web was a rebellious force irrevocably reshaping the media landscape" (p. 26). This is what led Netscape Navigator to have a wildly successful IPO of $1 billion in 1995, despite not being profitable, like many other unprofitable yet massively financialized Valley companies, like Amazon, Tesla, Twitter, Uber, and others (Uluorta & Quill, 2022). In other words, Silicon Valley is as much selling a Romantic idea of technology, as technology itself.

For technology to generate financial speculation, it must promise to disrupt stale structures, rather than entrench a predictable status quo. Silicon Valley's speculative economies have worked not so much by demonstrating a reliable result, as by selling a

wild vision of how a genius innovator is going to disrupt the world through media (Mosco, 2004). It sells Romantic promises that technology will revolutionize the world, liberate individuals, constantly produce the new and unexpected. Since technologies with the most venture capital have tended to be the ones to achieve market dominance (Kenney, 2003), this turns into a self-fulfilling Romanticization: wild visions of disruptive technology appear to come true, as these visions that get financial backing.

Silicon Valley's technologically-liberated individuals became the ideal subjects of a burgeoning neoliberal cultural politics in the 1990s, as theorized in Barbrook and Andy Cameron's (1996) Zeitgeist-capturing essay, "The Californian ideology." According to the Californian ideology, these open-ended, free-wheeling computational media would liberate us as individuals and erode autocratic state power. This pro-business anti-government vision found support across the U.S. government in the 1990s, with politicians on both sides of the aisle proclaiming its slogans and courting tech entrepreneurs (O'Mara, 2020). Computational Romanticism here became an (anti)-politics. These new media offered a dream about the Romantic subjects they would produce, and the free-market utopia they would automatically usher in. These cultural, political, and economic reasons all helped push the Romantic view of computation into dominance by the late 1990s.

Romanticism functions as an important ideological structure for Silicon Valley, in organizing imaginaries around information technology according to its own ends. Scepticism of these Romantic promises emerged around the dot-com bubble, when critics noted the ways that the Valley's hyping of utopian liberation had material and financial consequences (Coyne, 1999; Mosco, 2004). Writing towards the end of the dot-com boom, Richard Coyne (1999) noted the ways that discourses about the internet sold its utopianism in explicitly Romantic terms of harmonious communality. What turned out to be a highly unstable Ponzi-scheme, was sold with utopian promises of global village unity, what Coyne (1999) calls "technoromanticism." Despite this scepticism and the bubble bursting, Romantic promises persist into the world of Web 2.0, as Alexander Galloway (2012) and Seb Franklin (2015) show. The figure of a playful, Romantic individual serves as a model of online freedom, even as this figure dovetails with the construction of neoliberal subjectivities.

However, writing in the 2020s, something seems to have changed in the wake of these analyses of Romanticism's historical and ideological influence in Silicon Valley. In the post-covid hellscape of online slop, mandatory internet use, and far-right shit streams, these Romantic promises are stretched thin. They have come to feel hollow and repetitive. As Silicon Valley openly aligns itself with far-right authoritarianism, the Romantic individual emerges more in the form of the terrifyingly powerful tech billionaire, than in the empowered media user of a personal device. Elon Musk blasts off to explore outer space, while the users of his products are placed under relentless surveillance. Silicon Valley emerges more and more as its own centralized power structure, paradoxically promising that its technologies will set us free from such power structures. The very technology that offers these utopian relations seems to actually undermine them, then promise them again.

Even as Silicon Valley as a power structure seems to foreclose its own Romantic promises, the technology itself also becomes brittle. As journalist Jacob Silverman (2025) writes, "a consensus has formed that the internet, as a place to live, work, shop and communicate, has fundamentally got worse." Various theorizations point to a widespread disenchantment and a sense that the edifice of bankrupt promises is nearing collapse (Hwang, 2020; Larson, 2019; Sadowski, 2025; Zuboff, 2019). Cory Doctorow (2024a) goes so far as to name this technological epoch the "enshittocene," because the internet has become so dysfunctional. Academic critiques try to re-imagine the designs of technologies, hoping a different perspective could make them liberatory instead of crushing; yet, we still live in this weird totality. Despite a litany of critiques, we seem to get more of the same. Instead of surfing the internet, today we doom scroll. There is an endless production of studies on its adverse effects on mental health, yet it seems impossible to stop scrolling. Digital technology seems at a hinge point, where we try to hold onto these Romantic media fantasies, even as they are failing. And not just failing (they already did in the dot-com bust), but failing so many times in a row that we're starting to get disabused of these Romantic visions.

This dissertation is written amidst this growing confrontation with the failure of Romantic promises that has not yet found an alternative. By analyzing this repetitive return to Romanticism in the moment when its failure is more and more obvious, I

attempt to articulate an alternate political imagination. For the rest of this introduction, I will further illustrate this moment of failed promises, the ways even our critiques keep turning to them, and my methods for developing an alternative in the rest of the dissertation.

Reversed promises

In May 2024, Google released its AI Overview search engine feature. Using a large language model, the AI Overview offers a synthesis of webpage content to provide a singular answer as the default response to each search. This marks a fundamental change to the ethos of the internet and online search. The standard output of a Google search changes from a list of web pages to a synthesis of online information. It interprets search terms as questions in need of a specific response, rather than keywords to explore, scattered and linked across the web.

This might seem minor, but it actually flips the internet into the exact opposite technology that it originally promised to be at its outset. It was precisely the limitless, exploratory space of networked computers, according to early enthusiasts, that would liberate users and create free, expressive subjectivities. Promoters of this exploratory model of computing, such as Ted Nelson and Stewart Brand, emphasized its potential against the strictures of more rigid media, such as encyclopedias or military mainframes (Stevens, 2023; Streeter, 2011). Ted Nelson (1965/2003) explicitly criticized these as media that can only perform a unitary informational retrieval. Whether his criticism is fair is up for debate, but he saw the field of information retrieval as being "concerned with seeking *true* or *ideal* or *permanent* codes and categories" (T. H. Nelson, 1965/2003, p. 144). In other words, he was responding against a perception of a certain kind of media that could only provide a singular, authoritative answer. He saw as liberating the idea of a collaborative, evolving, and varied system of knowledge, one in which users could follow linkages between pages according to their individual thought processes. With the introduction of the AI Overview, Google reverts back to a more encyclopaedic model: its purpose is no longer a *search engine.* In other words, it is trying to get away from presenting an expanse of linkages for a searching subject to move through in a unique path. Lists of networked pages give way to discrete answers; exploration has turned into

getting an answer. It is no wonder that the metaphor of *surfing* the internet has quietly slipped out of usage.[2]

In the early days of computation and of the internet, the promise was that we would be liberated by surfing. Enthusiasts were convinced that this oceanic media environment would yield individual freedom, openness, and expressivity, and they referenced Romanticism both explicitly and implicitly to promote this vision. For instance, Ted Nelson named his early linked-media project "Xanadu," after the limitless dream-space depicted in Romantic poet Samuel Taylor Coleridge's "Kubla Khan." In developing this project in the 1960s, Nelson coined the term "hyperlink," which later became synonymous with the structure of the World Wide Web.

Nelson hoped that this new media milieu could yield free, individualized subjectivities. He saw the possibility of endlessly linked media as creating a limitless environment that mirrored the "caverns measureless to man" depicted in "Kubla Khan" (Coleridge, 1816/2020). Mobilizing the poem as a double metaphor, Nelson also saw "Xanadu" as his own visionary dream, harking back to the opium-induced hallucination that led Coleridge to write the poem and conceive his image of limitless space (Stevens, 2023). In practice, the internet didn't really live up to Nelson's vision, as it had only unidirectional linking (pages display links out to other pages, but not links in *from* other pages). Indeed, its early iterations were more closed off than they seemed. Most early internet adopters in North America used AOL, which kept its users in a walled garden of curated links on aol.com. However, by the mid-1990s, AOL's users realized the expanse that was being kept from them; they felt duped by this enclosure and wanted out. Realizing what lay beyond AOL's protocols, they longed to access the infinitely exploratory space of the internet as a whole (McCullough, 2018). This suggests the ways that the Romantic dream of Xanadu structures the internet's design, promises, and expectations.

My own memories of this era are filled with this kind of excitement. My family got dial-up internet when I was 13 (5 hours a month), but even before this my brother and

[2] After spending hours trying to turn off the AI Overview and realizing this was impossible, someone tipped me off to an easy hack: just add the word "fuck" to your search terms and the AI deactivates.

I were using our modem to dial into Bulletin Board Systems. These were proto-internet pages, which you connected to directly through the phone line. Each BBS had its own selection of offerings, usually a mix of message boards, chat rooms, text-based computer games, and information. Despite being walled gardens like AOL, these were still a new kind of media that you could explore and move through multi-directionally. Like Xanadu, these were based on the linkages between computers, and the exploratory linkages within the pages on the BBS itself. I don't remember where we got the phone numbers for the different BBSes, but I remember the thrill of getting a new one. Each one was a little different, meaning that each new BBS phone number promised a new world to explore.

BBSes contained something of Nelson's Xanadu dream, a dream that got transposed onto the early internet too. In this era, it was easy to believe that computers, BBSes, or the internet could all be free, exploratory spaces freed from the determinations of a hierarchical power. The liberated subjectivities that would emerge in these spaces were imagined in the 1960s Romantic terms of free, individualized, fun, creative, questioning selves. As Cait McKinney (2018) shows, this wasn't the only imaginary of networked technology at the time; early adoption of BBSes by queer activists mobilized their multi-directionality and updateability to share information about HIV/AIDs, taking the technology in the direction of collective care. In this case, the technology was not hyped as automatically liberating; rather, activists worked with and against it to bend its strictures towards the needs of their communities. In the moment in which I write, when the Romantic promises of the internet are being undermined by the internet itself, it is important to remember these alternate imaginaries of technology that mobilize around a different kind of politics. Rather than see media as the condition of our liberation, these approaches struggle in and with media to articulate a difference. This isn't a transcendent difference that will overcome and liberate everything! As I'll argue throughout this dissertation, it is time to get over this concept of transcendently liberating media, and grapple with it as a constant power relation. Hyped promises of media liberation might just lead to a dead end.

As Google roles out its AI Overview, with promises of effortless information at your fingertips, it's worth noting how this technology is a full 180 reversal of what networked computing has been promising for the last half-century (Google, n.d.).

Treating the internet as a trove of data for an AI to synthesize into a discrete answer represents a break with the Romantic dream of Xanadu. Users are no longer set up to encounter the internet as a limitless dream-space to drift through, discovering strange wonders in the endless linkages. The point here is not that Google is secretly betraying a Romantic promise. This would not be so new, as already in the 1990s, companies saw search engines as an auxiliary part of the internet, primarily there to hook user attention and direct it to profitable avenues (Vaidhyanathan, 2011). What's significant about the AI Overview is how explicit the reversal is. It is not a failure to live up to the promise of Xanadu, rather it is a declaration that *the promise has changed*.[3]

The promise has changed because the internet itself has changed. As Cory Doctorow (2024b) argues, the AI Overview is an implicit admission that Google has become unusable as a search engine, given that it is filled with sponsored content, trash, and slop. In this way, the AI is the promise of liberating users from having to deal with an internet that has itself long since abandoned the dream of Xanadu. While the feeds we scroll through still contain links, they are obscured. One does not so much follow the linkage of page to page around the web, seeing the great organic connection of the whole; rather, links just appear, chosen by opaque processes no one understands. And they disappear just as fast, with each automated refresh. The internet today is something that *comes at you* - curated lists pop up in your face; answers are anticipated before you ask the question; surfing gives way to scrolling; users fear constant manipulation. The internet today cannot really pretend anymore to be an exploratory space. Today, the limitless connective space of hypertext has become an overwhelming deluge. The AI Overview emphasizes qualities like speed, ease, effortlessness, and summarization: "let Google do the work for you" (Google, n.d.). The promise of Google's AI Overview is to liberate the user *from* the endless linkages. The AI allows you to surf over it while it dives into the deluge, empowering you as a user once more.

[3] The advent of algorithmically-curated feeds on social media is a clear antecedent to the AI Overview's model of search, given that it figures its user as a passive receiver of algorithmically-curated information (van Dijck, 2013a). However, this still embodies the exploratory ethos of the early web, a promise of a vast unknown world to explore – the feed, after all, is endless. The sneaky web-ads masquerading as friend-requests might undermine this promise, but the promise still takes its cue from Xanadu – not answers, but exploration.

The AI emerges in a medial situation in which the Romance of technology is under threat from the changing internet. It responds by allowing the user to bypass the internet itself. This represents a new phase of the internet, an information overload in which searching has become a *burden.* In this situation, AIs are servants relieving you of tiresome computational labour. This means that it heralds both a negation and preservation of our status as Romantic users. If the promise of the internet was to automatically create media-empowered subjects, what to do when media itself becomes overwhelming? AIs emerge as a new medial layer that promises to reassert user empowerment.

In this way, AIs become their own figures of Romantic subjectivity – they are the ones cruising the endless web, searching for strange connections. Even as computers still attempt to promise human users the status of Romantic subjects, it is computers themselves who have become this figure. Philipp Schönthaler (2024) narrates this Romanticization of AIs as a parallel history to Streeter's (2011). Schönthaler shows how, over the course of the 20th century, computers were more and more understood as *themselves* being Romantic subjects. In the 1960s, Schönthaler relates, the wonder of calculating machines was precisely how un-Romantic they were. Their cold, number-crunching rationality promised a utopia free from human biases and fallibility. Deceivable humans could be taken out of the loop of decision-making and replaced with an apparatus that would not be manipulated or make mistakes.

Various crises, however, disturbed this promise, most notably the use of computers by the U.S. military to calculate bombing targets in Korea, Vietnam, Laos, and Cambodia. As computers were used to rationalize war crimes, their utopian framing gave way to an understanding of the computer "as a technocratic instrument of domination" (Schönthaler, 2024, p. 53).[4] This helped bolster what Schönthaler (2024) calls "a second cybernetics," one that emphasized creativity, machine learning, self-formation, and self-organization over predictability, rationality, and number-crunching (p. 53). This is the second-order cybernetics as merged with the Romantic values of the 1960s counterculture, discussed above. In short, this alternative computational utopia was

[4] "als technokratisches Herrschaftsinstrument." Translations are mine unless otherwise noted.

modeled on Romantic rather than rational values (I discuss the relationship between Romanticism and this kind of cybernetics in Chapter 1).

Schönthaler's point is that this marks a major transition in our expectations of machines, one which turns both consciously and unconsciously to Romanticism as a model. The discourse on AI gets far more excited today by a machine that is creative, unpredictable, and self-organizing, than one that is rational, objective, unbiased, and predictable. We want autonomous machines, rather than automatic machines. We are testing machines today on Romantic criteria, whereas an earlier generation tested them on the opposite. As Shane Denson (2023) shows, the cultural response to generative AI is largely one of marveling at its unfathomable strangeness, generating affects of sublime awe or uncanny cringe. This understanding of machines as unpredictable and self-forming becomes naturalized, as more and more machines are built according to its criteria. Today, it seems common sense that AIs should be Romantic subjects.

For Schönthaler, this Romantic narrative about machines has an ideological function. When we understand machines as creative problem solvers, as learners, as adaptable, this allows them to penetrate all facets of social life. It is only with a Romantic understanding of machines that they can become ubiquitous, mainstream. An objective number-cruncher can only do discrete, pre-programmed tasks in select realms of life; a Romantic, self-overcoming subject can adapt itself to anything. Think of the AI Overview: its power is the ability to synthesize information from any field, offer explanations, instructions, medical advice, emotional guidance, etc. Whatever you type into Google Search, it will have an answer. Even as it makes the internet a less Romantic space for users, it itself becomes a more Romantic machine. What we value about it is precisely its ability to move beyond objective rationalism and to synthesize, to form itself, to learn, to offer various perspectives. In other words, a Romantic understanding of AI is ideologically necessary for it to function ubiquitously, to fill any and all roles, to fashion itself constantly into new forms. For Schönthaler, computation is Romantic today because computers themselves have become Romantic subjects.

Streeter (2011) and Schönthaler (2024) offer parallel histories of Romanticism and computation that on the surface seem to tell the same story: a change in the cultural

understanding of computation from rational to Romantic. Yet, the implications of each history are at odds with each other. Streeter (2011) tells a story of Romanticization machines, which allow their users to become Romantic subjects and inhabit Romanticized worlds. In this account, machines re-mystify the world for humans. Schönthaler (2024) offers a history of a Romantic machine, which itself becomes an innovative, opaque genius, displacing humans as the developing, learning, progressing subject of history. In this account, machines that are themselves the mystery. Bringing these histories together begs the question: who gets to be the Romantic subject, human or machine? This contradictory Romanticism characterizes the dreams around computers today.

Thinking these two parallel, contradictory histories together is necessary for understanding Silicon Valley, its technological creations, and the ways these imagine user subjectivity. Both are operative, and it is precisely in their contradiction that Silicon Valley power functions in the 21st century. Silicon Valley produces technologies that promise users the position of a Romantic subject, while at the same time it creates machines that threaten to displace humans from this subject position. The very technology that promises Romantic subjectivity is also the technology that undermines its possibility. In this way, Valley technology creates the very limits to freedom that its technologies repetitively promise to overcome. This dissertation shows this recursive operation across a variety of examples to argue that the continuing failure and repetition of Romantic promises is structural to Silicon Valley technologies.

Indeed, the designers of tech are already winding up another cycle of Romantic repetition. Even as AI displaces the human as Romantic user, it also offers humans a new Romantic position: through AI, we confront the sublime. This is the view promoted by the so-called "father of AI," Jürgen Schmidhuber. In an interview in the film *iHuman* (Schei, 2019), Schmidhuber describes how through AI, humans experience a mystical becoming, a re-enchantment of the world, a confrontation with the unknown. As Schönthaler (2024) points out, the film shows Schmidhuber on a misty mountain in an exact replica of Caspar David Friedrich's iconic Romantic painting *The Wanderer over the sea of fog,* as viewers hear his words in voice over. Schmidhuber and the film invite us to gaze out over the technological mist. In the fog of uncertainty, humans become bold

explorers once again, encountering the limitless and sublime mysteries of technology. Even as the early-Romantic dreams of the internet are destroyed, a new Romanticism is promised through the very technology that destroyed it. How many times will this Digital Romanticism fail to live up to its promises before we turn to a new narrative?

Beyond Romantic computation

Following Streeter (2011) and Schönthaler (2024), I would argue that cultural narratives around tech still tend to assess its merits, purposes, and failings against a rubric of Romanticism. It is precisely this rubric that keeps the Silicon Valley recursive loop to Romanticism churning round and round: when tech doesn't live up to its Romantic promise, this generates new techniques for restoring Romanticism, and new Romantic figures who might be capable of this restoration. Throughout this dissertation, I chart examples of this repetitive promise in Silicon Valley's new technologies. In this model, the uninterrogated goal of tech is to usher in a Romantic subject, which only plays back Silicon Valley's own narratives, thereby reinforcing its hold on the technological future. The idea is that, with the right technology, this subject will simply come into being; surfers of Xanadu, for example, are automatically Romantics. When this doesn't work out, the call is for new techniques, rather than to question this promise itself.

Through this critique, this dissertation argues for a different relationship of mediation and subjectivity than the one consumer technology repeatedly fails to establish. Instead of the right technology that will finally give us this relationship to ourselves and the world, it calls for a different relation to media that lets go of the expectation that technological liberation is coming. Rather than call for an upgrade in moments of technological disappointment, it argues that we can use these openings to assert different social and political relations counter to Silicon Valley power. Mediation here opens as a space of struggle, rather than something subjects wield towards their personal freedom.

The problem is that the Romantic rubric for assessing tech also appears in critiques of Silicon Valley. One of the critiques of more public significance came via the 2020 film *The Social Dilemma* (Orlowski, 2020). Distributed via Netflix, the film had a broad audience and received extensive media coverage. This half-documentary, half-dramatization depicts everyday technologies – the ones we could no longer do without –

turned sinister. The narrative portion of the film moves between a middle-class, white, smartphone-addicted American family, and a trio of anthropomorphized AIs, who literally manipulate the family members as puppets, directing them towards sinister choices. The documentary portion consists of insider-interviews with alarmed tech workers, who recommend we stay offline if we value our freedom. Instead of empowering users, the film said, these technologies were manipulating them, transforming them into hapless marionettes for the profit of Silicon Valley's big tech companies: we may think we are making our own choices, but we are actually controlled by sociopathic algorithms. Instead of liberating Romantic subjectivities, they were creating brainwashed automatons of a command-and-control structure. Suddenly, our most intimate devices were revealed to be the opposite of what they promised to be!

The Social Dilemma structures both its nightmarish visions and its call for liberation on Silicon Valley's own figuration of freedom: that is, the individualized, empowered user, extending and liberating himself through media. We are supposed to be empowered by media, but really, we are brainwashed! Algorithmic mind control, rather than, say, the power of the billionaire class, becomes the image of unfreedom in the film. In many ways, this re-creates the Romantic frame of the 1960s and 70s computation that Streeter (2011) and Turner (2006) describe: it dramatizes a centralized automation that crushes individuality clashing against the promise of a media-empowered subject. *The Social Dilemma* is assessing Silicon Valley tech against the Valley's own Romantic promises, without noting the way the industry constructs these very promises as part of its operations.

As a critique, *The Social Dilemma* reinforces a Romantic framing of technology. The solution it gives to algorithmic mind control is to try to reclaim this space of individual agency, free expression, and self-formation that has been perverted, allegedly, in recent years. As many of the insider-interviews in the film reinforce, Silicon Valley conceives of present social problems as a perversion of its ideal, rather than stemming from the ideal itself. The film ends with recommendations that all suggest using individual willpower to resist technological manipulation and reclaim a free subjectivity. Through this approach, the movie responds to Silicon Valley with the accusation that it

has betrayed its long Romantic promise, but then reasserts precisely this promise as the model of freedom. The Romantic relation to technology is itself unexamined.

As one of the more popular critiques of Silicon Valley, *The Social Dilemma* carries a special significance in the discourse around tech. The film came in the wake of other events that revealed how big tech companies are engaged in surveillance and mass manipulation, such as the Cambridge Analytica scandal of 2018, and the publication of Shoshana Zuboff's popular academic book *The age of Surveillance Capitalism* in 2019. While events like these set the stage, the film had a much more intense public response. Within 6 weeks of release, 38 million people had viewed the film on Netflix, making it the second most viewed documentary on the platform at the time (Moore, 2021). People were shocked and frightened; news and social media went wild; *Game of Thrones* author George R. R. Martin tweeted to his million-plus followers that the film "terrified me more than any horror movie I have seen in the past twenty years" (George RR Martin [@GRRMspeaking], 2020).[5] The white walkers are nothing compared to Palantir's algorithms. Like Hannah Arendt (1971) argues in "Lying in Politics," revelations of this kind are not so much about revealing something unknown, but about giving it shape and making it a coherent, public topic. Part of the significance of *The Social Dilemma* was that it gave the critique of big tech the same Romantic shape that has structured Silicon Valley's promises since the 1960s. By placing the onus on individual subjectivity as the site of freedom, *The Social Dilemma* reconstructs a narrow imagination about the proper relationship between media, subjectivity, and liberation, that mirrors Silicon Valley's own.

This shows a lack of imagination and breadth of public discourse in thinking about the relationship between freedom, computers, and the self. When freedom continually appears through the figure of the Romantic subject, it generates an expectation that this kind of subjectivity and liberation can occur simply through new techniques of mediation. This sets up a limited view of politics in which technical fixes replace collective projects. Repeated failures generate new techniques to fulfill these

[5] And remember, this was at the height of Martin's cultural relevance, with the series finale of the TV show *Game of Thrones* airing in mid-2019.

Romantic promises. Stuck in this repetition, things can become dangerous. After enough let downs, where can we turn to for the freedom we've been promised for so long?

Narrowly thinking of freedom as a media problem, starts to make it seem that only a media-savvy genius can meaningfully change the world. Part of Silicon Valley's Romanticism also involves cultivating the Romantic trope of the visionary genius as the figure who can create world-shaping technologies (Streeter, 2015). This dates back to Steve Jobs' own self-promotion, but also to the Romantic mystique surrounding coders in the 1990s: enthusiasts promoted the new programmers as geniuses, able to create new worlds simply through writing down the numerical thoughts in their minds (Lewis, 2025). Like genius Romantic artists, they birthed new realities simply out of their visionary interiority. For those of us living in the 21st century, what is dangerous is the way such visionary individuals have moved from being figures of technological possibility, like Steve Jobs, to figures of political possibility, like Elon Musk. In this context, Elon Musk can masquerade as a Romantic genius as he seizes control over large sections of the U.S. government. In many ways, Musk is restaging the plot of countless cyberpunk novels in real life: he demonizes a large, centralized bureaucracy, and figures himself as the hacker hero who will come in, "delete" this autocratic form of power, and restore the nation to freedom.[6] Government here is like the factory-style technology Silicon Valley oriented itself against in the 1970s, and a visionary genius emerges to offer new techniques to mediate its individualized citizens as free. Who needs government when you have geniuses who birth new worlds from their minds?

This dissertation is not necessarily about Elon Musk or technofascism. The point here is to show how repeating Silicon Valley's Romantic stakes and seeing them repeatedly fail can start to justify dangerous things. We need to be attuned to these Romantic narratives, understand how they operate through everyday technologies and cultural fantasies about the technological future. The irony of the Romantic vision of computers and its emphasis on boundlessness, is that it has itself become a limited dream of computation, tied to this repetitive Romantic figure. Novelty has itself become

[6] Even the trend among stodgy government types to talk about society or the economy needing a "reset," seems to reference this conception of politics as a media problem.

mundane. When expectations, promises, and user-experiences of technology get locked to this image, it closes off other possibilities and imaginaries of what technology is for and what freedom can look like. At best, this means a repetitive relation to technology, in which "innovation" looks like Tiktok replacing Instagram; at worst, we get media-wielding geniuses deleting the government and refiguring the world according to their own dark imagination of freedom. This means that it's important to be careful of the ways critiques of Silicon Valley repeat its own stakes.

Many academic critiques also fall into this Romantic rubric. Shoshana Zuboff's (2019) influential book *The age of Surveillance Capitalism,* for instance, also recreates the structure of pitting rational control vs. Romantic freedom. Zuboff's critique is largely directed at the ways Big Tech undermines the figure of the free, liberal individual online. She puts this most clearly in a summary of the book given in an interview with *The Guardian*: "The age of surveillance capitalism is a titanic struggle between capital and each one of us. It is a direct intervention into free will, an assault on human autonomy" (Kavenna, 2019). In other words, the underlying narrative of her book comes straight from Stewart Brand: the goal of tech should be the same autonomous user-consumers promised by hyperlinked media and the Apple I; it should not be used for unidirectional command and control. Evgeny Morozov (2022) offers an extensive critique of *Surveillance Capitalism* that helps show this. Zuboff, he argues, identifies a problem with individual users being watched and controlled*,* but does not extend her critique past this policy to the monumental tech companies themselves. Zuboff's critique focuses on manipulative control of individuals, but not on the system itself. I'm not so concerned here with whether Zuboff is right or wrong, as with analyzing the narratives she turns to for her critique. Zuboff loops back to Silicon Valley's own Romantic promises of computing to make her argument, that technology should be about users enhancing their own self-determined purposes through open-ended media.

Richard Seymour (2019) offers a critique of surveillance capitalism that is more explicitly anti-capitalist, but ultimately falls into a similar frame, re-creating the promises of Romantic vs. control computation. Like Zuboff (2019), he depicts social media as an addictive, behavioural modification machine that deprives users of their autonomy. Attributing this machinery to a free-market profit model that monetizes engagement, he

suggests that media must be dislocated from capitalist imperatives. When these have no higher ideal than constant attention, they lead to addiction, fascism, bullying, and death.

Against this machinery, Seymour (2019) argues for alternative utopian visions that can guide and motivate progressive change. Yet, his utopian visions again return to a Romantic media relation. In using the frame of addiction, freedom gets wrapped up in a figure of liberated subjectivity. "We are all addicts," he writes, manipulated into constant use of our machines by tech that hacks our brain-chemistry, and renders us "dependent" (Seymour, 2019, pp. 45, 68). Machines "bombard us with stimuli, learning from our responses, the better to teach us how to be the market demographic we've been identified as" (Seymour, 2019, p. 76).[7] Taking an ableist view, Seymour seems to equate addiction with brainwashing. His emancipated subject is not far from Apple's own figuration, famously depicted in the 1984 ad that had the empowered Apple user smashing the Orwellian forces of mind control once and for all. Repeating Silicon Valley's own model of freedom in relation to media, Seymour turns to a Romantic figure as an antidote to social media. "At its best," he writes, "cyber-utopianism has revelled in untold possibility…[to] enable everyone to write as uniquely as they must and as weirdly as they will" (Seymour, 2019, p. 213). Here, he seems to return explicitly to figures like Ted Nelson and Stewart Brand, and their early utopian visions of computers, in which media free their subjects from systems altogether.

In this, there is a desire to get out of writing as a *system* and instead just have writing as such: "what if, in deliberate abdication of our smartphones, we strolled the park with nothing but a notepad and a nice pen?" (Seymour, 2019, p. 216). This pastoral idyll of writing even involves "lay[ing] back on a lily pad" with the pen (Seymour, 2019, p. 216); the notepad and lily pad seem to resonate in a natural writing, a Romantic motif if there ever was one. The pen becomes a Romantic metaphor of writing that springs from a subject's personal relation to nature; it is something we wield, whereas the smartphone is something that seems to wield us. If we keep trying to figure our freedom in relation to media as total independence, to figure writing as something we wield to mediate the

[7] For a critique of the idea that algorithms allow a direct programming of the subject, see Doctorow (2021), Hong (2024), or Bruns (2019).

world rather than something that subjectifies us, I argue that we will end up disappointed, looping back again and again to Romantic promises that never seem to arrive. Romanticism, as I discuss in Chapter 2 through the work of Friedrich Kittler (1985/1990), also relied on a hierarchical writing system, based on intensely rigid gender roles and state power. It was precisely through subjects experiencing themselves as autonomous, natural writers that this system's power functioned. In this dissertation, I argue that Silicon Valley's functions through this yearning and failure to become this kind of subject, precisely the rhetorical gesture that Seymour makes.

Offering techniques for achieving Romantic subjectivity is not an alternative to the Silicon Valley system of information production. As I explore throughout this dissertation, this idea of escaping the media system and wielding media as an empowered subject is the kind of Romanticism that Silicon Valley continues to deploy half a century after the Apple I; on the back end, this kind of media-empowered subject functions at producing data for free. Again, I don't think Seymour is wrong about the horrors of social media or the monopolization of Big Tech; what I'm interested in is the framing narrative of the critique and the way it is symptomatic of the impasse in Digital Romanticism. We seem stuck in the same question as the one asked by the control vs. Romanticism theory of computation: am I in charge of media, or is media in charge of me? The goal of this dissertation is to get out of this either/or frame, and theorize a different relationship between self, freedom, and mediation. Romanticism continues to structure utopian horizons of media, despite this Romanticism coming from the media empires we are trying to resist. There is no ideal form of writing or mediation that allows individuals to escape power; rather, media are always already organizing a power relation, in which we must find our resistance.

Romanticism and media

As much as it critiques Digital Romanticism, this dissertation is firmly embedded within it. If Romanticism is a project of intervening in mediation, then it is necessarily also a tendency to reflect on one's own medial conditions, and to constantly assess one's relationship to media. Indeed, part of Silicon Valley's effect seems to be creating a deluge of discourse that self-reflexively analyzes the media we use. In this sense, this

dissertation is a product of the very Romanticism it is critiquing. In this meta-self-reflexivity, being self-reflexive about the medial conditions of its self-reflexivity, it seeks to eject itself from the repetitive return. By identifying and using Romanticism, rather than just repeating it without realizing, I try to change it. This characterizes the method of recursion that I use throughout this dissertation, and elaborate in detail in Chapter 1.

Schönthaler (2024) argues, given how embroiled Romanticism is with Silicon Valley and contemporary technological imaginaries, that "much of the future depends on how we concretely conceptualize Romanticism" (p. 188). In other words, if a culture understands technology Romantically, then what *Romanticism means* has a lot of power in determining the development of and relation to technology. While there is a growing body of scholarship that links Silicon Valley to Romanticism, none of it addresses this important problem of Romanticism itself, what it means and how it resonates through time (Coeckelbergh, 2017; Coyne, 1999; Franklin, 2015; Galloway, 2012; Schönthaler, 2024; Streeter, 2011; Turner, 2006). These works tend to use a popular – rather than critical – understanding of Romanticism. This dissertation grapples with the question of how Romanticism is transmitted across time, through an interdisciplinary analysis that critically engages Romanticism and Silicon Valley simultaneously. It contends that even as Romantic imaginaries structure our relationship to contemporary media, these media also transmit their own version of Romantic ideas. This means that a popular understanding of Romanticism is inadequate to critical analysis – it is already structured by the Romanticism of the media we are trying to critique. Without a critical analysis of Romanticism itself, there is a risk of slipping into Silicon Valley's own Romantic frame. Rather than analyzing the linear influence of Romantic ideas on Silicon Valley, as many of these scholars do, I argue that Romantic concepts endlessly loop through technologies over time, constraining our imaginaries of media even today. In this way, the Romanticism of media also becomes a locus of power. My analysis builds on the comparison articulated by these scholars, by offering a political critique of Silicon Valley technology through a critique of Romanticism. I propose a recursive method of analyzing Romanticism and Silicon Valley, which I discuss in greater detail in Chapter 1 (along with this scholarship on Romanticism and Silicon Valley.

This scholarship linking Romanticism and Silicon Valley also misses the ways Romanticism itself anticipates digital technology. There has been a recent turn in literary criticism to thinking of Romanticism as actually containing its own ideas of technology, and as developing a "media theory *avant la lettre*" (Brooke-Smith, 2013, p. 345). There are two siloed academic discourses here, each discussing the relationship between Romanticism and technology: one is coming from STS and communication studies, comparing Silicon Valley and its technology to Romanticism; the other is coming from literary studies, reading Romanticism as developing a theory of technology. These discourses seem unaware of each other, but it seems vital to bring them together. The recursive method I use throughout this dissertation provides an interdisciplinary method of connecting these scholarly discourses. By looping back and forth between Silicon Valley's Romantic technologies and literary Romanticism's technological visions, I develop a critique of both. The idea is to continually put different concepts of Romantic technology in relation to each other as a way to understand their recurrence, and to get beyond the approach that assesses technology through its own Romantic promises. Through this approach, I argue, we can understand how futures that seem innovative are actually repetitive loops back to past fantasies; and we can theorize alternative models of freedom than an individualized Romantic figure in relation to technology.

In this way, I'm not so much reading a linear movement of Romanticism through time and charting its direct influence on Silicon Valley, as some of the scholars discussed above do. Instead, I am searching for resonances in a Romantic approach to media between Silicon Valley and earlier Romanticism. This means that I am particularly interested in the moments that Romanticism theorizes the relationship between subjectivity, technology, and mediation in ways that resonate with Silicon Valley's own Romantic promises. Throughout this dissertation, I closely follow Leif Weatherby's (2016b) reading of German Romanticism as developing a "technological metaphysics" (p. 124). In plainer language, this means a theory in which technologies or techniques are not just tools for completing a task, but can operate on the categories of reality itself. They are means of mediating reality, and thereby directing the visionary imagination of the subject into shaping self and world. Through a reading of the concept of the *organ,* Weatherby argues that Romanticism is trying to discover ways to act medially, for a

subject to intervene in processes of mediation and change them. This means that a subject is able to collapse the distinction between contradictions (like self/world), but also to carve out new distinctions that can reframe reality (i.e. – a different boundary between nature/self, and a different way of mediating this boundary). Romanticism tried to achieve this through various fields, including art, science, encyclopaedics, and engineering. Romantics envisioned art as a kind of technology, having the power to recalibrate ontological distinctions in the world; but they were interested in more concrete tools, imagining engineering apparatuses as giving a visionary inventor the power to recalibrate reality. While my main analyses take up this preoccupation that is especially characteristic of German Romanticism, I also turn to include examples from English literature, which had a more direct influence on Silicon Valley, as in the Wordsworth reference discussed above.

While Weatherby is focused on techniques of mediation, my reading emphasizes the subject harnessing these techniques to direct mediation. I ask, what kind of subject emerges in this Romantic technological metaphysics? In this way, I push back against trends in recent scholarship on Romanticism that see its project of mediation as about restoring harmony between contradictory realms like nature and technology, or self and society, or human and ecology (Hui, 2019; D. Nassar, 2014; Norton, 2024). I also critique a recent trend that has downplayed Romanticism's emphasis on the individual self. This work has rightly pointing out elements of collectivity and passivity in Romanticism that were previously neglected (Beiser, 2002; Goldstein, 2017; Nersessian, 2015; Rajan, 2004). However, as I'll argue in Chapter 1, they do so at the cost of ignoring some of the more extreme moments of Romanticism, that depict disturbing excesses of individualism and misogyny. In my view, the individualizing power of Romantic mediation can easily lead to these kinds of excesses, and they need to be taken into account, not ignored.

I worry that readers of this dissertation will think Romanticism is nasty, or that I don't like it. This isn't the case. What I love about Romanticism is actually how extreme and strange it is, and the ways I find myself drawn to its excesses even when I know they're messed up. Excess, darkness, weirdness, megalomania – these things have an allure, and what I love about Romanticism is that it gives readers a way to explore this attraction. Similarly, the Romantic emphasis on mediation means that things flip really

dramatically: suddenly, your wife is really your sister! Or, you set out to sell some horses and find yourself suddenly torching the German countryside! This is why I'm pushing back a bit against the scholarship that tries to render Romanticism 'nice,' or to systematize it into a coherent philosophy. When we sanitize Romanticism, we miss the mayhem that helps us reflect on why grandiose promises are appealing, and the weird worlds media usher in.

One of my favourite Romantic stories is Ludwig Tieck's (1797/2018) "Eckbert the Blonde," which depicts the dark side of a Romantic desire "to mediate as such" (Weatherby, 2014, p. 63). The tension revolves around Eckbert, his wife Bertha, and his friend Walther. Bertha tells them the story of her childhood, giving "Eckbert the Blonde," the form of a story within a story. Eckbert becomes increasingly suspicious that his friend knew details of his wife's early life all along, and the boundaries between the two stories increasingly begin to blur for him. Eckbert starts to lose touch with what is real and what is projection. He begins to see enemies everywhere and murders his friend. As the self is increasingly responsible for mediating the boundary between itself and the world, between narrative and reality, the world is inverted in hellish ways. In a kind of psychosis, Eckbert continues to murder more people who he once trusted.

"Eckbert the Blonde" shows the ways that a Romantic desire for self-directed mediation goes hand in hand with a kind of psychosis or paranoia, a difficulty assessing boundaries between narratives, and a trouble disarticulating audience from author. Part of the purpose of this dissertation is to help acknowledge the ways we can be like Eckbert, particularly as we wield our strange devices and use them to shape our own realities. "How many likes did I get?," is an Eckbertian question that confuses the distinction between self and audience. In Chapter 2, I compare Silicon Valley to Friedrich Kittler's reading of Romanticism to show it as a system that codes the world as throbbing with subjective meanings for each of its users. Part of what's troubling about Silicon Valley's Romanticism is its effort to create this kind of subject, rather than critique figures like Eckbert. I would hate readers to walk away thinking Romanticism is bad, that it's just like Silicon Valley; instead, I want to explore the pull of this Romantic promise, and by acknowledging it, perhaps open space for it not to be so totalizing.

Indeed, Romanticism contains counter-texts to this project of technological metaphysics. In Chapter 1, I offer a reading of the neglected Romantic writer Sophie Tieck, arguing that she is criticizing the fantasies of mediation-power found in the writings of the men in the Jena Romantic circle she participated in. Bringing her critical voice into the canon may be a way of acknowledging the multiplicity of Romanticisms, including both the excesses promoted by writers like Novalis, and the critique of these excesses from writers like Sophie Tieck. By emphasizing this contradiction, I show how Romanticism can be both critical and excessive at the same time. A Romanticism that can see the appeal but understand the excess has, in my view, a better approach to technology than one that insists on an empowered figure who mediates self and world, or puts trust in new mediations to solve our problems. It's not about finding the right Romanticism with which we can mediate the world we want, but about questioning the promise that the right form of mediation will finally harmonize us or set us free.

Disappointing technology

Of course, not all modes of tech critique operate through the figure of the Romantic, empowered user, liberating his consciousness through media exploration (or his inverse, the brainwashed automaton, controlled by manipulative computers). What these examples of Romantically-framed critique show is that, following Streeter (2011) and Schönthaler (2024), Romanticism is a dominant cultural frame for thinking about the liberatory (or oppressive) power of technology. This is why it is vital to critically engage both Silicon Valley and Romanticism itself, simultaneously. There is a tendency to return to Romanticism, consciously or unconsciously, in tech and in critiques of tech. This points to the need for a deeper understanding of Romanticism's entanglement with Silicon Valley, the history of computation, and contemporary techno-power. Without it, we risk returning to the Valley's own narratives about what technology is for and we miss opportunities to demand a different relationship to technology than the one Silicon Valley has already been promising for half a century. In addition, being conscious of Silicon Valley's Romanticism helps explain why, after incessantly undermining the very autonomy it has promised its users for decades, Silicon Valley power continues to function on the same promises.

Understanding Silicon Valley's Romantic frame encourages more care with the questions we ask of technology. As soon as we ask what media-design would be liberating, we are asking on Silicon Valley's own terms that see media as the condition of our liberation. This dissertation tries to show why we need to resist the urge to fix tech when it doesn't fulfill its Romantic promises; this constant disappointment in and reassertion of a Romantic relation to media forms a feedback loop. In this circuit of power, it's hard to see past Silicon Valley's vision. We may need to get over this Romantic expectation that someday technology will be something users individually wield to transform themselves and the world in empowering ways. This dissertation is not anti-tech per se, but rather sees technology as something weird and alien, that doesn't really allow this Romantic subjectivity to flourish. Every time technology breaks, fails, or disappoints is actually an opportunity – not to upgrade or to reassert our media-empowerment, but to question its promises and fantasies and our own attachments to them.

Cait McKinney (2024) offers a very thoughtful critique of fixing and repair, acknowledging why we are attached to this frame, but also why it might be important "to sit with broken things" (p. 76). McKinney is responding to queer methodologies of reparative reading in their critique; that is, a very different genealogy of repair than Silicon Valley solutionism. Yet, I find their critique relevant in a context that assumes fixes are liberatory, and sees them as the correct response to our technological expectations being disappointed. Maybe what's wrong with our tech isn't something that needs fixing, but our own relation to technology itself. Part of what academic critique can do is rethink this relationship to technology, beyond changes in design. Our relationship to technology is not simply a technical problem, which can be solved with a new user interface or source code; instead, it means paying attention to the promises that circulate around technology and our attachments to them. As such, sitting with our disappointed relationship to technology can show what's actually wrong. This doesn't just show the technical object in a new way, but it also shows the attachments we had to that object, to the promises invested in it – it shows the ways our subjectivities are drawn into these objects.

Feeling disappointed by dysfunctional things might allow building a new relationship, rather than building a new technology that promises to get the relationship right this time. If this sounds like warmed-over Heidegger, specifically the idea that technologies only come into relief when they break and are no longer "handy," or immediately graspable, there is a key difference here (Heidegger, 1927/2010, p. 69). For Heidegger, this experience of dysfunction is a clearing away of the mediations masking Being; for me, it is a view to creating an antagonistic political subjectivity. Confronted with the horrors of technological modernity, Heidegger (1976/1981) declares, "only a God can save us;" the clearing opened by technological dysfunction is, for him, an opening in which this God may emerge. I reject the language of salvation, and instead argue in favour of an ongoing resistance, cultivated through the frustrations we have with technological promises endlessly reiterated by the power structure that is Silicon Valley.

In the wreckage of technology, Heidegger seeks the Gods in the pre-technological Romance of his forest hut in Todtnauberg; Silicon Valley designs an upgrade to restore the proper relation to technology, through technology; I seek to cultivate an antagonism. Social relations (including those with technology) need to be negotiated and struggled over together, rather than designed in advance through the right techniques of mediation. Rather than, say, design an app-detox-app to reclaim our empowerment over and through media, we might insist on a collective right not to be on our phones all the time. Rather than mystifying the future through a highly unstable AI, we might demand the right not to be displaced by machines. Our disappointments are not only around massively hyped technology, but also over two centuries of cultural attachment to Romanticism. Being aware of these attachments and letting ourselves be disappointed by them may open a door to exiting the endless loop back to repetitive promises.

The chapters of this dissertation apply this approach to a variety of technological case studies. Chapter 1 elaborates this approach through a reading of Romanticism itself, developing a critique of Silicon Valley's recursion to Romanticism through a reading of the work of Sophie Tieck (1800/1960, 1800/2015). The concept of *negative recursivity* outlined in this chapter forms a method that the dissertation applies in the following chapters. Chapter 2 reads the ways Silicon Valley Romanticizes data, through a comparison of its system of meaning with the Romantic system of meaning outlined in

Friedrich Kittler's (1985/1990) *Discourse Networks 1800/1900.* Chapter 3 analyzes the ways social media Romanticizes its user subject, through a comparison of Olaudah Equiano's (1789/2007) slave autobiography to its adaptation on the Instagram page equiano.stories. Chapter 4 turns to the ways Silicon Valley tech functions as a Romantic bodily organ, through an analysis of the high-profile brain-machine interface Neuralink. Each of these chapters shows the ways Silicon Valley tech loops round and round a Romantic promise that never quite arrives, while offering a critique that tries to break this circuit.

Chapter 1.

Romantic recursion and negative recursivity

Introduction

In April 2024, Silicon Valley start-up Humane Inc. releases its "Ai Pin." The Ai Pin is worn on your shirt: you talk to it, it answers; there is no screen. Founded by two former Apple employees, Humane has set itself the mission of creating technology "born from good intentions" in order to reclaim our humanity, our connection to ourselves and the world, and the magic of life (Humane, 2024).[1] Looking at it, I'm reminded of an alarm clock I had around the year 2000, rounded, boxy, compact, like you could drop it without it breaking. The Pin's robust appearance perhaps recalls an era when technology was not so sleek and slippery, something you could rely on not to steal your identity and manipulate your desires. Indeed, Humane explicitly describes the Ai Pin as an antidote to a screen-saturated world, increasingly known for addiction, manipulation, data theft, and for making your life mundane and meaningless. The Ai Pin disrupts this toxic smart phone culture by removing the screen from the equation. As a *New York Times* article puts it, "Humane's ambition to disrupt the smartphone is audacious, creative and even irrational; the kind of thing Silicon Valley is supposed to be known for, but, which critics bemoan, in recent years has turned into incremental frivolities, like selfie apps and robot pizza trucks" (Griffith et al., 2023). The Ai Pin promises to restore the human in the human relationship with technology, centring a personal experience of self and world, re-enchanted by media: "we believe in building innovative technology that feels familiar, natural, and human… that improves the human experience...[in] experiences… that feel magical and bring joy" (Humane, 2024).

Backtrack two decades. In January 2007, Apple releases the iPhone 1. Steve Jobs presents the phone to an ecstatic audience in San Francisco (Protectstar Inc., 2013). No

[1] Sound familiar? Whereas Google's "don't be evil" sets up a modicum of accountability, "good intentions" don't really need to take responsibility if their consequences don't turn out as planned. We've learned not to set our sights too high.

one had seen a touch screen before. Jobs emphasises the "revolutionary user interfaces," the embodied and empowering experience of use. "We've designed something wonderful for your hand" Jobs says (11:47-11:49), "you can touch your music" (14:30). The phone is meant for human bodies, for "natural" use. "It fits beautifully in the palm of your hand" (14:15), Jobs repeats, the idiom "in the palm of your hand" suggests technology to be something almost part of us, at our finger tips. And indeed, Jobs makes a big deal of the touch screen not requiring a stylus, but only "the best pointing device in the world," the finger (7:02). It merges with the body. Like Humane twenty years later, it is a fantasy of the disappearance of technical mediation in a seamless connection with the self. The audience is in awe of the ways we will touch the phone. Meanwhile, Apple runs ads with the slogan "touching is believing." Wow! iPhone offers an embodied technology that brings a sense of wonder to the world – you have to touch it to believe it.

Run the recursive loop between these two events: in 2024, Humane offers the same technological promise the iPhone screen did in 2007, precisely through removing the screen. The failure of the iPhone to fulfill the proper relationship between humans, media, and nature generates a new technology to re-imagine this relationship. Note that this failure is not one of rational functionality (*NYT* explicitly describes it as "irrational"). Rather, it is a failure of the promise that technology will empower humans, enchant the world, and feel natural. As Humane developer Imran Chaudrhi (2023) declares in his TED Talk, "this is the possibility of re-imagining the human-technology relationship as we know it" (13:07-13:08). Humane enters into a recursive loop with the iPhone: the adoption of the very technology that promises an individual power to mediate and re-enchant the world undermines that power (the iPhone 1), spurring a new technology to develop the initial promise (Humane's AI Pin).

In the Introduction, I described the technological Romanticism of Silicon Valley as entering a new phase, marked by a collective awareness of its repeated failure. One example I gave was Google's AI Overview, which undermines the Romantic promises of the internet, even as it seeks to rescue Romanticism from what the internet has become. Humane offers another example of this recursion to Romantic promises via the very technologies that undermine them. Throughout this dissertation, I map further examples of this recursive back and forth between an initial promise and the way its medium of

fulfillment also works to undermine that initial promise. In this way, Silicon Valley technology creates the very limits to freedom that it repeatedly promises to overcome. This chapter focuses specifically on the concept of Romantic recursion as an analytic method. I show how recursion operates in this tighter cycle of Silicon Valley power and in the longer loop of history, that moves from present day tech bros to an 18th century literary movement.

The example of Humane and the iPhone is telling, because it shows how Romanticism operates at multiple levels in this digital recursion. Humane promises a device that gives users the power to mediate the world; and it promises that this form of mediation will allow the world to become enchanted and humanized. Similar to Novalis' project of balancing the mediated relation between human, technology, and nature (Norton, 2024), Humane promises a user-directed technological mediation that will restore the wonder of the world and render it more human(e). Humane will mediate a new relationship between humans and technology, even as the technology allows humans to mediate a new relationship with themselves and the world. These promises constitute two levels of Romantic recursion, by which I mean the return to Romanticism that generates new technologies.

There's also a third level of Romantic recursion in the example of Humane, which is the form of the recursion itself. Humane depicts technological progress as a looping cycle in which confrontation with obstacles yields new growth, from iPhone to Humane. As I'll elaborate throughout this chapter, Romanticism also makes use of this structure of recursion, through the idea that looping back to oneself from confrontations with the world generates growth, transformation, new knowledge, *Bildung*. In this way, Humane not only takes recourse to *content* from Romanticism (self-directed mediation, enchanted world), it also stages its own emergence through a Romantic *form* of recursion. The failure of the iPhone to yield the specific relationship to mediation requires a formal recursion to Silicon Valley's Romantic promise, spawning the new technology, Humane. This chapter focuses on this recursive form to illustrate the structure of Romanticism's recursion through Silicon Valley tech. In doing so, it seeks to answer the questions: if Romanticism returns today through the technological systems of Silicon Valley, what

exactly is returning, what is the form of this return, and how can this recursion turn into a method for critiquing technopower?

This question builds on a substantial body of academic literature that connects Romanticism and Silicon Valley (Coeckelbergh, 2017; Coyne, 1999; Franklin, 2015; Galloway, 2012; Streeter, 2011, 2015; Turner, 2006). Each of these scholars works with a slightly different conception of Romanticism, but all take the method of following a linear reception of Romantic tropes across time. In contrast, I want to show how Romanticism is itself structured through the form of a looping return to itself from external obstacles. As I explain throughout, recursion does not just mean return. Returning to some past moment is a powerful idea that characterizes many political projects, in particular nationalist movements that seek to go back to some mythical past. Romantic recursion is different. It is not simply a repetition of the past, but the idea that returning to the same place from somewhere different yields progressive change, actually changing the place of origin in the return to it. Romantic recursion is a repetition that yields transformation. This chapter maps the ways Silicon Valley develops by returning to Romantic content, and shows the ways this progressive return to Romanticism is itself a Romantic form of recursion.

Humane is significant for two main reasons, that have less to do with the technology itself (which is dead in the water as of 2025), and more to do with recursion. The first is its relation to the iPhone. The smartphone has become a potent cultural symbol of technological *un*freedom, even as it has become unavoidably ubiquitous. Reading Humane and the iPhone recursively helps reveal the iPhone differently. It's not as if the iPhone went wrong somewhere, rather it was always a promise waiting to fail, so that it could produce a new innovation. The second reason Humane is significant is that we recognize Silicon Valley's philosophy of development within it. The *New York Times* makes this explicit by describing the Pin as returning to Silicon Valley's core ethos of disrupting stale cultures with irrational and imaginative ideas – even when those stale cultures are coming from Silicon Valley itself (Griffith et al., 2023). Humane stands in for this recursive theory of development. It's the same ethos that grounds Peter Thiel's famous sentiment that instead of flying cars we got tweets, and makes him then propose developing technology for resurrecting the dead (@jimstewartson, 2025). As Silicon

Valley becomes stale, we need to go back to our visionary dreams and create something new that will fulfill it this time! Humane and the *New York Times* gesture to the ways Silicon Valley has successfully marketed its own development as functioning in this way. Learning from the failures of recent tech, Humane returns to Silicon Valley's Romantic promises to yield innovation.

Humane recalls a longer history of Silicon Valley's recurrent promise. As Margaret O'Mara (2020), Fred Turner (2006), and others relate, this promise loops back to the 1960s. Silicon Valley offering this kind of transformation through technology emerges out of 60s' culture rejecting technology as a centralized, bureaucratic, destructive force. As the centralized command structures of the Korean and Vietnam wars appropriated cybernetics into their own purposes, the rise of microelectronics in the 1960s offered the chance for "a second cybernetics, that increasingly emphasizes the principles of auto-poiesis, self-organization, adaptation, and pattern recognition" (Schönthaler, 2024, p. 53).[2] This was the second-order cybernetics of Heinz von Foerster, channeled to Silicon Valley through Gregory Bateson and Margaret Mead, and adapted by Stewart Brand (Hayles, 1999; Turner, 2006). From its outset as a producer of consumer products, Silicon Valley promised to disrupt the centralized, bureaucratic form of technicity, and restore an autonomous human with a harmonious relationship with media and world. What's strange about this, though, is that the narrative seems to remain the same. As O'Mara (2020, pp. 355–356) relates, Silicon Valley incessantly repeats this drama of liberating individuals from bureaucratic media, even as it itself becomes this crushing force. In many ways, the recursive structure is the discourse of innovation: anytime there are problems – even with the tech we ourselves create – a visionary imagination will invent new ways to achieve this relationship between self and media, each time incorporating lessons from its previous failures. But what to do when the recursive structure itself becomes the centralized, bureaucratic medium? How does one transcend transcendence itself?

[2] "einer zweiten Kybernetik, die verstärkt auf Prinzipien der Autopoiesis, Selbstorganisation, Adaptation oder Mustererkennung"

By casting this return as progressive, the *New York Times* piece on Humane (Griffith et al., 2023) takes Silicon Valley Romanticism at face value: it accepts the premise that a (Romantic) recursion to (Romantic) promises yields growth and transformation. Here and throughout this dissertation, however, I question whether this model really works as it's promoted. Rather than taking recursive progress at face value, I'm using Romantic recursion as a method of critique. By staging my own recursion to Romanticism, I'm pushing back against this assumption of innovation, and the attachment to a freely mediating Romantic subject. In the first half of this chapter, I develop this method of Romantic recursion. In the second half, I return to Romanticism itself to develop it in an alternative direction. One such alternative is the neglected Romantic writer Sophie Tieck. I read her story "The old man in the cave" (1800/2015) as undermining this progressive view of Romantic recursion and mediation, and actually critiquing her contemporaries in the Jena Romantic circle who promote it. Looping back to this alternate Romanticism might help us confront Silicon Valley today, to open up alternatives to its endless return to the same promises.

The first half of this chapter offers a response to media theory and philosophy that has embraced the Romantic concept of recursion. Specifically, it responds in detail to Yuk Hui's (2019) book *Recursivity and contingency.* Hui, and others writing in this field, return to Romantic writers to promote the progressivism of recursion. They argue that this could ultimately allow cybernetic recursion to develop a new response to its own destructive repetition. It's important to question the premise that recursion is progressive, both in literary Romanticism and in contemporary media. Returning to the Romanticism of Sophie Tieck offers a way to question not only the progressivism of literary Romanticism, but also of the recursive form more generally as it moves through cybernetics and Silicon Valley's self-promotion.

In offering this alternate reading of Romanticism and bringing a submerged author from the time period into the scholarly discussion, this chapter also addresses two recent, intertwined tendencies in scholarship on Romanticism. The first is the focus on the Romantic concept of mediation, and even of a media theory within Romanticism (Brooke-Smith, 2013; Goodman, 2004; Hui, 2019; Langen & McLane, 2008; McLane, 2008; D. Nassar, 2014; Norton, 2024; Weatherby, 2014, 2016b). The second is a tendency

to render Romanticism less extreme, moving away from a previous generation of scholarship that emphasized Romanticism's individualism, excess, and subjective growth (Beiser, 2002, 2003; Goldstein, 2017; D. Nassar, 2014; Nersessian, 2015; Norton, 2024; Rajan, 2004). I argue that Sophie Tieck's story is criticizing precisely the Romantic media theory that recent scholarship has elaborated, by pointing out its excesses and delusions. This invites a recognition of the ways Romanticism's promises of harmony slip into megalomania, and why they should not be taken at face value. Recent scholarship has made this Romanticism too *nice,* largely by omitting some of its more disturbing moments. Acknowledging the Romantic writers who critique these tendencies might help recognize the moments when Romanticism is unappealing or excessive. This mode of critique can be brought back to address newer iterations of Romanticism, such as the one operating in Silicon Valley tech. If our technological moment is characterized by a repetitive return to Romanticism, we might return to an alternative Romanticism that can break this cycle.

Recursive auto-poietics

One of the key questions this chapter asks is, how does Romanticism move through time to appear in Silicon Valley tech? The various scholars who have shown the historical and ideological connections of Silicon Valley to Romanticism tend to describe this as a linear, cultural influence. In this section, I discuss this literature to show how thinking about Silicon Valley Romanticism recursively can help extend their findings. I'll start by laying out what I mean by recursion, and how it functions as a Romantic form. I'll then show how the method of recursion could add significance to the findings and methods of the scholars linking Silicon Valley to Romanticism.

The concept of recursion is today closely associated with algorithms. A recursive algorithm functions by setting out from a "base case" to solve smaller problems, each time returning to and changing its base case through these smaller solutions, and eventually using this changed base case to solve a larger problem. In short, a recursive structure constantly returns to itself after confronting problems, and in returning to itself, changes itself; then it sets out again. Though this structure is associated with computation, it is actually theorized within Romanticism. Yuk Hui (2019) argues that,

through its recursive structure, Romanticism develops "a proto-cybernetics or a proto-systems theory" in the late 18th century (p. 69). Using the structure of recursion, Romanticism develops a way of thinking about both nature and the individual self as self-determining, learning, interacting systems.

First-order cybernetics focuses on a closed, auto-poietic system that relies on feedback for stabilization; second-order cybernetics focuses on the relationship between the individual observer and the system, emphasizing self-reflexivity and change. Similar to second-order cybernetics, Romanticism posits individuals as systems that oscillate between what Hui (2019) calls contingency and recursivity: as the individual-system confronts a contingency – something unknown, unpredictable, or limiting – it returns to itself with this new experience and incorporates it into the system in a process of self-development, or *Bildung.* As a confrontation with contingency, this is a mediated rather than an immediate recursivity. Whereas "recursive immediacy" means a self's immediate knowledge of itself (Weatherby, 2016b, pp. 201, 393n89), recursive mediation means the ability to mediate contingency into *Bildung.* I'll return to the importance of this kind of mediation to Romanticism in the second half of the chapter. The point here, however, is that this is not simply an auto-poietic feedback system, that works towards its own self-stabilization; rather it is a recursive auto-poietics that generates and develops itself through its interface with the contingency of external systems.

Two sites were especially influential to the early Romantics in developing this model of growth: Johann Gottlieb Fichte's (1795/1982) treatise *The Science of Knowledge* and the literary genre of the bildungsroman. Friedrich Schlegel (1798–1800/1991a, p. 46) famously described the three most important influences on Romanticism to be the French Revolution, Goethe's archetypical bildungsroman*, Wilhelm Meister's Apprenticeship,* and Fichte's philosophy. The Romantics were drawn to Fichte's conception of the self as progressive and self-determining. In Fichte's (1795/1982) account, the self, or "I," posits itself absolutely, in an initial act of self-creation, but constantly comes into contact with the "not-I," its own limitations in the world. Its work is to mediate the "not-I" into itself, overcoming its limitations in a process of self-directed becoming. This account also characterizes the plot structure of the *Bildungsroman,* which focuses on the development of a single protagonist from youth to

adulthood, through a variety of challenges. Mikhail Bakhtin's (1979/1986) interpretation of this genre is especially suited to Hui's (2019) cybernetic account of Romantic growth. Whereas *Bildung* is usually translated as "formation" or "learning," Bakhtin reads the bildungsroman as "cyclical emergence" implying a radical newness, or difference coming about through the protagonist's confrontation with external challenges (p. 22).

Despite being focused on an individual's transformation, the bildungsroman is more social than Fichte's account. As Franco Moretti (1986/2000) argues, this genre offers a model for how free, self-determining individuals (in other words, the bourgeoisie) can also integrate into a larger society of responsibilities. In finding a way to reconcile the contradiction between self-determination and social responsibility, the bildungsroman also participates in this kind of systems-theory. Individuals are free, self-determining systems, who must also find a way to integrate into a larger, social system that progresses through their successful integration. As Petru Golban (2018, pp. 9–10) argues, the bildungsroman is itself a (literary) system within which individuals are able to form identities.

Whereas Fichte establishes this kind of progressive system exclusively in the human self, later Romantics develop it as a model for other kinds of systems, such as society and nature, and explore how these self-determining systems interact with each other (D. Nassar, 2010; Norton, 2024). Hui's (2019) reading focuses on Schelling, who extends this auto-poietic structure to nature, such that it becomes a self-generating, developing, productive force. Hui calls this kind of auto-poietic system *organic* (p. 42). Organic here does not mean *vegetal* or *earthy,* but rather an organism, or an organized system. Romantics like Schelling render Nature organic in the sense that it ceases to be an inert object, and instead becomes a dynamic process. Individual beings within this larger system also form their own, discrete organic systems. In addition to being processes of self-formative growth or development, organic systems are unified in themselves, individual. As Friedrich Schlegel (1798–1800/1991a) writes, "is it possible to characterize anything but individuals?…Aren't there individuals who contain within themselves whole systems of individuals?" (p. 51). For instance, individual humans form their own organic system, even as they form the individual parts of a larger individuated

system of society. Much of the Romantic project, as I'll elaborate below, seeks to mediate the relationships between these individuated yet interactive systems.

In Hui's (2019) account, a computer is also *organic*, in its "constant amelioration and breakthrough," or the "algorithm's capacity for self-positing and self-realization" (p. 115). Likewise, Beatrice Fazi (2018) describes computers through Goethe's distinction between *Gestalt* (form) and *Bildung* (formation), arguing that non-classical computation is best described as a process of *Bildung,* in its tendency towards contingency, emergence, and formative process (p. 157). As Fazi suggests that machine learning turns to a Romantic model of development, Hui explicitly sees the basis of cybernetics in the Romantic concept of nature. For Hui (2019), Romanticism begins a project that continues in cybernetics. However, he sees cybernetics today as losing its recursive power to transform as more and more it dominates nature. His argument is not to abandon cybernetics, but to return to it its ability to recursively transform itself. Forthcoming work from Leif Weatherby on the direct connection between cybernetics and German Idealism, will no doubt strengthen this comparison. These writers suggest that computational processes find their basis in Romanticism's concept of the organic system; and likewise, that transcendental philosophy is not outside of or above technological thinking.

The concept of a recursive system is innovative because it transcends the merely mechanical system. Whereas mechanical systems repeat in unchanging tedium, recursive systems are dynamic. Hui (2019) writes, "recursivity is not mere mechanical repetition; it is characterized by the looping movement of returning to itself in order to determine itself, while every movement is open to contingency, which in turn determines its singularity…every time it departs from itself, it actualizes its own reflection in traces, which we call *memory*" (p. 4). Both algorithms and Romantic thinking operate by having an object of contemplation driving the recursive system. The system stops once it successfully returns to itself and completes its integration or mediation of the object into itself as memory, or learning. Whereas mechanical systems can only repeat, recursive systems integrate, change, and return to an altered self.

Viewing Romanticism as a self-developing system offers a way of accounting for its continued repetition in history, such as in the 1960s American counterculture, or

Silicon Valley. Rüdiger Safranski (2007/2014) has described this Romantic repetition as a distinctly "German affair" (the subtitle of his book). In this account, Romanticism repeats in German culture because of some kind of national character or fixation. This is a variation on the argument, popular after the Second World War, that Germany's path to Nazism began two-hundred years prior in the irrationality and individualism of Romanticism (Craig, 1982; Lukács, 1962/1981; Voegelin, 1964/1999). Safranski (2007/2014) critiques and inverts this argument, preserving the part that describes Romanticism as a repetitive national character, but inverting Romanticism into an anti-authoritarian impulse. Using the concept of recursion, I would take a broader view that can account for a more multi-cultural Romantic repetition than any of these theories do. Recursion helps to explain why ideas from the past keep coming back in different forms in the present. This offers a non-linear theory of Romanticism's historical repetition that can help extend the scholarship linking Romanticism to Silicon Valley. I will summarize this work in the following section, and then connect it to this recursive theory of Romantic repetition.

Silicon Valley Romanticism

The body of scholarly work that theorizes Silicon Valley as a return of Romanticism can be roughly divided into two kinds. On the one hand, there are historical analyses that seek to trace the direct influence of Romanticism on Silicon Valley and its technological developments (Streeter, 2011; Turner, 2006). On the other, there are ideology critiques, that seek to explain how contemporary technological systems come to have Romantic values attached to them (Coeckelbergh, 2017; Coyne, 1999; Franklin, 2015; Galloway, 2012). In the introduction, I showed how my analysis builds off of all these scholars' findings; here I want to instead critique their methods for mapping the return of Romanticism in Silicon Valley tech. While these works all make important contributions to the study of Silicon Valley and digital technology, their methodology of matching similar tropes across time has drawbacks that limit the significance of their work. Roughly, these works take one of two methodological approaches to studying Romanticism, either characterizing Romanticism as a diffuse cultural influence, or pinning it down to a single idea. As I'll show, both of these methods pose problems for

analyzing contemporary cultural forms as being Romantic: defining Romanticism too broadly makes it difficult to draw significance from the comparison, whereas defining it too narrowly misses the dynamism and multiplicity of Romanticism.

Mark Coeckelbergh (2017) and Thomas Streeter (2011) both define Romanticism as a broad set of tropes, that have been so influential that they continue to float through the cultural ether, two centuries after their inception. Understanding Romanticism so broadly, however, poses difficulties for characterizing its return. If Romantic tropes are all around us, pointing out their presence in any particular place is much less significant. Without a more rigorous definition of Romanticism, we get a bit lost in what such a comparison might mean.

This has plagued theorists of Romanticism for the last century. Arthur O. Lovejoy (1924) first pointed it out in his essay "On the discrimination of Romanticisms," where he writes "the word 'romantic' has come to mean so many things that, by itself, it means nothing. It has ceased to perform the function of a verbal sign" (p. 232). Isaiah Berlin (1965/2013, p. 1) pointed this out again in his famous lectures on Romanticism in the 1960s, arguing that Romanticism is more or less impossible to define. More recently, Anahid Nersessian (2015) has followed a turn in literary scholarship that characterizes Romanticism by its "conceptual inexhaustibility" (p. 5). If Romanticism is diffuse, conceptually limitless, and without clear definition, it becomes hard to make these kinds of comparisons. Both Streeter and Coeckelbergh suffer this problem. When Coeckelbergh (2017) asks "what could it possibly mean to be 'nonromantic'?" it implies that everything is Romantic, including his own work (p. 213). This makes the significance of pointing out a specific example of Romanticism unclear.

The temptation then might be to define Romanticism more rigidly, to offer more precision in its influence on contemporary forms. Alexander Galloway (2012) and Richard Coyne (1999) both take this more restrained approach, defining Romanticism as *play* and as a *yearning for unity*, respectively. However, this has the inverse problem. It is hard to attach a concept as broad as "play," specifically to Romanticism. Furthermore, such singular definitions miss the ways in which Romanticism itself experiments with contradiction. Ernst Behler (1993) characterizes Romanticism not by "the dominance of

one single principle," but rather "the counteractive movement of several tendencies" (p. 304). We miss something if we define it too narrowly, by neglecting the ways it might also contain the opposite. Indeed, Coyne's (1999) reading of Romanticism as a continuation of "the Neoplatonic trajectory, privileging unity over individuation," misses the ways Romanticism does actually elevate the individual, the particular, and the fragment (p. 278). The idea that Romanticism repurposes Neoplatonic eschatological narratives comes from M. H. Abrams (1973) classic text in Romantic criticism *Natural supernaturalism*.[3] However, Abrams' dialectical reading sees the Romantic yearning for restored unity not as an absolute dissolution of individuality, but as a wholeness fulfilled via the particular individual, the poet. In Romanticism, particular and whole engage in an interplay of unification and individualized transcendence of this unity. Indeed, Coyne's (1999) antidote to technoromanticism, which is "to celebrate the particular over the universal," misses the ways that this is actually a return to Romanticism's own elevation of the self, the fragment, and the individual (p. 279). In this way, Coyne's solution puts him firmly into a Romantic recursion: his book recreates Romanticism's own movements from unity to particularity and back again.

In this way, I'd suggest that Coyne – and to a lesser extent these other scholars of Silicon Valley Romanticism – miss their own Romanticism. For Orrin Wang (1996), this characterizes much Romantic scholarship in its "simultaneous disavowal and reappropriation of Romantic knowledge" (p. 7). This critique is not meant to downplay the significance of these scholars' works, but rather to point out how their claims could be extended through a method that accounts for the ways Romanticism tends to repeat, even in criticism of Romanticism. A recursive method is potentially more fruitful than either of these linear approaches to exploring Romantic returns, because it offers a way of dealing with Romanticism's "conceptual inexhaustibility" – the impossibility of its strict definition (Nersessian, 2015, p. 5). Rather than force a definition of Romanticism that then gets transported into another context, it acknowledges Romanticism as inherently dynamic. Romanticism is, from its inception, already about recursive (developmental)

[3] Coyne does not cite the text, but Abrams' argument is well known in Romantic criticism.

returns to itself. Mobilizing this concept of Romanticism as an analytic helps to better theorize why and how it keeps coming back.

Orrin Wang (1996) offers an explanation for this meta return that seems to effect Romanticism more than other literary or artistic movements. In analyzing other Romantic returns across time, Wang argues that the tendency of Romanticism to recur is inescapably bound up with a paradox Romanticism initiates. The paradox goes as follows: if we think of modernity as initiating a historicist understanding of change, and we think of Romanticism as a project of breaking with modernity, then Romanticism's rejection of modernity ironically reinscribes the progressive, historicist thinking that defines modernity in the first place. In rejecting, it repeats. Wang terms this "fantastic modernity," a modernity that is simultaneously the impossibility and possibility of its transcendence, a haunted history that both precludes and necessitates its own overcoming. He writes "Romanticism is the transcoding of what it itself transcodes" (Wang, 1996, p. 10). In other words, it finds itself translated into new forms that repeat its project (Wang is focused on postmodernism). Each repetition of the Romantic project is itself a Romantic transformation—reinscribing its own logic in new forms. The tension here is that, the thing Romanticism is trying to transcend gets repeated in the act of transcendence. Wang's analysis suggests that part of what defines Romanticism is precisely its return over time. Its recursive structure initiates a dynamism, that spirals it forward into the future. It is not simply that Romantic tropes reappear; this cyclical development is itself Romantic. Returning to literary Romanticism from a present Romanticism to change the meaning of both is itself part of Romanticism. It seeks to develop and change Romanticism by using the Romantic form of recursion.

Using recursion as a method is different from a simple comparison. Markus Krajewski (2010/2019) describes this through his concept of "recursive historiography" (p. 155). When recursion is used as a method, it is not just a simple "running back" to its origin, but a return to a "starting point [that] has long since become a different one," from which its result also changes (Krajewski, 2010/2019, p. 156). Recursion actively seeks to change its origin point and thereby change its end-state. Krajewski uses this method to study cultural techniques of service from 18th century servants to contemporary internet servers. As Krajewski argues, a recursive method shows that 18th century servants were

always already integrated into a social system as information processers. The recursion back from servers to servants returns to a very different figure of the servant as information processor. The recursion forward from this new concept of servants to servers shows how technological servers embed longstanding hierarchies and expectations of subordination, that are transported through rhetoric and narrative.

This emphasis on recursion is common in the field of media archaeology, but Krajewski's recursive historiography offers a key difference: rather than reject diachronic narrative, recursive historiography mobilizes it as part of the recursion. Media archaeology, particularly in its more radical forms, tends to fully sideline narrative, historical temporality, and progressive change. This stems from Kittler's (1985/1990) technological update to Foucault: as storage is the condition of the archive, media are the ground on which (historical) knowledge becomes possible. This means that new media systems create massive ruptures in historical continuity, and new forms of non-discursive storage threaten the possibility of rational history (I discuss Kittler's rupturing of historical continuity in greater detail in Chapter 2). Wolfgang Ernst (2013/2016a) develops this technological *a priori* of knowledge into a media archaeology that critiques time itself: what is stored by technical media is no longer just discourse from the past (which would enable historical narrative), but processes immanent to the medium. Ernst (2013/2016b) gives the example of the *Volksempfänger*, the low-cost "people's receiver" radio, mass produced by the Nazis. If turned on today, it will play Doja Cat, rather than the Horst-Wessel Lied or the rantings of the Führer.[4] Rather than store symbolic discourse from its era, it stores a technicity that operates in a constant present. Recursions operate here in the way that any medium calls up a technical past into the present every time it is activated, thereby undermining the sense of chronological time: "the formerly developed version is also sublated in the current version as technical knowledge, and it is thus equiprimordial in the computative present" (Ernst, 2013/2016a, p. 252). Technical media store the past in such a way that it becomes present in media's very operations.[5] For

[4] See also (Winthrop-Young, 2015b)

[5] Ernst (2010) argues that the phonetic (ancient Greek) alphabet is in a recursive relationship to the phonograph. The advent of the phonograph recursively reveals that the phonetic alphabet was all along a medium for sonic storage, and some trace of this phonetic storage system is called into the present through the operations of its newer iteration.

Ernst, this recursive temporality ejects historical narrative, which exists only as the effect of a media storage system (archive) that stores symbolic discourse; technical media open onto a different non-chronological temporality.

Krajewski (2010/2019), however, pushes back against this sidelining of historical narrative. Recursive historiography means that media and narrative recursively remake one another. This is not an effort to fully redeem historical time, but to dynamically rewrite it. Even as media provide the basis for whatever narratives, rhetoric, and institutional metaphors are available, these discursive and symbolic constructions also recursively constitute media development. For example, an internet "server" embeds expectations of subordination and hierarchy that refer back to the information processing function of servants. But these are rhetorical, rather than technical transmissions. In other words, even technical media have a discursive, symbolic, historical character. Whereas media archaeology arrests the flow of narrative time to expose strata of technical inscription, recursive historiography follows the loop whereby historical narration itself is re-encoded in each new medium. For the purposes of my study, this method can track how Silicon Valley programs Romantic fantasies into devices, something media archaeology, with its eschewing of narrative, has trouble addressing. In practice this means my analysis must keep both media materialities and Romantic fantasies in view, rather than declaring one epiphenomenal to the other.

Simultaneously, recursive historiography allows a method that can account for the ways Romanticism returns over time. Wang (1996) uses variations of the word "transmission" fifty-nine times to describe the ways Romanticism moves from the past into the present, but he does not reference a media theory that would better situate this term. A recursive historiography can develop this point: Romanticism is transmitted across time via different media, and Romantic ideas, attachments, subjectivities, and imaginaries structure this media. Silicon Valley's Romantic concept of technology was, as argued in the introduction, articulated *against* the idea that technologies are slipping out of our control and creating their own, inhuman worlds (O'Mara, 2020; Streeter, 2011; Turner, 2006). In other words, it attempts to create technologies that will counter the theories mobilized in radical media archaeology (I develop this further in Chapter 2). As Steve Jobs, Ted Nelson, Stewart Brand, and others turned explicitly to Romanticism in

the 1960s to develop technology, their Romantic media has been recursively developed from the 1960s to today. Romanticism is thereby transmitted forwards, even when this explicit reference has been forgotten. Even as this dissertation argues that digital technology operates on a deeper temporal scale that extends back to Romantic theories of mediation, it also argues that Silicon Valley mobilizes a tighter recursive loop between Romantic expectations of technology and technologies that embed these expectations in their design. Narrative and media form a recursive loop of technological imagination, a closed-circuit of power.

In response, this dissertation offers a larger recursive loop that returns deliberately to literary Romanticism to assess these promises and look for alternatives that might be brought forward into the present – it looks for counter-Romantic content for the recursive constitution of media. Returning to literary Romanticism in this way means looking for the ways Romanticism itself already contains assumptions about media and subjectivity that structure expectations around technology going forward. Recent literary scholarship on Romanticism is indeed fixated on media (Brooke-Smith, 2013, p. 345; Goodman, 2004; Hui, 2019; Langen & McLane, 2008; McLane, 2008; D. Nassar, 2014; Norton, 2024; Weatherby, 2014, 2016b). At times, these scholars make explicit how these media-centered readings of Romanticism have an "obvious relevance in our contemporary world" (Weatherby, 2016b, p. 240). Wang (1996) cites Slavoj Žižek's (1989) *The Sublime Object of Ideology,* to show how each generation reinterprets Romanticism differently: "every historical rupture, every advent of a new master-signifier, changes retroactively the meaning of all tradition, restructures the narration of the past, makes it readable in another, new way" (Žižek, 1989, as cited in Wang, 1996, p. 26). Reading Romanticism from their own historical vantage point, these scholars have opened an understanding of how Romanticism itself advances a theory of technology. This urge to return to a technological Romanticism suggests a recursive relationship between the technological present and the Romantic past. This scholarship could be extended by being even more explicit about what these readings recursively bring forward into the present.

Using a recursive method allows this more conscious confrontation of the ways Silicon Valley Romanticism might be the context for this technological reading of Romanticism. A recursive method is not simply a one-way street: even as Romanticism

returns in Silicon Valley, Silicon Valley has incited us to return to a different (technological) understanding of Romanticism. This re-understanding of both Romanticisms is key for generating difference, rather than repetition, because it allows the possibility of alternate narratives to enter into the recursive constitution of Romantic media. Addressing the literary scholarship, this kind of analysis allows us to see some of the more extreme "tech bro" elements of literary Romanticism, which contemporary criticism tends to downplay. At the same time, it also opens the significance of neglected Romantic writers, who we might turn to for an alternative. This chapter concludes with such an alternative return, one that recovers overlooked Romantic voices to challenge Silicon Valley's recursive mythos from within.

Recursion is a computational metaphor that speaks to the automaticity of Silicon Valley's technological production. As explained above, a recursive algorithm returns again and again to a base case, altering it through the calculation it makes along the way. This dissertation seeks to hijack this recursive return to Romantic promises by introducing new terms that might bring this circuit to a halt. I develop these new terms through the rest of this chapter, and upload them into the system through the rest of the dissertation. I elaborate this in the following section, through a critique of Hui's (2019) *Recursivity and contingency.* My goal here is similar to Hui's – to bust out of the repetitively destructive cycle of contemporary technopower. Yet, unlike Hui, I suggest that what traps us in this mechanical cycle is the very promise that we can transcend it. By staging my own recursion to Romanticism, I end at a method of *negative recursion*, that calls Romanticism into question as a "base case." This base case is recursion itself – the idea that these looping returns to the same, generate difference. Negative recursion, as I elaborate, is a recursion that becomes conscious of its own circularity and opts to stall rather than accelerate.

Recursive Romanticism

Using Romantic recursion as a method is tricky, as it participates in what Jerome McGann (1983) calls "the Romantic ideology," or the interpretation of Romanticism on its own terms. Romantic writers tend to conceive of the recursive process as inherently

progressive, a form of "infinite perfectibility" (Behler, 1989; Schlegel, 1963, p. 506).[6] This means that expecting the method of recursion to yield some kind of transformation or new knowledge is a way of taking Romanticism at face value. In a version of Romantic ideology, Hui (2019) and Fazi (2018) both seek to unlock cybernetics' progressive, Romantic potential to transform. Hui (2019) describes this cybernetic development as "a psychedelic becoming" (p. 1), and Fazi (2018, p. 6) similarly emphasizes the openness and non-deterministic nature of computation as harbouring unknown outcomes. As such, I would suggest that they are not only reading cybernetics in Romantic terms, but that their method of reading is itself Romantic, in that it trusts in the progressivism of recursive systems.

Hui (2019), however, points out two threats to the recursive progress. One is that "a recursive function may not attain its goal, and hence doesn't halt. In this case, it gets lost in its infinite looping until it has used up its computational resources" (Hui, 2019, p. 113). There is a danger in recursive systems that they will endlessly repeat, stuck in a loop, reverting back to a mechanical repetition. The other threat is when a recursive system becomes so totalizing that it fails to confront contingencies, and instead develops itself in a static direction (Hui, 2019, p. 183). Read closely, this first threat is not so different from the second: both mean an endless doubling down, a reversion to mechanical repetition or immediate recursion, that fails to produce change.

For Hui (2019), this cybernetic totality is the problem we face today. He describes it as a moral, rather than technological or political problem, one in which we have mistaken technology for the environment in which our being unfolds. In this technological totality, cybernetics lacks an external difference to confront; therefore, recursion cannot really take place and cybernetics loses its way. Hui calls for a return to the progressive essence of recursion: "exiting the positive feedback loop that characterizes the modern vision of progress, it is possible for another thinking to function either by negating it or by transcending it - that is to say, by inventing another recursive process, another epistemology" (Hui, 2019, p. 263). Hui proposes two ways that this transcendence might happen. For the first, he turns to the potential of crisis to open new

[6] "unendliche Perfektibilität"

modes of thinking: “failures and catastrophes direct us to a broader reality, which the previous system cannot integrate, and it enforces the discovery of another system” (Hui, 2019, p. 143). The second is the concept of technodiversity, which means having different, co-existing cultural orientations to technology, that progress towards different goals, or *teloi*. Drawing from his previous book, Hui (2016, 2019) sees hope in the cultural difference of technology in China against the Euro-American understanding, to break the totality that each culture’s technical systems attempt to assert.

In this argument, Hui is trying to keep the promise of cybernetics open. He criticizes a technophobic view of cybernetics, which depicts it as inherently manipulative and deterministic. Instead, he holds out the possibility that it could “resolve alienation and antagonism between nature and technics” (Hui, 2019, p. 273). At the same time, he leaves this open as a question: “will the recursive thinking in cybernetics allow us to relaunch the question of organicism and technodiversity, or will it, being driven by efficiency for the final cause imposed by capital, finally only realize a purely deterministic complex system that is moving toward its own destruction” (Hui, 2019, p. 273). Totality tends towards determinism, meaning the reversion of cybernetic systems into mechanical repetition. However, if nature and technology could reach some kind of synthesis, in which they were not struggling against each other for total determination, this could avert planetary disaster. A true cybernetics, that develops through confronting difference, could lead us there. This would entail a synthesis of nature and technology into a harmonious, recursively exchanging environment, or “third nature” (Hui, 2019, p. 271).

In my reading, Hui is arguing for an actualization of a Romantic theory of recursion here, in which the constant return to self results in synthesis and transformation. Indeed, his position of harmonizing nature and technology is not so different from ideas articulated in literary Romanticism. Wordsworth (1833/2012), for instance, suggests something similar in his poem “Steamboats, Viaducts, and Railways.” Wordsworth acknowledges the destruction wrought by these new transportation systems; yet, he encourages the possibility of a future understanding of these technologies that could be more harmonious. He suggests that “nature doth embrace” these human creations, heralding a future “hope,” as long as they can embrace nature back. A future harmony

awaits, born out of the confrontation of each auto-poietic system with the other. Likewise, Novalis promotes the envisioning of new media that "would enable humans to forge new relations between nature and technology" (Norton, 2024, p. 91). This promise is mirrored again in Silicon Valley itself, for instance in the effort of Apple's corporate campus to seamlessly blend technology, nature, and individual humans (Sims, 2022).

The difference between mechanical repetition and recursive dynamism is not inherent to a system, but is a political cut. Silicon Valley sees its technological innovations as progressive, transcending their past problems towards a harmonious future; I am writing this dissertation to slice the distinction differently. I would suggest a more suspicious orientation to recursive progress here. The very ideas of novelty, growth, transcendence, and transformation seem dubious, especially when these promises are being sold actively in the App Store. The Valley has its own versions of this recursive model of growth: move fast and break things; fail fast, fail often; disrupt or be disrupted; iterate quickly; growth hacking. All these slogans of recursive dynamism insist that no matter how destructive the failure is, Silicon Valley must keep moving, keep acting, and reassert its need to update and produce the new.

Hui (2019) writes that "recursivity…is…a mechanism that allows novelty to occur, not simply as something coming from outside but also as an internal transformation" (p. 138). But doesn't a system that constantly produces novelty, render novelty itself mundane? Today, we are run ragged by the repetition of the new. What would be truly surprising or new in such a system would be a return to oneself that led to the paradoxical development of calling development into question. I would term this kind of paradoxical recursion, *negative recursivity.* If recursions are meant to return to themselves after contingent experiences and thereby transform themselves, a negative recursivity would return to itself to call the very structure of return and transformation into question. I'll elaborate this further below, in my reading of Sophie Tieck.

There is another layer to Hui's Romantic ideology, which returns to the Romantic focus on moral – instead of political – change. Heinrich Heine (1834/1985), a poet of the generation immediately following literary Romanticism, theorized this in his argument that Romanticism arose in Germany as a surrogate to the French revolution. While the

French overthrew the government, the Germans overthrew ideas (Berlin, 1965/2013, pp. 7–9; Heine, 1834/1985, p. 200). While many Romantics were initially enthusiastic about the French Revolution, they became suspicious of such turbulent political change following the Terror. After the let-downs of the French Revolution, they came to believe that the real revolution must first take place through *Bildung,* meaning culture or education (Beiser, 2003, p. 89). Indeed, both Schlegel and Novalis make this explicit, arguing that the French Revolution will pale in comparison to the "epoch-making" cultural transformation that their work is a part of (Behler, 1993, p. 64). As I'll discuss further in the following section, Leif Weatherby (2016b) suggests that the Romantics offer a technological theory of epistemological revolution to complement this cultural transformation. The medial-cultural revolution arises as an alternative to politics, a suggestion that change is only possible in this realm, given the outcome of the revolution in France.

In this focus on epistemology, Hui (2019) seems to be responding to the contemporary inability to meaningfully address crises, specifically capitalism's destructive relationship to nature. This question plagues politics today: why are we so stuck? Knowing we are hurtling towards our own demise, why is it so difficult to actually change this trajectory? By turning to the dynamism of cybernetics, Hui (2019) wants to hold out hope that in the midst of this political stuckness, some "Unknown" could emerge to restore the contingency necessary to spur the system to change itself (p. 232). There are heavy Heideggerian overtones here, a variant on the sentiment that "only a God can save us now" (Heidegger, 1976/1981). Some mystery must emerge to disrupt the determinism. I agree with Hui that part of the problem here is the totality of a cybernetic system. In its totality, it can't seem to confront an external difference that would spur some kind of transformation. However, this totality is a political rather than a moral problem.

The problem is political because a power structure is making the totality of technology a material reality. While Hui (2019, p. 185) acknowledges how the totality of technical systems is at least partly a problem of the way digital technology has been deployed, he still settles on a shift in consciousness as a solution. In contrast, Rob Larson (2019) articulates this totalization as a problem of Silicon Valley's economic

monopolization. No infrastructure so universally used, Larson argues, should be privatized and centralized in the way that Silicon Valley's platforms are. Unfortunately, network technologies tend towards this kind of monopolization. A network is only useful if it can achieve a critical mass of users. They are most useful when everyone is on *one network*; in other words, if the network is totalizing. For Larson, breaking this totality means a democratic structure of power over these technological systems. In the following chapter, I'll expand on the ways Silicon Valley creates a totalizing system, through my analysis of datafication. Despite Hui's insistence that technology is situated in a larger cosmos, and so is not total, it seems hard to actualize this knowledge when a power structure is making the totality of technology a lived reality.

I share with Hui the sense that contemporary technopower runs as a mechanical, repetitive system. My anxiety, though, is that it's precisely Silicon Valley's Romantic-recursive promise of transcending such a mechanical system that keeps us running through its repetitive motions. In practice, it seems to function less as progress than "cruel optimism," the undermining of the fruits of a promise through the very belief in it (Berlant, 2011). It is important to question whether recursive systems are actually progressive, or whether they merely claim to be. Rather than try to reboot cybernetics to fulfill its true Romantic promise, I'd suggest a paradoxical orientation towards transcendence, that transcends by rejecting the very model of transcendence. I share Hui's goal of a recursive reading of Romanticism to stop the endless looping; but instead of asserting a Romanticism of progress, I return to Romanticism to show the ways it always called this *Bildung* into question. Hence, I'm trying to return to a slightly different origin, in hopes that running it through the recursive loops into the present could yield a different outcome. In place of the urge to resolve, to grow, to overcome, to harmonize, this is instead the idea that struggle is constant and mediation contested.

This kind of recursion might settle in a truly novel place, a place that doesn't expect the system to produce novelty. This negative recursivity would mean using recursion, not to transcend the system, but to discover the ways the conditions of undermining the system are latent within its continued failures. Rather than look to a transcendent absolute, through either the Romantic subject, the empowered user, or a complete reconciliation with nature, it might suggest that there is no "terminating case"

or end state, where tensions are finally resolved. It means to live in the contradiction that these things maybe aren't reconcilable, that they instead constitute a fundamental difference, or even enmity. Could we run a recursion that settles on the negative, on a transformation to a state of recognizing the impossibility of absolute transformation? This is still a learning, but a learning that learns that it hasn't learned anything and so exits the loop back to new learning. This kind of negativity interrupts, rather than completes, the recursive cycle. It's this paradoxical, negative recursion I'll ultimately read in Sophie Tieck's (1800/2015) story, which mounts a similar critique of Romantic auto-poietics. Today, progress is equated with a Romantic model of recursive *Bildung*: machine learning promises to usher in Artificial General Intelligence and change the world. It is vital to think through critiques of recursion and the possibility that it doesn't work as promised.

Romantic media theory

In this section, I run the recursive loop back from Silicon Valley Romanticism to literary Romanticism. Above, I suggested that the context for the growing body of scholarship reading Romanticism as a "media theory *avant la lettre*" is precisely the technologically turbulent present in which this scholarship emerges (Brooke-Smith, 2013, p. 345). It's important to acknowledge this consciously, and put the two Romanticisms in dialogue, which I will do through the method of recursion. In my view, many of these scholars are returning to a Romanticism that is too *nice,* running back to it for views of mediation and technology that might redeem us today. This misses the ways Romanticism anticipates some of Silicon Valley's darker moments. I would run the recursive loop between these Romanticisms, not to find the right mode of mediation, but to question the idea that the right form of mediation will finally set us free. As I'll show here, Friedrich Schlegel develops an individualized Romantic mediator with the capacity to shape the world, while Novalis takes this already megalomaniacal figure in extreme and disturbing directions. In addition, both of these figures feminize contingency, depicting recursive becoming as an individualized pursuit reserved for men.

Running the loop back to Romanticism from the fantasies of technologies like the iPhone or Humane confronts Romanticism's own ideas of an individual mediating self

and world. Some of the most direct statements on this figure of mediation can be found Friedrich Schlegel's (1800/1991) "Ideas." He writes that "to mediate and to be mediated are the whole higher life of man and every artist is a mediator for all other men" (1800/1991, p. 98, §44). In this text, Schlegel develops this figure of the individualized mediator, through a critique of Fichte's theory of selfhood and mediation. For Fichte, the self begins with an absolute and tautological gesture of self-founding, but this unity is disrupted by having to mediate the non-self – its limitations and oppositions. Schlegel shifts Fichte's narrative by rejecting the first principle of a self-posited-self, from which mediation follows (Beiser, 2002, pp. 440, 444). Instead, the self comes into being as always already mediated in various ways. For Fichte, the self is absolute, whereas for Schlegel "the absolute…is mediation itself" (D. Nassar, 2014, p. 155). In this context, Schlegel sees the self on a journey of moving from being mediated to taking charge of mediation.

For Schlegel, this movement towards becoming a mediator is the development towards being an artist: "an artist is someone who carries his center within himself. Whoever lacks such a center has to choose some particular leader and mediator outside of himself" (1800/1991, p. 98, §45). Non-artists are those who seek mediation outside themselves; when one finds this center within himself, he can become an artist, a mediator. Typical for Schlegel, however, there is a contradiction between these aphorisms. Alongside his discussion of artists centered in themselves, he writes that "no one can be the direct mediator for even his own spirit because the mediator must be purely objective, and necessarily centered on a point outside himself" (Schlegel, 1800/1991, p. 98, §44). How is it that the artist-mediator carries his center within himself and reveals it to the world, but at the same time that no one can be the direct mediator of himself?

This contradiction is resolved by thinking recursively. Recursive mediation requires externality or contingency in order for the internal system to develop and express itself; if it fixates only on itself, it is stuck in an endless feedback loop. The artist-mediator must therefore be focused on confronting what is external, what is not-self, in order to develop his inner spirit. For Schlegel, this recursively-powered revelation of the inner spirit is also a kind of self-destruction: "a mediator is one who perceives the

divinity within himself and who self-destructively sacrifices himself in order to reveal…to all mankind this divinity" (Schlegel, 1800/1991, p. 98, §44). As Frederick Beiser (2002) points out, Schlegel's ideal is a perpetual "interchange between self-creation and self-destruction" that is actually a process of self-development and the creation of the new (p. 448). Recursively transforming one's inner spirit into art is a way of objectifying it, turning it into something external to the self. The self can then confront this as a contingent externality, using this objectified version of the self to critique and develop itself further. Mediating the self as object reveals it to the world, and allows the mediator to perform a recursive criticism that destroys and recreates the self. The artist's intervention in the realm of mediation is a recursive structure. It is a constant return to the self as an object that changes both the self and the world, towards new mediations.

In Schlegel's description, a certain kind of self goes with this capacity, one that is self-possessive, constantly re-creating itself with a divine, utopian mission to transform the world. Though the artist rises above other men, like men do among the "creatures *[Bildungen - creations]* of the earth" (Schlegel, 1960, p. 11, 1800/1991, p. 97, §43), the artist's role is also democratized: "everyone is an artist whose central purpose in life is to educate his intellect" (Schlegel, 1800/1991, p. 96, §20). As Isabelle Faul (2016) points out, this is a curious blend of aristocracy and universalism. Everyone, ostensibly, can learn to mediate the world and their own becoming; yet, they mediate individually, a bunch of heroic artist-mediators, all with their own self-center. "Reality," in this worldview, becomes "the common sphere of mediation" (D. Nassar, 2014, p. 29). We could anachronistically call this an open-source concept of reality. Schlegel's vision is less Peter Thiel and more GitHub, promoting an individualized, yet democratized, access to the tools of mediation.

Yet, Schlegel seems to exclude women from this sphere, despite having more progressive ideas on gender than many men of his time (D. Nassar, 2014, p. 81). Both his gendering of the artist figure and his separation of women from the concept of genius suggest that this is a man's role: "love is for women what genius is for men" (Schlegel, 1800/1991, pp. 95–96, §19). Friedrich Kittler (1985/1990) offers one of the more elaborate analyses of the Romantic system of gender discrimination, arguing that this system induces Romantic poets to productivity by enforcing women as objects of

mediation, rather than mediators themselves. The Romantic system enforced this gender binary by insisting that "women could not write because they *were* Poetry" (Kittler, 1985/1990, p. 172); or, in Schlegel's (1800/1991) own words "women have less need for the poetry of poets because their very essence is poetry" (p. 106, §127). They have no need to create beauty, because they already are beauty (which male poets can mediate into the world). I will return to this theme shortly, as I read a critique of this mediator position in the work of one of the Romantic women writers here excluded from it.

Schlegel's interest in the power of mediation to transform the world reflects a broader Romantic interest. Leif Weatherby (2014, 2016b) offers a comprehensive analysis of this Romantic fixation, interpreting it as a theory of technology. He reads this theory through the Romantic concept of the *organ.* Romanticism occurs before the term *organ* solidifies its biological connotation, when it still carries the more general meaning of "tools" or "function-bearers" (Weatherby, 2016b, p. 5). As such, it is not strictly a biological term, but also includes techniques, cognitive faculties, conceptual frameworks, tools, and media genres. Weatherby defines the Romantic organ as the ability to "act[...] medially," to "interven[e] in the shifting process of mediation" (Weatherby, 2014, p. 61). As noted above, Romantic recursion relies on a specific theory of mediation. As systems confront contingencies, they need ways to mediate these unexpected obstacles into moments of transformation. As such, the space of mediation becomes extremely important for the Romantics, as a site in which different self-forming systems interact with each other. Romantic organology is defined by "the attempt to address the pressure point of input and output, of perception and action, even of self and society" and to intervene on this pressure point to change reality (Weatherby, 2016b, p. 348). Romantics use mediation to direct the transformation of the system, whether self, society, or nature.

In this way, Romanticism moves from *organicism* to *organology.* Whereas organicism sees beings as recursive systems, organology seeks to intervene in these systems through the correct organs of mediation. In other words, if nature, society, body, and the self are all recursive feedback systems, *organs* provide ways for mediating this feedback. As such "organology" functions within Romanticism as "a 'technological metaphysics,'" a metaphysics that can be re-written with the right techniques (Weatherby, 2016b, p. 124). The biological understanding of organs is important, and I turn to this in

Chapter 4 in my discussion of brain-machine interfaces. However, here, I want to emphasize that *organ* should not be understood as strictly a biological category: rather, it is any tool for reconfiguring the mediation of reality. Likewise, the organ is not a tool for a discrete task, but a tool for the "construction of the very rules that constitute the phenomenal" (Weatherby, 2016b, p. 236). This is a theory of reality as alterable or programmable, given the right tools that can intervene at the right point in a feedback system. This reading depicts a radical Romanticism: organology is an attempt to create tools that can rewrite the *a priori* itself. Romanticism's creations become an efficacy in the world, rather than a depiction of the world: "Poetry has the capacity to 'act'" (Weatherby, 2016a, p. 345).

Romanticism seeks to extend the technological power to directly intervene in and transform world and self into new arenas: arts, science, social sciences, the body, etc. For Novalis, "all things could be, or could be *made*, organs" (Weatherby, 2016b, p. 124, emphasis in original). The Romantic project is to develop more organs, more ways of mediating reality. This means that, for the Romantics, the *a priori* is contingent: it can be changed if one creates the correct organ to change it. Organs here might seem something like second-order tools, or meta-technologies that operate on other technologies and allow processes of mediation to become visible (Siegert, 2015). This comparison doesn't quite map on, however. Key to the Romantic view is a collapsing of the difference between what later media theory will call first and second-order techniques. As Weatherby (2016b) shows, the Romantics do take up the concept of the *organon,* or the organ of organs, but they dissolve this split by insisting that all organs function at the metaphysical level. In the Romantic view, all organs – all techniques – can intervene on the mediation of reality, and everything can become an organ. As such, this Romantic project harkens forward to Sybille Krämer's (2008/2015) argument that media theory renders the *a priori* contingent, re-writable: "the media critical break proves to be both a breakdown as well as an ultimate justification of the idea of the a priori. It also proves to be a breakdown of the attempt to distinguish, universalize and thus make autonomous one phenomenal domain as a prior matrix of our being-in-the-world" (p. 29). In other words, Romanticism engages with a medial *a priori*. All organs can re-write reality, and the Romantic subject creates and wields these organs.

Whereas this "media critical break" (particularly in Kittler's work) has tended to scramble human agency in this medial disruption of the *a priori*, the Romantics (and Silicon Valley) view this contingency as a site of radical possibility: if the rules of the world depend on our tools, then they can be rewritten with new tools. If the *a priori* becomes medial, technological, it can be refashioned by designing new media. Or rather, the sense that new organs can refashion the *a priori* becomes a Romantic media theory recursively, in retrospect. A Romantic relation to media seems to discover that "media determine our situation" two centuries before Kittler (Kittler, 1986/1999, p. xxxix), but they add an additional caveat: "media determine our situation, and we can wield media." Romanticism's promise is for tools that allow their users to mediate, rather than simply find themselves always already mediated. Here are both the form and content of Silicon Valley's recursion to Romanticism. If the form is a recursive model of growth and development, the content is a user-directed mediation of this transformation.

In my reading of Friedrich Schlegel above, I attributed this Romantic power to an individual mediator, embodied in the male artist. Recent scholarship on Romantic mediation, however, is hesitant to follow this individualized reading, promoting a more harmonious understanding (Goldstein, 2017; D. Nassar, 2014; Norton, 2024). As an example, Amanda Jo Goldstein (2017) also reads a Romanticism focused on medial, in-between space, but interprets this as a Romantic passivity that allows the self to be affected. This is a very different reading from Leif Weatherby's (2014, 2016b) more agential interpretation, and indeed he differs from these scholars in hinting more at an individualized mediator who wields these organs as the locus of world-shaping power. However, he too is hesitant to name this figure as such. He writes, "this organ [i]s a functional point where *one* could 'stand' to move the world" (Weatherby, 2014, p. 52, my emphasis). But who is this "one"? As I showed above, for Friedrich Schlegel this "one" appears as an individualized, male Romantic artist. Below, I'll develop this figure further in the work of Novalis. Novalis embodies this figure in even more extreme and exclusionary directions that need to be acknowledged and contextualized. As I'll show, the scholars arguing that Novalis' work promotes harmony and passivity are omitting serious passages that suggest the opposite.

Novalis has an even more developed organology than Schlegel (Weatherby, 2016b). While he also seeks to harness the capacity to mediate self and world, he speculates on more extreme powers. Weatherby slightly downplays some of this extremity. Take, for instance, this quote from Novalis' *Logologicial Fragments,* as cited in Weatherby's (2016b) work: "The body is the tool to shape and modify the world – we must therefore seek to cultivate our bodies to become an organ capable of anything. Modification of our tool is modification of the world" (p. 235). So far, so Schlegelian. But Weatherby omits the sentence immediately preceding his quotation, which reads "the art of becoming omnipotent – the art of realizing our will totally" (Novalis, 1965–1968/1997, p. 78). This has a slightly more megalomaniacal inflection than Weatherby lets on, and it moves far beyond Schlegel's sassy elitism. Rewind to a few fragments earlier, and Novalis offers a vision that makes consciousness-downloading and age-reversal apps seem benign:

> In the same way as we move our mental organ at will…we must also move the inner organs of our bodies, constrain them, combine and separate them, *learn* them…then for the first time the human being will be truly independent of nature, perhaps even in a position to restore lost limbs, to kill himself merely by his will, and thereby to achieve for the first time true insight into the body-mind-world, life-death and the world of spirits. Perhaps then it will only rest with him to quicken inert matter. He will compel his senses to *produce* for him the shape he demands – and he will be able to live in *his* world in the truest sense. Then he will be capable of separating himself from his body- if he finds it good to do so. (Novalis, 1965–1968/1997, p. 75)

The prediction of full independence from nature; the slip from a collective "we" to a singular "he" with the power to fashion a fully individualized and self-possessed world; the full control over the body, culminating in its ultimate transcendence; all these imperatives suggest this "technological metaphysics" is getting out of hand.

Downplaying these more extreme moments of Romanticism has been a trend in recent scholarship. Anahid Nersessian (2015), for instance, argues that Romanticism is a project of living within limits, rebutting its common interpretation as a "literature of extremes" (p. 3). Likewise Amanda Jo Goldstein (2017) argues for an understanding of Romanticism in which the self is a passive and interactive figure, rather than an auto-poietic individualist. To make these arguments, both of these scholars leave out the more

controversial figures of German Romanticism, skipping over the Jena Romantics that come after Goethe. However, even those scholars who study Novalis and German Romanticism offer similar readings. Bryan Norton (2024), for instance, argues that Novalis is explicitly trying to harmonize the relationship between human technology, and nature. Likewise, Dalia Nassar (2014) offers a thorough reading of Novalis' thinking to argue that its goal is "the actualization of harmony between humanity and nature and between human beings in general" (p. 78). Tilottama Rajan (2004, pp. 1–2) argues that Romanticism helps to temper the absolutizing tendencies of German idealism by balancing ideality with materiality. Frederick Beiser (2002) acknowledges that Novalis says some extreme things, but he argues that Novalis does not really believe in them, so they "should not be taken as evidence for the excesses of romanticism" (p. 423). I will briefly flag here for later discussion that "harmony" is not an innocent concept, but generally requires some level of repression of dissonant elements (Ahmed, 2010). For now, I'd like to read this trend in scholarship as an effort here to defend Romanticism against charges of extremism. How are we to square these scholars' well-evidenced arguments with some of Novalis' more extreme statements that seem to directly contradict them?

These readings are an understandable rebuttal to earlier generations of scholarship that generated widespread misconceptions about (particularly German) Romanticism as an extremist, irrational, and entirely subjective program, culminating in fascism or civilizational collapse (Babbitt, 1919/1966; Berlin, 1965/2013, p. 154; Craig, 1982; Klemperer, 1947/2013, p. 141; Lukács, 1962/1981; Voegelin, 1964/1999, pp. 88, 159). While this reading was especially prevalent from the 1940s to the 1960s, it persisted throughout the 20th century (Safranski, 2007/2014; Wang, 1996). The turn in Romantic criticism to construct a less extremist picture seems at least partly a response to the hangover of these influential readings. Critics like Beiser (2002) Nassar (2014), Norton (2024), and Weatherby (2014, 2016b) are also following a tradition of reading Novalis and other Romantics as *philosophers* rather than just poets (D. Nassar, 2010). This is a different mode of interpretation, that looks to these Romantic works for a coherent system or logic. While this opens a fresh reading, it tends to render these works *too* coherent, missing some alarming contradictions. There is a danger in passing over the

pieces that don't fit: when we argue for the relevance of Romanticism by rendering it palatable, balanced, and systematized, we seem to be agreeing with the conservatism of its earlier critics that literary excesses should be dismissed as dangerous. We shouldn't have to censor Romanticism for it to be relevant. Now that more diverse readings of Romanticism have emerged, it is important to re-include moments when its writers are extreme.

The most disturbing of these moments is Novalis' acclamation of rape in the *Allgemeine Brouillon.* For readers who wish to skip this, I will quote the passage in this paragraph and discuss it for the next five paragraphs. Unfortunately, this passage remains neglected by scholars, despite countless critics dealing with the *Allgemeine Brouillon.* Here is Margaret Stoljar's translation: "THEORY OF NATURE: The more energetically that which is to be eaten resists, the livelier will the flame of the moment of enjoyment be. Application to oxygen. Rape is the most intense kind of enjoyment. Woman is our oxygen" (Novalis, 1965–1968/1997, p. 124). James Hodkinson (2007) is one of the few scholars to directly address this passage, but he downplays it by claiming that Novalis "does not seek to justify rape or portray it as acceptable practice" (p. 95). He argues that this passage is not actually about rape, but about science: "it serves to support and inform the other discourses, those of physics and chemistry, with which it is interwoven; it is not a discrete statement on sexual mores" (Hodkinson, 2007, p. 95). I disagree with these arguments and find the extreme sexism of this passage disturbing. At the very least, this calls for a reading of Novalis' scientific theories to contextualize his theory of rape.

Bryan Norton (2024) has recently offered a scientific reading of the *Allgemeine Brouillon* as trying to apply the theory of thermodynamics across disciplinary boundaries. According to Norton, Novalis is looking for techniques that can prevent entropic decay and make vital energy available for utopian projects. Norton does not mention Novalis' discussion of rape, but Novalis is clearly theorizing the violence of rape through thermodynamics. According to thermodynamic laws, combustion requires a fuel – usually oxygen – to release the stored energy of a substance. As such, "woman" here is both the combustible object and the fuel ("woman is our oxygen") for this thermodynamic process. The negentropic process of releasing stored energy transforms here into the flame of male enjoyment.

Novalis uses an older German word here for rape, *Nothzucht* (1798–1799/1993, p. 262, §117). The usual word, *Vergewaltigung,* is based on the word *Gewalt,* or violence, centering the victim in its etymology. *Not[h]zucht* breaks down into "necessity" and "breeding," casting sexual assault as an uncontrollable need rising within the perpetrator. This fits with the aforementioned thermodynamic reading of Novalis, implying an entropic state of stored energy in need of release. As such, this disturbing passage should be read against the rosier view of Novalis' project of negentropy, particularly the idea that it "provides the basis for a new type of attunement between humans and nature, a type of synergistic relational exchange" (Norton, 2024, p. 97). In Novalis' thermodynamic theory of rape, "synergistic relational exchange" seems a way of naturalizing extreme misogyny and violence. If this project is about creating harmony, it seems to fall back on an individualized figure of a male mediator, subordinating energy sources to his harmonizing project.

Margaret Stoljar's acknowledgement of this passage is noteworthy, as is her choice of it to be included in her selection of Novalis' works. She writes in a footnote to her translation of Novalis' *Philosophical Writings*, "this lamentable observation can be explained, if not excused, by the reification of women revealed in T[eplitz]F[ragments]" (1965–1968/1997, p. 175n5). In these fragments, Novalis offers various cryptic comments about women, which tend towards an idealizing, yet back-handed praise. For instance, he writes "with women love came into being, and with love women – and therefore one cannot understand the one without the other. Anyone wanting to find women without love and love without women is like the philosophers who looked at instinct without the object and the object without instinct—and did not see both at once in the concept of action" (Novalis, 1965–1968/1997, pp. 104–105). Woman vs. love, object vs. instinct, these binaries form a recursive system whose output is "action." Given that love and instinct are aligned on one side of the system, and women and object on the other, it seems that the output of activity is actualized by men.

Both Schlegel and Novalis depict women as contingent sites of male becoming. Read alongside the discussion of recursion and organology above, these passages decidedly gender the subject and object of Romantic recursive systems. Contingency, to use Hui's (2019) terms, seems to be "woman," while recursivity (the internal process of

becoming) is reserved for the male poet. Men are in a process of becoming, while women facilitate this becoming as externalities. For instance, in Novalis' discussion of rape, the transformative loop of combustion relies on women as the contingent element in a process of male transformation (symbolized by fire). Needless to say, there is no discussion here of the ways sexual violence is transformative for its victims in devastating rather than progressive ways. Though less extreme in his statements, women also seem to be the object of male transformation in Friedrich Schlegel's (1800/1991) "Ideas," when he describes women as poetry, and men as geniuses creating poetry (through their inspiration by female beauty). Men mediate women into sites of their own becoming. In this sense, Romantic recursion seems to instrumentalize its contingent object as a site of consumption or, at times, violence. In other words, these promises of harmony, of empowerment over mediation, and recursive development seem actually not so far from Silicon Valley's repetitive and often discriminatory promises. Move fast and break things is a way of subordinating who or what gets broken to the progress of the system.

Luciana Parisi (2022) critiques recursion for analogous reasons, through a reading of Hui's (2019) recursive philosophy. She appreciates Hui's connection of machine, organism, and philosophical thinking that avoids privileging any one above the others. However, his emphasis on recursivity allows a determinism "to re-enter metaphysics through the back door" (Parisi, 2022, p. 332). Because recursive systems rely on external contingencies to function, Parisi argues, they re-inscribe the internal/external dynamic that has plagued both Western philosophy and computational development. Since the external is coded in terms of racialized bodies and submissive servo-mechanisms, this dynamic maintains a colonial, Darwinian model of progressive transformation. In other words, contingency is violently produced by the system that relies on it as its energy source. For the colonial project, for instance, to function as a form of 'progress,' it needs to produce racialized bodies as the contingent externality that needs to be humanized, allowing history to move forward. The concept of "the human" always relies on an inhuman other, and processes this binary distinction through techniques that promise progress. This speaks to the ways promises of future harmony often depend on violence to bodies who do not fit into the system's image of progress, or uses their lesser status to

power its progressive vision. In my reading, the Romantic recursion of Schlegel and Novalis subjugates women into this role.

Through my reading of the gendered dynamics of Romantic recursion, I'd suggest a more megalomaniacal Romanticism than that depicted by scholars like Nassar (2014), Norton (2024), Nersessian (2015), Goldstein (2017), or others. These scholars' readings show new sides of Romanticism, but omit certain extreme moments, such as Novalis' sexist writings. I would argue for holding these different, contradictory sides of Romanticism simultaneously, rather than trying to resolve Romanticism's internal differences into something palatable, or coherently systematic. It is actually Romanticism's strangeness and contradiction that makes it interesting, not its coherence. Part of Romanticism's enduring legacy is to enable an exploration of the darker aspects of reason, or the ways utopian projects become extreme. Being able to intervene directly in the sphere of mediation is an appealing philosophy with utopian promises of egalitarian reality; but Schlegel's fixation on individualized divinity and Novalis' megalomaniacal and violent visions suggest that it also carries a danger to get carried away with itself. The idea that mediation is something a self wields opens up the world as an instrumental site of subjective becoming, rather than a confrontation with real difference.

Silicon Valley might respond to this question with the answer of access. Whereas Romanticism pushes women out of the role of mediator, where colonialism constructs a racialized other to progressively mediate through a civilizing process, and where the *Bildungsroman* defines progressive becoming through bourgeois identity (i.e. – makes it class exclusive), Silicon Valley gives us all the technologies of the self that we need to mediate our own becoming through the contingency of the world. No one is excluded in this new Romanticism! Afterall, the explicit promise of John Perry Barlow's (1996/2016) formative text of online freedom, *A Declaration of the Independence of Cyberspace,* is equal access regardless of identity. As I'll show in my analysis of the Instagram adaptation of the 1789 slave narrative *The Interesting narrative of the life of Olaudah Equiano* in Chapter 3, the idea that digital media can transcend racist and sexist systems persists to this day. At least on the surface, Silicon Valley has responded to the problem of Romantic recursion by democratizing access to the power to mediate. This suggests that

access is perhaps not the main problem here, but rather the faith in recursivity, user-directed mediation, and subjective becoming.

As Parisi (2022) argues, recursive systems need to constantly devour externality in order to function. She suggests that this externality is not ontological or moral, but political: what counts as "contingent" is produced by the very system that relies on contingency to grow and transform. In other words, recursive systems are not innocently discovering contingency out in the world, but actively coding it into the world; they need to actively produce an Other that they can then appropriate. In the next chapter, I'll follow this line of critique to argue that universal datafication functions through a Romantic coding of the world as appropriable, both for user's in their projects of self-transformation and for AIs in their urge to turn everything into data. Following Parisi (2022), this systemic reading suggests that granting the power of Romantic mediation to hitherto excluded subjects (in this case women) does not actually resolve its problems. The recursive system just creates a new contingent object to facilitate its growth. The ultimate power to mediate here is the power to separate contingency from subject, or in other words to establish what is Other to the system. This power rests in the system itself, not in its subjects.

The problem here is the very understanding that mediation is a power granted to a subject. When mediation is figured as something to wield to re-write the conditions of the *a priori,* this instrumentalizes relationality rather than trying to work with difference. Through a reading of the racial politics of the film *Get Out,* Parisi (2022) suggests a non-recursive contingency or alienness, that does not just end up as fuel for the progress of the system. Instead, it undermines the concept of the human that relies on binary distinctions like human/subhuman and human/machine for its identity. Parisi argues that the "inhuman" side of these binaries can introduce a radical alienness that dissolves the auto-poietic structure of the system, rather than provides fuel for its process of recursive progress. The attempt should be to "get out" of the colonial model of progress, rather than steer it in the right direction. This suggests a model of contingency that remains contingent, rather than being absorbed back into the recursive system.

Below, I develop an alternate concept of mediation within Romanticism that similarly attempts to maintain contingency and get out of the loop of recursive development – I call it *negative recursivity*. To do this, I bring a neglected figure of German Romanticism into the discussion of Romantic mediation and recursivity: Sophie Tieck Bernhardi von Knorring (hereafter Tieck).[7] I argue that her 1800 short story "The old man in the cave" develops a different concept of recursivity, self, and mediation than those presented above. In comparison, it acts as a critique of the self-referential subject of mediation, celebrated and developed by the men writing for *Athenaeum*, the founding journal of the Jena Romantics. My recursive return to Romanticism is here trying to reveal a contradiction or struggle within Romanticism, such that a Romantic approach to media is not just a utopian promise of poet-directed transformation, but also a debunking of this fantasy of male power. Rather than the correct techniques that will finally mediate the relationship we want, this suggests mediation as a contested space of relation. Rather than the relation becoming instrumental to a higher transcendence, the relation itself must be worked upon, struggled over, or negotiated.

Sophie Tieck as critic

Sophie Tieck has received growing attention following the continuing effort to include women writers in Romanticism (Eschler, 2005; Haberstock, 2001), but has still received very little critical attention in comparison to other writers of the period (Weiler, 2023, p. 95). Christina Weiler (2023) published the first extensive interpretation of the story "The old man in the cave," following a short reference to the story in Alison Stone's (2021) work on women philosophers in German Romanticism. Both Weiler and Stone

[7] What to call many of the women writers of German Romanticism is a strange problem. Because of multiple marriages (for some, a sign of their radical gender politics), they have different names at different times. Caroline Michaelis Böhmer Schlegel Schelling is perhaps the most benamed of all. Literary criticism inherits many of its premises from Romanticism, including the importance of authorship being tied to an individual author identifiable by name (Benesch, 2002). This effect of having multiple partners helps to deny these women a place in the canon for a second time: first in the era in which they had to publish under their husband's names, again today when we can't tie their work to a stable authorial signifier! At the same time, there is an irony that these women continue to perplex this model of authorship centuries later. Tieck herself rejected the name Bernhardi, even before her divorce, as she was deeply unhappy in her abusive marriage to August Bernhardi (Matenko et al., 1967, pp. 353, 364). This is part of the reason I've chosen to use the surname "Tieck." My other reason is to elevate Sophie Tieck alongside her much more famous brother Ludwig Tieck and thereby trouble the unreflective use of the surname "Tieck" in literary criticism.

read the story as embodying common tropes of Romanticism, fitting fairly smoothly into the movement as a whole. I read the story more antagonistically, as actually providing critique and commentary on the project of Romanticism, while exposing the circuitry of its system of meaning in a way that anticipates Friedrich Kittler's (1985/1990) analysis. The idea that she is responding to other Romantic writers is not just speculative. Tieck is certain to have read the works of Schlegel, Novalis, and others, given that she both published in and co-edited *Athenaeum* (Corkhill, 2011, p. 122). My argument here tries to extend efforts to include Tieck in Romanticism by reading her as a critic of its megalomaniacal tendencies.

"The old man in the cave" ([Tieck] B., 1800/2015) tells the story of an old sorcerer, living in the depths of a forest, who helps poor villagers with their everyday problems. One day a young man comes to him and asks for the power to see his own thoughts as objects in the world, in the hope of attaining greater knowledge. The old man grants his wish, but warns him that he will deeply regret it. From here on, the reader follows the young man, Leonhard, through the torments of constantly seeing his thoughts personified in the world. These usually appear as stupid or deformed versions of himself that he cannot handle, and they grow overwhelming in their chaotic number. Other hallucinations follow. Leonhard falls in love with a young woman, who seems to be only a vision or dream. In despair, he returns to the old man several times, and the phantom girl is revealed to be the old man's daughter, from whom he is estranged. In the end, Leonhard's love renders the woman - and the world - material again. The old man causes his hallucinations to cease, the family is restored, and there is a kind of 'happily-ever-after' ending.

Yet, this ending is heavily ironized: "he saw his thoughts no more; and so they *appeared* to him to be as reasonable as before, and he lived as happily with his bride as any man can"[8] ([Tieck] B., 1800/2015, p. 147, my emphasis). At first, this seems all very well and good. Yet, there is a curious paradox in this line that shifts the meaning of the story: a "not seeing" becomes an "appearing." Leonhard's happiness flows from his

[8] "seine Gedanken sah er nicht mehr; also *erschienen* sie ihm wie vormals vernünftig, und er lebte mit seiner Gattin so glücklich, als es ein Mensch nur vermag"

thoughts *appearing* to him as reasonable once again; and yet, we know from the story that their actual appearance is hideous and foolish. That "not seeing" results in an "appearing" suggests a certain repressive mechanism colouring reality. Leonhard can see his thoughts as reasonable when he doesn't actually have to see them. Anticipating later critiques of the ego from Nietzsche (1887/1998) and Freud (1914/1957, 1900/2010), Tieck seems to be showing that a certain amount of projected self-misrecognition is necessary for life to be in any way tolerable.

Both Weiler's (2023) and Stone's (2021) readings of the story seem to miss this ironic and somewhat misanthropic ending. Instead, they read the story in a moralizing way, about how certain forms of knowledge are "unproductive" whereas others are good (Weiler, 2023, p. 101). As Leonhard flees towards familial bliss from the torment of seeing his thoughts, the ultimate moral lesson is that "love is…more important than complete knowledge" (Stone, 2021, p. 376). This moral reading has the unfortunate consequence of dissolving Tieck's intervention back into the regular tropes of Romanticism, defined by the critical reception of its male figures over the past two centuries. Indeed, Stone (2021) writes that Tieck "makes the same point" as Novalis' *Apprentices at Sais*, and is "like other Romantics" (p. 376); Weiler (2023) writes that the story is "typical for early German Romanticism" (p. 96). These readings bring Sophie Tieck into critical reception by reading her through the men around her. The fairy tale genre makes this moral reading tempting, but in my view, Tieck is actually developing new concepts, rather than simply offering Romanticism as the moral of the story. In my view, Tieck is attempting to advance a different conception of the self and its power to mediate itself and the world.

The concept of narcissism provides an opening to this interpretation. Weiler (2023) uses the word "narcissistic" to refer to Leonhard's thought projections, arguing that love and nature raise him out of this narcissism and teach him the value of harmony with others (p. 107). While I agree that the story is about narcissism, it doesn't seem that Tieck is actually suggesting an alternative. Instead, through her ironic ending, she seems to anticipate something like a primary narcissism. For Freud (1914/1957), primary narcissism is the total self-centeredness of infancy, which, later in life, morphs into the ego-ideal, or the image one has of oneself. This ego-ideal is always a distorted image of

the self, but one which is necessary to cope with the difficulty of being a self. This ideal comes to provide a "narcissistic satisfaction" (Freud, 1914/1957, p. 95). Tieck's story moves more in this direction. Rather than being an overcoming of narcissism, it moves from an impossible confrontation with the self *towards* narcissism. Actually confronting the self is a serious threat to Leonhard's narcissistic satisfaction, and the story becomes a journey of restoring the ego-ideal. In suggesting that a certain self-blindness and projection of reasonableness is necessary to make life tolerable, "The old man in the cave" shows not the evil of narcissism, but rather its inescapability.

Tieck's (1800/2015) story seems to say that to actually look at ourselves would be horrible; and yet, we go through life *thinking* that we are doing just this. Tieck (1800/1960) is explicit about this in her 1800 essay "Outlook on life," published in *Athenaeum* in the issue following Friedrich Schlegel's "Ideas." Tieck (1800/1960) writes "if it were possible for someone to grab hold of and describe the innermost qualities of his most beloved friend, the friend would cower as if he had been clutched by a sorcerer, who had the power to draw the spirit out of our bodies and make it visible to us, and we would forever retreat from him [or it], estranged"[9] (p. 210). The ambiguity of this sentence is not possible to translate, but the final *ihm* in German could refer both to the sorcerer and to the spirit – the recoiling is equally from the self as the one who shows it to us. "The old man in the cave" depicts just such a sorcerer and the unbearable horror of this kind of self-knowledge. In this way, the story seems to develop ideas from "Outlook on life," written in the same year, into literary form. The idea that we are looking critically back at ourselves is delusional, yet this may be a necessary delusion.

This reading suggests that "The old man in the cave" is responding to Friedrich Schlegel's views in "Ideas," discussed in the previous section. Read through Tieck's story, what happens to Schlegel's artist mediating "the divinity within himself," and objectifying it for mankind? What happens to the idea of a "center" in Schlegel's definition of "an artist [a]s someone who carries his center within himself"? Whereas

[9] "wäre es einem Menschen möglich, die innerste Eigenthümlichkeit seines geliebtesten Freundes aufzufassen und auszusprechen, so würde den Freund ein Schauder wie vor einem Zauberer ergreifen, der die Gewalt hätte, den Geist aus unsern Körpern zu ziehen und ihn uns selbst anschaulich hinzustellen, und wir würden auf immer entfremdet von ihm zurücktreten."

Schlegelian Romanticism would say that our knowledge of the self is always incomplete, but something we infinitely strive towards, Tieck's story suggests that this very figure of striving is a ridiculous fantasy. If Schlegel actually was able to gaze back at himself, he would see something hideous and stupid, rather than this crowing, progressive genius. For Tieck, there is an impossible opacity at the centre of the self, which not only cannot be known, but violently resists this knowing gaze. An autonomous, singular self appears only through not-seeing oneself. Weiler and Stone suggest that the story points to an alternate path that would yield true, non-self-centered knowledge; and they are right that the story suggests an appreciation of interconnection over isolation. But what it seems to layer onto this is the suggestion that all knowledge is based on a primary repression of the intolerable aspects of the self, including its contradictory multiplicity. We may think we are turning back towards the self, or objectifying its inner divinity into the world, but this requires a repression of the horror we can't confront within ourselves.

Yet, as Weiler (2023) argues, the story also involves moments of uncovering repressed memories, of bringing the intolerable to light. The resolution of the story occurs through the old man confronting how his judgemental actions drove the women out of his family (and out of the narrative itself). The impetus for this recollection, however, is quite random: Leonhard is doodling in the dirt with a stick, when the old man begins to cry. It turns out that the signs Leonhard has drawn, without knowing it, are magical, and the old man tells him that they "forced all the images of my pain and injustice before my soul"[10] ([Tieck] B., 1800/2015, p. 140). Weiler doesn't mention this episode, and instead suggests a more programmatic approach to surfacing memory, involving connection with nature and love. However, this moment suggests that we can't really control when we appear to ourselves lucidly as objects. We go through life repressing pain, until some random occurrence forces us to confront ourselves. Indeed, in "Outlook on life," Tieck (1800/1960) offers a very suspicious view of such epiphanies of self-knowledge, describing these moments of realization as self-delusional: "people

[10] "zwangen alle Bilder meines Leides und meines Unrechts vor meine Seele."

should actually understand, that they most fervently deceive themselves, precisely when they rebuke their past lies"[11] (p. 212).

Tieck seems consistently suspicious of such moments of transformative certainty, those in which we emphatically insist that we have transformed ourselves through new understandings. These moments, such as the old sorcerer's sudden epiphany in the story, seem actually to be moments of repetition. We perceive progress, new understanding when we repress or ignore the ways in which we are repeating. Tieck encourages a humility and doubt about any time we experience a transcendent self-certainty. This is a paradoxical self-knowledge, that knows that the self does not have a clear view of itself. We know enough to know that we don't know enough: this changes the model of self-knowledge from one that values progressive transcendence to one of that refuses such grandiose dreams and focuses more on acknowledging and working with our lasting struggles and insufficiencies.

These two movements in the story, towards a necessary narcissistic repression and away from repression through random triggers, suggest Tieck is developing a very different view of mediation and the self than Schlegel or Novalis. Mediation here is not so much something artists take control of in order to objectify their inner genius into the world. Instead, mediation is the unconscious masking of inner horror that makes life bearable. Mediation is not so much something that can be used to retool reality according to a Romanticizing imagination. Instead, new techniques of mediation lead to alarming surprises that we cannot anticipate, control, or necessarily incorporate. As her collaborators on *Athenaeum* trumpet their inner divinity and its power to mediate the world, Sophie Tieck seems to be suggesting that this is merely a coping mechanism. The way off the recursive train is not to find the right kind of mediation, but to acknowledge the autonomy of mediation. Mediation is an autonomous structure that has its own agency, independent of the self, whether this takes the form of the unconscious, a technical process, or a form of inscription. This means that contingency, coded as Woman

[11] "Überhaupt sollten nur die Menschen einsehen, daβ sie sich nie herzhafter betrügen, als wenn sie sich ihre ehemalige Lügen vorrücken."

in the work of Schlegel and Novalis, has an agency outside of being the fuel of Romantic becoming.

In an analysis of Romantic writing that harkens forward to Kittler's (1985/1990, 1978/2013), Tieck also suggests that this male fantasy of transformative mediation is supported by a gendered division of labour. Leonhard's objectified thoughts become bearable only in certain moments, and these are always in the presence of a "rustling" ("rauschten") nature, or a woman ([Tieck] B., 1800/2015, pp. 135, 142). Indeed, the two are linked: "as the oaks and beeches rustled [rauschten] above him, he remembered…how he had seen the girl in the little house"[12] ([Tieck] B., 1800/2015, p. 142). For Kittler, "rustling" evoking a woman is the Romantic scene *par excellence* (Winthrop-Young, 2011a, p. 81). Kittler (1985/1990, 1978/2013) reads Romanticism by analyzing the new pedagogical system of the late 18th century. He argues that mothers are tasked with teaching their sons language by using partial sounds that mirror the rustlings of nature. These boys grow up hearing subjective meaning and maternal love all around them, a context which produces Romantic subjects - that is, subjects with an individualized, accessible interiority. As they listen to the rustlings of nature, they literally hear a loving, woman's voice talking to them out of the trees, that they can then decode as poetry. This flow of universal meaning becomes a certain form of writing, and a sense of media mastery ensues as language appears to flow directly out of the interiority of poets. Yet, in actuality, this meaning is programmed through a system that renders this subject anything but autonomous.

Leonhard's struggle likewise resolves itself temporarily in the rustlings of nature, and ultimately in heterosexual marriage. Gone are the multiple, hideous versions of himself, and he is able to perceive his thoughts as "reasonable" and his subjectivity as coherent once again. For Weiler (2023), this is simply a positive lesson around interconnectivity; Stone (2021) is a little more skeptical, as it instrumentalizes women as "the objects of men's love, returning men to affective life out of obsessive theorizing" (p. 376). However, Tieck's ironic ending seems to shift both of these readings by deliberately

[12] "als die Eichen und Buchen über ihm rauschten, erinnerte er sich…wie er das Mädchen in dem kleinen Hauses sah."

exposing Leonhard's experience of coherent subjectivity as a delusion. Women are subordinated here, not to male *Bildung*, but to male projection – to a male fantasy of transformation.

Read through Kittler's analysis, Tieck's story satirizes the Romantic subject in gendered terms. It depicts men's ability to experience themselves as auto-poietic subjects, mediating their own genius into the world, as being based on the disavowed labour of women. Tieck's story seems less to be a program for how men can find peace through love and nature, and more a diagnosis of where this self-assurance actually resides. Romantic men experience a transformative self-growth, but ultimately this owes itself to women labouring to create meaning at an earlier point in the circuit. Perhaps Tieck here is also commenting on her own (disavowed) authorial status. Many of her stories were and are only published only under the name of her brother Ludwig, who rose to prominence as a key figure of Romanticism (Corkhill, 2011, p. 121). To be fair to Friedrich Schlegel, he encouraged her publication of "Outlook on life" in *Athenaeum* under her own name. The author listed in the original publication is "Sophie B." However, the "B" was not a name she came to identify with. "Bernhardi" is the name of her husband, August Bernhardi, who maligned her literary talents while taking credit for her work and publishing it as his own (Corkhill, 2011, p. 122). Even before her divorce from him, she had reverted to using the name Tieck in her private correspondence by 1802, after three years of living in an abusive marriage (Matenko et al., 1967, pp. 353, 364). While "The old man in the cave" suggests the ways that male creativity and progressive *Bildung* rely on a disavowal of the labour of women, this disavowal was also embodied in the publishing and marital politics of Tieck's time.

In emphasizing mediation as an autonomous process, however, Tieck is not simply trying to render women's labour visible, but to challenge the whole project of an empowered, self-progressive mediator. Tieck critiques not only the erasure of women's labor, but the very Romantic structure that demands the external world (and women in particular) serve the expressive needs of the self. In a perverse way, Schlegel and Novalis are explicit about the ways their Romantic model of transformation depends on disavowing women: as noted above, both depict women as contingent objects in the recursive system of male becoming. Tieck satirizes this figure by depicting the

masculinized project of Romantic transformation as delusional. In the end of "Outlook on life," she describes this delusion and its alternative:

> But it is something great…when one then sees, that he can only run around in a circle of errors, and then decides to just stand still, exactly where he set out from at the beginning, and marks it with a smile….Man is like a child that has a beautiful, naked statue, who plays with it and carefully gathers flowers and colourful and golden ornaments to decorate it; unfortunately, most remain children, who, dissatisfied by this eternal play-work, keep ripping it down off of the beautiful form. They don't want to see it naked, but rather collect ever new rags to dress it; they think they can make their lives beautiful through poetry. ([Tieck] B., 1800/1960, p. 214)[13]

This criticism of the effort to transform life through art seems to speak directly to the concerns of Schlegel and Novalis, discussed earlier in this chapter. The passage not only describes auto-poietic growth as "a circle of errors," it also suggests an alternative: standing still. Importantly, there *is* new knowledge here. This is a kind of *Bildung*, but not one that sets out on a new recursive loop of transformative growth. Instead, what it has learned is precisely that this recursive loop was in fact mechanical repetition. This is a kind of static transformation, that has transformed precisely by stopping trying to transform. In terms of the gender politics discussed above, this means letting contingency, coded by Novalis and Schlegel as Woman, be in itself. The differences produced by an autonomous mediation are ones to work with, rather than appropriate. This is what I would call *negative recursivity*, theorized in my discussion of Hui (2019), above.

"The old man in the cave" offers a similar kind of static transformation to its reader, through the distance of the reader from Leonhard achieved by the form of the fairy tale. As Jack Zipes (2012) argues, fairy tales "create counterworlds and gain distance from our world of reality," separating readers from their fantastical depictions,

[13] "Aber etwas groβes ist es…wenn dieser dann einsieht, er kann nur in einem Kreise umherirren, freiwillig dann stehn bleibt, wo er zuerst auslief, und mit Lächeln bemerkt…Der Mensch ist wie ein Kind in Besitz einer schönen nakten Statue, womit es spielt und mit Mühe beständig Blumen und bunte und goldene Zierrathen zusammenträgt, um sie zu schmücken; leider bleiben nun die meisten Menschen immer Kinder, denen ihr Spielwerk ewig miβfällt, sie reissen es von dem schönen Bilde oft herunter, sie mögen es aber nakt nicht sehen, sondern tragen von ihrer Armuth immer neue Lumpen zusammen, um es zu bekleiden; sie meinen sie verschönern durch Poesie ihr Leben."

even as they draw them in (p. 20). This creates both an identification with and a distance from the protagonist, giving the reader something that Leonhard doesn't end up with: a perspective on Leonhard. The reader is able to both identify with and have distance from Leonhard's self-delusions. In this way, Tieck offers a paradoxically transformative knowledge of the self. It is a knowledge that it doesn't know itself; a transformation that has stopped trying to transform. Moving with this knowledge of not-knowing is her way of escaping the "circle of errors" that characterizes the Romantic desire to transform the world through art. In this way, she encourages a kind of doubt, a toning down of the grandiose promises of Romantic transformation. Living with Leonhard in mind, with the idea that I know that I'm deluding myself, could lead to a different kind of transformation: a breaking out of destructive repetition.

In my reading, Sophie Tieck's story adds a dissonant voice into the Romantic project of recursion, mediation and "technological metaphysics" (Weatherby, 2016b, p. 46). Using irony, it destabilizes Romanticism's more extreme claims regarding the mediation of inner genius and outer contingency, and the capacity to shape the world. Importantly, this is not the Schlegelian irony of endless self-criticism, returning to the self as an object to destabilize it and thereby grow further (Behler, 1990, pp. 66–67, 139; Beiser, 2002, p. 448). In fact, it seems to be reacting precisely against this self-referential mode, suggesting its impossibility. In this return to the self, the story seems to say, the Romantic ironist never actually confronts anything but his own ego-ideal. There is hubris in thinking the divine is lurking within; instead, our internal truth is always-already mediated back to us in the form of a bearable image. We are much more the appendage of mediation than its master. Whereas Schlegelian irony would try to overcome the ego-ideal, Tieckian irony sits in the split between my inescapable self-image and my understanding of it as deluded. In other words, it remains in a contingent, oscillating space, without absorbing this difference back into the system.

Recursively bringing this reading forward into contemporary Digital Romanticism, it finds a resonance in the ambivalent attitudes to Silicon Valley technology today. I discussed at greater length in the introduction how the current moment of technological utopianism has worn thin. A fatigue with grandiose promises sets in as users are buffeted around the dumpster fire of the internet, feeling more and

more like the appendages of a vast system of mediation rather than master-mediators empowered by tech (Doctorow, 2024a; Silverman, 2025). Early utopian visions of the internet as a transcendent space of freedom give way to the reality of surveillance and tedium. Techno-optimist narratives about AI-transcendence and singularity through recursive machine learning are met with the deluge of machine-produced slop and meaningless content. Read through Tieck story, the idea that a transcendent future is just around the corner seems more like the bearable image of a repressed mediocrity and disappointment. I would place a hope in fostering political energy through tarrying with this disappointment, rather than mobilizing it as a site for "good" technological development. Rather than absorb this contingent gap between expectation and disappointment into a recursive upgrade, let the disappointment and the understanding of delusion settle over the entity that is Silicon Valley. Rather than solutions that can take back tech and set it right, this moment calls for a scrappier antagonism to any grandiose promises of technological salvation. Recursion powers the progress of the system, negative recursion takes a stand against the system.

Including women writers in Romanticism is not just a matter of course. It changes Romanticism fundamentally. If Romanticism requires that "actual women remain silent" for its "conditions of possibility" (Kittler, 1986/2013, p. 107), then bringing women writers into Romanticism introduces an internal contradiction in its system of meaning. As a detracting voice, Sophie Tieck shows another side of Romanticism, one which hopefully allows us to acknowledge the more extreme moments of Romanticism that she seems to be criticizing. Romanticism, then, contains both of these movements: it includes the desire to direct mediation towards recursive transformation of self and world, and it also contains a criticism of this project as confused or fantastical. It suggests techne that can reconfigure the *a priori* conditions of knowledge, and also suggests that the illusion of this kind of control is built on ignoring how invisibilized people labour to sustain any epistemological system. This double movement between megalomania and doubt offers a fuller grasp of Romanticism's concept of mediation. In its polyvocal contradiction, it suggests both that the attachment to the power to mediate is delusional, and that this delusion may be a necessary one. However, this is not so much about giving up, or accepting powerlessness. Rather, it is a project of maintaining contingency, living the

split between these contradictory poles without trying to resolve them into a new coherence. Inhabiting the split between a binary, it challenges the coherent totality of the system, suspicious of any projects that promise transformative growth is just around the corner.

Conclusion

This chapter has theorized recursion as a Romantic form, and used this form as a method to address the argument that Romanticism returns in Silicon Valley. This recursive understanding helps explain how Silicon Valley can offer the same promise of individualized mediation, harmony, and progressive self-growth through tech, even as it has simultaneously undermined these promises since the 1960s (O'Mara, 2020). As this dissertation argues, Silicon Valley seems able to repeat its promises over and over again, because it is able to sell the idea of a recursive transcendence, even of its own technologies. Here, I used Silicon Valley's own method of a Romantic recursion to Romanticism, but with a difference: by trying to return to a different "base case" of Romanticism, I offer a different approach to mediation and recursivity that might break this repetitive promise of transcendence. To this end, I offered a reading of Sophie Tieck's story "The old man in the cave."

Sophie Tieck's story introduces an antagonism into Romanticism. As I've shown above, it speaks to Schlegel and Novalis' projects of transformative growth by ironizing this as a repetitive male fantasy. In contrast to the progressive auto-poietics of Romantic *Bildung*, Tieck elaborates a negative recursivity, or a recursive loop that finally learns that it's not going anywhere. This speaks not only to her contemporaries, but also to the repetitive Romantic promises embedded in the Silicon Valley technologies examined throughout this dissertation. Rather than look to the system to transform itself, it offers a short-circuit to break what she calls "a circle of errors" ([Tieck] B., 1800/1960, p. 214). At the very least, this means a suspicion of Silicon Valley's recurring promise to roll out new technologies of harmonization, individualized mediation, and auto-poietic transformation. Ironically, it might be precisely by *not* believing in transcendence (through technology, revolution, individual sovereignty, or whatever) that we could transcend this problem of destructive repetition.

While scholars like Norton (2024), Nassar (2014), Goldstein (2017) and others theorize a harmonious Romanticism that attempts to balance the mediation between nature, technics, and humans, I would argue that this project ultimately rests on the individualized figure of the male Romantic artist to direct this harmonious mediation. Particularly in the writings of Novalis, this reliance on the visionary individual leads to disturbing excesses. Today, this Romantic figure returns in the cultural understanding of Silicon Valley's businessmen as visionary geniuses inventing world-shaping innovations (Streeter, 2015), and in the promise of the media-empowered user of Silicon Valley's consumer technologies (the focus of this dissertation). While Novalis says many things that back up these scholars' interpretations, his work contains contradictions. It is important to read Romanticism critically, to bring out these contradictions, rather than take its utopian claims at face value. Similarly, it is vital to challenge Silicon Valley's own Romantic promises through their repeated failures and oppositions. If we took Humane founder Imran Chaudrhi's TED Talk at face value, it would also seem like a nice, utopian project of media harmonization; but we know better. If we start thinking of Chaudrhi as being like Leonhard, we might see Humane as what it is: a twisted apparition rehashing the same, tired reality.

Silicon Valley's Romantic model of mediation does have an appeal. It promises all users the ability to mediate the reality and subjectivity they desire, such that communication becomes a diverse, multi-directional exchange in which identities are self-cultivated rather than imposed. At the level of design philosophy, it does seem to offer an alternative to the centralized technological bureaucracy Silicon Valley originally cast itself against in the 1960s (O'Mara, 2020). As Fred Turner (2013, 2019) argues, this emphasis on multi-channel, user-directed communication also merges with a political project of producing fascism-resistant subjects who can maintain democracy. In the next chapter, I'll show how it's precisely through such freely-mediating subjects that Silicon Valley's centralized, technocratic power reproduces itself. The sense that technology empowers users' self-mediation is the condition of their actions actually being mediated by the logic of profit, or data capture. From this point of view, there is another layer of mediation lurking behind the promise that mediation is self-directed: bodies are still

mediated by a system of profit, just as bodies were/are mediated by profit through the centralized technics of the factory.

In this chapter, I've elaborated a more theoretical critique of Silicon Valley's Romantic view of mediation. This emerges from Sophie Tieck's story: techniques of mediation produce unexpected and unmanageable outcomes that erode the promise of an empowered media-user. As such, experiences of harmony and media-empowerment depend on repressing the bodies and resistant elements that don't fit into its system of mediation. To construct the appearance of progressive development, it is necessary to repress elements that a system deems regressive. There is a faith in the progressivism of recursive systems that Tieck critiqued two centuries ago, and that needs to be articulated again. Today, this faith finds its most extreme expression in the idea that machine learning will achieve an artificial general intelligence, creating a strange new world of technological transcendence. Yet, we've heard promises of technological transcendence from Silicon Valley enough times now to know these technologies become mundane, even burdensome, and we're stuck menially rubbing at them with desperate, greasy hands. We never quite get to wield mediation into our own recursive becoming.

This suggests mediation as itself a realm of resistance and contradiction, rather than a space that resolves into self-direction by using the correct techniques. This is perhaps most obvious in the stubbornness of the techniques of mediation themselves. As Shintaro Miyazaki (2023) notes, digital technologies "exhibit an obstinacy, a wilfulness, an agency and a logic of their own that is diametrically opposed to the original intentions of their developers" (p. 36). Mediation is not really something individuals can control; and, as Tieck's story suggests, thoughts of control appear only through the repression of what is out of control. Harmony requires repressing the non-harmonious elements.

These two problems seem to lead to an impasse. On the one hand, a logic of profit mediates bodies into a system of power; on the other hand, if we can't direct mediation, we can't change this oppressive system of mediation. This is, however, only an impasse if we insist on a Romantic model of mediation – one that directs mediation towards a recursive transcendence. Looking at this contradiction from the perspective of negative recursivity reveals instead how the system's techniques of mediation can themselves

undermine its planned operations. They contain glitches, resistances, and unexpected uses that could open onto different kinds of operations. This aligns with the arguments of critics like Hui (2019), Fazi (2018), Miyazaki (2023), and others, who place some hope in the surprising outcomes produced by technical systems. Even the alleged technological determinist Friedrich Kittler (1986/1999) shows the ways that willful machines can open alternatives to power. He describes how entertainment radio in Germany arose out of what one German military officer called "an abuse of army equipment," or military radio operators suddenly turning their machines to new, unintended, and anarchic purposes that the machines' properties unexpectedly allowed (Kittler, 1986/1999, p. 96). The important thing here is leaving open the contingent glitch, rather than trying to mediate it back into the recursive progress of the system.

In the following chapters, I take up this method of negative recursivity to do two main things. One is to chart the ways Silicon Valley's recursivity serves, not to progress the system, but to repetitively entrench its power as a totality. Its recursive system works to set a return to its own premises as the default response to its failures. Whatever recursive development occurs here is a development of its own power, which it ensures through a monopoly on coding contingency into the world (something I discuss in Chapter 2). In this way, it shows itself to be more a feedback system, that a recursive overcoming. Second, my method of negative recursivity seeks to open these Tieckian spaces that hover in the brokenness of technological promises and search this gap for political possibility. The method of negative recursivity developed in this chapter shows the importance of contingency that isn't just appropriated back into the system, but allowed to remain as externality, as difference. Fostering externality to the system is perhaps more important than a total system change.

Sophie Tieck's story points to the problem of Romanticism imagining everything as a self-generating system. This problem confronts us again today. Negative recursion takes a stand against the system, rather than mediating contingency into its development. Here, I've suggested that mediation always produces unexpectedness, rather than harmony or self-direction. This unexpectedness can go either way. The publicly-funded early internet, for instance, was not destined to become totally subordinated to the logic of profit; just as it is not destined to stay there forever. For awhile, a massive "abuse of

army[14] equipment" did indeed turn the internet against the logic of profit, through the proliferation of internet piracy. Opening possibilities for it to leave the profit logic and serve other purposes is an important political task, but this should be freed from the pressure of a final overcoming, harmonization, or total solution – these two often feed back into the system's own development. Tieck's story offers an opportunity to stand still outside of destructive repetition. Look to its failures as openings to occupy, rather than the reason for an upgrade.

[14] I'm thinking of the militarily-funded origins of the internet in DARPA.

Chapter 2.

Datafication: Enchanting the world

Introduction

Data isn't Romantic. If anything, the cold relations organized by numerical correlation suck enchantment out of the world, abstracting it in impersonal ways. Friedrich Kittler (1986/1999) specifically singles out Romanticism, of all literary movements, as rendered impotent in the face of datafication. In the generalized digitization of the computer age "all data streams flow into a state *n* of Turing's universal machine; Romanticism notwithstanding, numbers and figures become the key to all creatures" (Kittler, 1986/1999, p. 19). *n* is the mathematical symbol for "natural" numbers and Kittler is playing out the pun to show how "Nature" has been flipped on its head since its poeticization around 1800. The hidden meaning locked within Nature is no longer for poets to decode in subjective reverie; it is for computers, which increasingly leave even their engineers behind when determining meaning. Kittler kills off Romanticism for the first time through the technical media of 1900, now he declares its death a second time in the digital discourse network that renders meaning purely numerical. If we wanted to follow Kittler, it seems like we'd have to say that data is the final nail in the coffin of Romantic subjectivity. However, in this chapter, I intend to follow Kittler to do exactly the opposite. Here, I show how datafication actually revives elements of the Romantic "discourse network" of 1800 (Kittler, 1985/1990). While computers hallucinate numerical meaning everywhere, users experience a Romanticization of this data via the interface.

This chapter is comprised of two halves that serve two interrelated purposes. Using Kittler's framework, the main purpose is to ground Digital Romanticism in the discourse network of datafication. *Aufschreibesystem* (translated as "discourse network") means literally "system for writing things down" or "recording system." Kittler (1985/1990) defines it as "the network of technologies and institutions that allow a given culture to select, store, and process relevant data" (p. 369). I argue that 21st century techniques of datafication operate through a recursion to the Romantic system of meaning

that Kittler describes in *Discourse networks 1800/1900.* Key to this argument is the idea that datafication could take different forms, and there's something specific and weird about the Silicon Valley version. This form is what Mark Hansen (2015a) refers to as "total recording" (p.11) and Kate Crawford (2021) describes as a situation in which absolutely everything is seen as containing data. The coiners of the term "datafication," define it as "taking all aspects of life and turning them into data" (Cukier & Mayer-Schoenberger, 2013). In short, this is a mode of recording that captures meaning indiscriminately, from *everything.* This builds on my discussion of recursion from Chapter 1, by showing the ways Silicon Valley's system codes everything as a contingent externality, available to be appropriated by its recursive system.

Turning everything into data doesn't sound Romantic; but by looking at technologies of self-datafication and self-narrativization, I show how this total recording begins to enchant the world for digital subjects. Even as machines are the ones coding the world as full of meaning, it also begins to throb with subjective meaning for its human users via these kinds of interfaces. To study this loop between systemic datafication and individualized meaning, I intertwine three main techniques of datafication: ambient data-emitting technologies that record and encode meaning in previously meaningless aspects of existence, personalization algorithms that mirror subjective preferences back to users, and self-tracking and social media documentation practices that transform the world into a site of self-narrativization. I analyze these as structural to the discourse network, which relies on humans seeing meaning everywhere, so that they, like machines, will record everything. For them, this recording is a reflection of selfhood; for Silicon Valley, it is the free labour of humans constantly recording valuable data.

This datafication of total recording echoes Romanticism in seeing secret meanings lurking everywhere. This way of seeing is what allows, for example, Silicon Valley pronatalists to believe that enough data about an embryo's DNA can reveal anything, from how happy "the future child" will be, to how much money the future adult will make (Genomic Prediction, 2024; Kleeman, 2024).[1] In this context, I argue that AIs

[1] Pronatalism is a movement promoting human breeding, popular in Silicon Valley. Pronatalism justifies its stance through fears about a declining population and neo-eugenic ideas that selective breeding could lead to superior humans. This involves encouraging only 'intelligent' people to breed and selecting their

function something like Kittler's (1985/1990) "mother's mouth," coding meaning into every fragment of what hitherto was meaningless noise. In turn, the interface mirrors this data back to users, not as a cold stream of numbers, but as subjective reflection of personalized recommendation. For pronatalists, this reflection takes the form of the perfect child; for more everyday users, they might see this subjective reflection in a sleep score, a Netflix recommendation, or even in the world itself, in the ways it is rendered "Instagrammable" – an alley, for instance, transforms from a passageway into a site to photograph for a personal profile that will generates likes and recognition. All resonate as a reflection of the self in the mirror of the interface.

In this way, I demonstrate that Silicon Valley's version of datafication doesn't simply quantify reality, but recursively re-enchants it through Romantic modes of meaning-making. Even as the world is drawn into a system of universal meaning via algorithmic data-capture, humans share in this bemeaninged world, in which the self is mirrored in all things. Romanticism re-emerges through these technologies of datafication; and the Romantic subjects of this digital discourse network perpetuate the system of total recording by autonomously tracking, photographing, and capturing all aspects of this enchanted reality. A recursive cycle emerges between the machinic coding of everything as meaningful and the human recording of everything as a reflection of selfhood. Yet, this recursive cycle between human and machine poses a problem: who gets to be the real Romantic author, here, human or machine? Humans are given mastery over mediation, yet are uneasily aware that machines are mediating them back. Using this Kittlerian-Romantic lens to study datafication reveals how Silicon Valley's promise of human mastery paradoxically rests on machinic systems that code meaning

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embryos to find the best ones (Kirchgaessner & Devlin, 2024; Munn, 2024; Regalado, 2019). Various tech startups, such as Genomic Prediction, promise to innovate data-driven techniques to assist pronatalist goals. Genomics researchers have criticized as unrealistic even the more moderate promises of companies like Genomic Prediction, such as the claim it can screen embryos for certain diseases (Regalado, 2019). The question is perhaps not whether they are correct or not, but rather what system of meaning allows these kinds of beliefs and approaches. To me, it's the belief that these meanings *must be there somewhere* that leads to fraudulent promises. Additionally, the idea that if these meaning are there, we *must search for them*, structures this quest as an unquestionable inevitability. Something similar occurred in the public's willingness to believe Theranos' claims it could perform revolutionary blood tests with its (fake) devices. The system induces the belief that meaning is lurking everywhere.

indiscriminately. In this way, datafication generates the very crisis of authorship it promises to resolve.

Before undertaking this analysis however, this chapter stages a confrontation with Kittler. Relying on Kittler's analysis of Romanticism creates difficulties, given his insistence that Romanticism does not survive the media systems of the later 19th century. From one view, Kittler's entire media theory is based on the idea that Romanticism, and all the humanist values associated with it, has now long since been left in the dust by superior media subjects. In contrast, I offer a reading of Kittler as an unwitting Romantic. Roughly the first half of the chapter is focused on Kittler and his reception, while the second half turns his theories on Romanticism to the contemporary system of total recording and the individualized interfaces of Romantic enchantment through data.

Diving into debates over the finer points of Kittler's oeuvre might seem a bit niche, but it also intervenes in two debates of broader relevance. The first is the self-critique of so-called German media theory.[2] Erik Born (2023) provides a programmatic overview of this self-critique, arguing for an updated German media theory that models the method I use here. The idea is a confrontation of older theory with new media to change understandings of both, updating the field in a critical way. Part of what the self-critique of German media theory has discovered is that the nails Kittler banged into the Romantic-humanist coffin were not as secure as once thought. As Kittler's contemporary Samuel Weber (2018) writes, reflecting back on his role in establishing what would later be called "German media theory," "[the] 'phantom of the I' was not to be as easily exorcized as many of us at the time expected" (p. 69). That is, Romantic subjectivity was supposed to disappear as technology developed, but it kept coming back. An "updated" German media theory, to use Born's concept, confronts this problem by opening the field, using its own methods to address this challenge to one of its central tenets.

One of the goals of this chapter is to offer a Kittlerian explanation for this un-Kittlerian return, by showing how the targets of German media theory actually resurface via the very technologies that were supposed to vanquish them. Computers don't do away

[2] For a nice critique of this term, see (Winthrop-Young, 2017). I'm using it for ease of writing to refer broadly and necessarily vaguely to the trend of post-humanist media theory Kittler inspired.

with Romanticism; they actually take recourse to it. This, in turn, complicates a lot of hardware-focused scholarship on computation that highlights the agency of machines as eclipsing human autonomy (Ernst, 2011; Fazi, 2018; Hansen, 2015a; Hayles, 2017; Mackenzie, 2017). I don't disagree with this scholarship, but pose the additional question: why does an autonomous Romantic subject, empowered by and over media, emerge so strongly in the exact moment it's really not supposed to? Kittler's own latent Romanticism offers an inverted mirror to the Romanticism of Silicon Valley: Kittler slides into Romantic authorship even as he claims machines have destroyed it, whereas Silicon Valley promises Romantic authorship even as this position is subverted by machines.

Bringing the framework of the discourse network to debates in critical data and algorithm studies, I argue for a more totalizing critique of datafication. Over the past decade, a lot of work has pointed out that "gathering and labeling data about the world is a social and political intervention, even as it masquerades as a purely technical one," to quote one noteworthy example from critical data studies (Crawford, 2021, p. 121). We learned from these scholars that data wasn't neutral or outside politics, but that it brought a lot of political baggage into technology. These works are important, but I'm advocating a slightly different approach. Structuring their critiques in terms of harms, discriminations, or lack of consent, many of these studies get stuck at looking for ways to mitigate damage. Obviously, these are important goals, and I support them; but they too easily get channelled into Silicon Valley solutionism, in which a technical fix is the knee-jerk response to pointing out a problem. This concern is echoed in the growing literature that critiques ethical or reformist approaches to technology, and focuses instead on power (Alkhatib, 2024; Asaro, 2023; Birhane, 2021; Merchant, 2023; Raji, 2024; Sadowski, 2025; Verdegem, 2024). Following such critiques, I'm reading datafication as a discourse network in order to analyze and challenge it as a system. Kittler's approach helps to show this systemic operation and how it functions. I argue that what's wrong with this system isn't just any example of harm, but the fact that it operates as a totality. As Guy Debord (1967/2024) shows, totalitarianism can work in two ways: censorship or inundation. In the latter case, everything is allowed, but must pass through a single mode of signification, erasing all possibilities of meaningful difference. This can't be fixed by

addressing datafication's biases, but only by challenging the fundamental way it codes meaning itself.

By looking at the way numerical meaning is coded, deciphered, and represented in this system, a weirder picture emerges. On the back end, it creates a system in which everything is potentially meaningful, in which there is no such thing as white noise, and algorithms decipher strange potentials in what seem like blank surfaces. On the front end, the subjectivity data calls forth is not one marvelling at an anti-humanist stream of natural numbers, as Kittler had imagined; it's one that expects its desires to be mirrored to it in the world. These two pieces cohere into foundational elements of a discourse network that insists on coding meaning into *everything.* Even as machines do this through data, users do it too, by interacting with smart phones, cameras, social media apps, self-tracking devices, recommendation algorithms, and other technologies of the self. When everything must have meaning, then *everything is brought into this system of meaning-making.* In other words, this is a totalizing system. Within this symbolic inundation, the separation between human and technology, inside and outside, meaning and noise, information and disinformation, collapses. In concluding, I argue that we need to go further than addressing the isolated harms of technology, and instead challenge this totality of datafied meaning.

Reading a system is a precarious method, not least because it involves a paranoid hermeneutics of seeing connections everywhere. From Daniel Paul Schreber to Pink Floyd, this kind of "discourse on discourse channel conditions" appears to others as mental illness (Kittler, 1982, p. 473; Winthrop-Young, 2011a, p. 57). This is because one must necessarily describe one's discourse network using that discourse network, generating a feedback loop that seems like gibberish. In other words, there is no exterior position to the discourse network that one can inhabit to offer a birds-eye, rational view of the whole – one describes it in its language.

My discourse is no exception. Writing about the discourse network from within the discourse network, I am making frenzied connections that leapfrog across centuries, genres, concepts, and languages. Yet, inhabiting this position is methodologically important for offering an alternative. Too many critiques of digital technology are

themselves taking on the assumptions inherent to the discourse network; namely, that media is something we can control, improve, tailor to predictable ends, wield as mediators. The very sentiment that if we just designed technology a little differently, we could usher in a better world, offers a strange mirror to Silicon Valley's own project. The digital discourse network generates an immense amount of discourse on itself; sometimes it seems that everyone must have an opinion on how it could be improved! Think of the online surveys at the ends of online surveys, asking about your survey experience...this might just be its most successful ideological operation, to cast its flaws as design flaws, and to promote the sense that it is responding to its subjects' desires. This dissertation tries to interrogate this very sentiment, including its assumption in critical scholarship on technology. Too often critique is trapped in a project of redesigning the totality, rather than opening space outside of it. My attempt to capture the totality of the system is my effort to offer an alternative. While everyone from Marxists to media theorists will tell you that trying to capture totality is a delusion, maybe it's time to confront technological society with delusional methods. If this chapter seems paranoid or disjointed, just unfocus your eyes, and try to see like the machine: meaning is everywhere, correlations must be made, hallucinations are the new reality.

Recourse network

This chapter reads a recursion of Romanticism via contemporary datafication, using Kittler's (1985/1990) framing of the discourse network of 1800. Hardcore Kittlerians will need some convincing that this comparison is worth making, given that Kittler explicitly states that the Romantic subject is dead and gone. In the following sections, I'll address this problem; here, I'll set the stage. I'll elaborate on Kittler's view of Romanticism, and sketch its relevance to contemporary studies of datafication.

The strength of Kittler's methodology is to ask how a regime of meaning-making determines the kinds of subjects possible within it, and how this relates to both political and technological power. Kittler uses this method to invert Romanticism's own self-understanding: instead of poetic souls producing writing, he argues, a certain form of writing produces subjects who understand themselves as poetic souls. In *Discourse networks, 1800/1900*, "Poet, Mother, Child," "Lullaby of Birdland," and other texts,

Kittler (1985/1990, 1978/2013, 1979/2013) contextualizes Romanticism within the changes to German educational practices in the late 18th century, showing how these future poets learned language as children. The way Kittler describes these, they can seem arcane, but it's important to remember that, historically, these were concrete policy decisions that actually did lead to skyrocketing literacy rates (i.e. – discursively productive subjects). These pedagogical policies formed part of larger "bureaucratic reforms designed to mobilize and install modern, self-reflexive, and self-directing subjects as civil servants in the heart of the emerging nation-state" (Winthrop-Young, 2011a, p. 40). For Kittler, Romanticism emerges from a system that trains subjects to see language emerging from everything, thereby coding subjective meaning all around them. Operating within this hermeneutic saturation, the subjects of this system cannot help but be discursively productive. These subjects link to power by providing the burgeoning nation state with poets who will give it cultural cohesion and bureaucrats who will facilitate its operations.

The new pedagogy shifted language education away from a disciplinary system of single-letter alphabetization, towards an oral, nurturing, maternal pedagogy, rooted in a new model of the nuclear family. Mothers were tasked by the state with teaching their children language through "minimal signifieds," or monosyllabic units of almost-meaning, that, once mastered, can be pieced together into full words: things like ma, pa, bu, be, etc. For instance, "bu" + "be" = "Bu-be" (boy), "pa" + "pa" = "papa, and everything returns to "the most distinguished minimal signified, ma-ma" (Kittler, 1985/1990, pp. 49–50). A sound like "ma" hovers between meaning and non-meaning, and when all words are built out of these sounds, "everything is always already on the threshold of meaning" (Winthrop-Young, 2011a, p. 44). Coding the world through the cultural technique of the mother's mouth means two things: 1. there is no distinction between meaning and noise; and 2. "the nuclear family" becomes "the official locus of production for German poetry" (Kittler, 1985/1990, p. 177). This is not just small-p poetry, but *Dichtung,* or the very concept of high art that emerges out of Romanticism as the work of an inner genius. The mother's mouth is responsible for producing this concept. Poets stand in the forest and hear things like "ss," "au," "ng," think the tree is saying "song" to them, and record this writing as flowing through their innermost

subjectivity. To us denizens of later discourse networks, these are meaningless noises, but – this is Kittler's argument – subjects of the mother's mouth would literally hear a woman's voice talking to them out of the trees, inducing them to produce discourse (Kittler, 1978/2013, p. 41).

One of the goals of Kittler's analysis of the mother's mouth is to show that the distinction between "information" and "noise" is historically contingent. These are the key terms in Claude Shannon's information theory, but for Kittler, this distinction can only be processed with the advent of technical storage media in the early 20th century. Indeed, Shannon's theory emerges out of its own media-historical situation, specifically a discourse network governed by the financial imperatives of the Bell Telephone Company, where Shannon worked. As Marie Thompson (2017) argues, Shannon's theory is geared towards a capitalist ethic, in establishing a moral distinction between noise as "a necessary evil" and information as 'good' (p. 55). This distinction emerges out of a post-WWII discourse network, governed by the demands of corporate-owned communication networks and military signals processing. Noise emerged as a category as scientific planning sought to domesticate sound towards the goal of efficiency (E. Thompson, 2002). As both Marie Thompson (2017) and Katherine Hayles (1999) argue, Shannon's theory devalues ambiguity, interpretation, and transformation. As such, it should not be understood as progressive step towards superior transmission, but rather as a contingent distinction based on the power structure of the discourse network in which he operated. As I reference noise throughout this chapter, it's important to remember this: the information/noise distinction has a specific meaning within each discourse network. As I move from one discourse network to another, using these terms, I am trying to describe how the meaning itself is shifting. In concluding this chapter, I'll argue that the signal/noise distinction is breaking down in the discourse network of universal datafication, but perhaps not in the utopian direction Thompson points to.

Kittler agrees: the information/noise distinction is contingent and does not make sense within the medial conditions of 1800.[3] The fundamental sounds of meaning in 1800

[3] As Yuk Hui (2019) shows, Shannon and Wiener also shared this view: "information is a new category that the ancients didn't anticipate" (p. 18).

only invert into meaningless noise once they are recorded by 20th century (capitalist) media. As Geoffrey Winthrop-Young (2011a) describes, this flip is embodied in the word: *Rauschen,* or rustling. There are few words more beloved by German Romantic poets, who hear the *Rauschen* of nature as a muse from which their poems flow effortlessly. But as of its coining in the 1920s, *Rauschen* is the German word for "(white) noise" (Winthrop-Young, 2011a, p. 81). Read backwards from discourse network 1900, the media system of 1800 turns all "white noise" into meaning.

In the fundamentally different reality of 1800, meaning appears everywhere and language emanates directly from nature. In this context, autonomous subjects are produced, because they hear subjectively-loaded meaning murmuring all around them. Romantic poets are maternally-programmed, according to Kittler (1985/1990, p. 43). They come to view the world as brimming with a hermeneutic richness that speaks directly to their most intimate, inner subjectivities; the love of mothers is ubiquitous. Meaning appears everywhere: in the flowing language of poetry, in female muses' sighs, and in the rustlings of nature. And when subjects hear their mothers speaking to them out of the rustling trees, and out of the very flow of the language they write, they become self-creative subjects, who see the world as speaking to *them*, to them as individual, discrete subjectivities. As Kittler (1985/1990) writes, "the creation of texts translated into and out of the Mother's Mouth is also the self-creation of an author" (p. 98).

Autonomous individuals come into being because individualized meaning is coded all around them. They, in turn, produce discourse coded as flowing directly back out of these inner depths, while the socially-enforced role of women is to absorb this inner meaning as love and become, in turn, pedagogical mothers. This system tries to crush women who refuse this role. The first half of *Discourse networks* closes with the suicide of the poet Caroline von Günderode.[4] Kittler (1985/1990) attributes her death to constant dismissal by her lover/publisher Friedrich Creuzer, who enacts the logic of the discourse network through his inability to recognize her as both woman and writer, lover and poet simultaneously. Creuzer's strange letters refer to her as a man every time he discusses her writing, playing out both his effort to hide the affair from his wife, and the

[4] Kittler's spelling. Usually written Karoline.

impossibility of him seeing women as writers. He eventually abandoned Günderode and she took her life shortly after. The discourse network of 1800 "rests on corpses" (Kittler, 1985/1990, p. 173). Behind the flowing odes is a violent reproduction of gender roles that ensures that discourse circulates incessantly in a symbolically-coded world.

This makes the discourse network a power structure, Kittler (1985/1990) argues. Quoting Hegel, he writes "automatic writing is anything but freedom. The alphabetization campaign of 1800 also intended to automatize cultural practices, but only in order 'to found and purify the ground of inwardness of the subject'" (p. 228). This inner subjectivity is less an autonomous freedom, and more a programmed subjectivity that performs the correct operations of power. In this way, Romantic poets become self-organizing nodes in a "communicative matrix" that requires individuals to constantly interpret and produce discourse (Kittler, 1978/2013, p. 6). The goal of power here is to train discursively productive civil servants. When not self-absorbing over old ruins or rustling bushes, poets work day jobs as self-directed bureaucrats, facilitating state power. These are not the bureaucrats of Kafka, for whom writing is painfully inscribed into the body to crush out the soul; rather, these Romantic bureaucrats function precisely through their own understanding of themselves as autonomous, soul-ful individuals. They are self-generating, auto-poietic subjects, who function precisely because they do not recognize that they are subjugated to a system.

Romanticism is, for Kittler, a body of literature that registers traces of a certain form of subjectification via state institutions, cultural techniques of alphabetization, and a gendered division of labour within the family. By creating a literature of love for a largely female reading public, Romanticism closes this circuit by reproducing this heteronormative model of mother/womanhood. This circuitry rests primarily on the hermeneutic abundance created by the mother's mouth: the world throbs with meaning, humans incessantly produce discourse as they decode it. It is this world of ubiquitous meaning that I'll read below in comparison to universal datafication. Both networks specialize in media that store the interiority of subjects, and in eliminating white noise. Below, I analyze how this system of meaning and subjectivity operates today, including important differences. However, I'll first address the problem of using Kittler to theorize the return of a Romanticism that he proclaims is dead and gone.

Failed exorcisms

Kittler could not be clearer that Romanticism is over. It "did not survive the typewritten typescripts and aleatory writings of 1900" (Kittler, 1985/1990, p. 83). This is a strong denouncement of a project that seeks to locate Romanticism in the 2020s! Yet, a close reading of Kittler betrays a latent Romanticism: despite trying to kill off the Romantic author, Kittler often slides into being one. Part of whether Kittlerians buy this argument comes down to how you read Kittler's style. Is he saying what he means in his pronouncements, or being deliberately hyperbolic? I'm following Samuel Weber (2018), Geoffrey Winthrop-Young (2011b), and others, that Kittler's hardlines are at least partly performative – "provocative rhetoric" (Winthrop-Young, 2011b, p. 15). Kittler is open to interpretation, much as he would insist that he hates the idea. I'm reading his declarative breaks more as humorous hyperbole than what he would call *Klartext,* and so reading more openness and play into his work. In this section, I want to show the ways Romanticism slips into Kittler's work, despite his denunciations.

This is perhaps best embodied in the character Friedrich Kittler himself. Let's rephrase Kittler's declaration as an *Onion* headline: "chain-smoking, iconoclastic German genius proclaims death of Romanticism." It's not far off the 1978 Crass song "Punk Is Dead." The guy whose *Habilitation* thesis was so weird he needed eleven evaluations over two years (Sprenger, 2016/2016), the guy blasting Pink Floyd while reciting Goethe, the guy cruising the Aegean for Odysseus' sirens, likely stoned, the guy putting a literal siren on the rocks where the sirens supposedly sang (Winthrop-Young, 2015b)…This is the guy declaring Romanticism dead and buried? [5] Not to mention, his late, untranslated work, *Music and Mathematics,* is full of references to his own female muse, recreating his analysis of Romantic authorship (Winthrop-Young, 2015b). Even after his death, Kittler seems to haunt his own work with a Romantic *Geist.* Through his reception, he has taken on the status of a singular *auteur* in a medial era that has allegedly done away with such Romantic figures. The fact that such *auteurs* are indeed few and far between only adds to his Romantic mystique.

[5] *Habilitation* is a second doctoral thesis German academics write to attain a job as a professor.

Recent scholarship on Kittler has directly taken up the problem of his own latent Romanticism and humanism (Hansen, 2015b; C. T. Smith, 2018; Weber, 2018; Winthrop-Young, 2015b). The most convincing of this work, to me, begins by highlighting the glaring contradiction in Kittler's media-centric approach: he *wrote* about it. While he squeezed the medium of writing into the discourse network of 1900 as registering the horror of its own supersession by superior media, it's more difficult for him to account for his own position as a later 20th century 'man of letters.' As Samuel Weber (2018) argues, Kittler returns to the allegedly dead authorial subject via his own writing practice. Chadwick T. Smith (2018) writes of Kittler's work, "it is precisely its own written character that must be disavowed" (p. 147). Geoffrey Winthrop-Young (2015b) writes "the great irony (and epiphany) is that Kittler, the smasher of subjects who discarded humans as outdated carbon platforms in the grand self-processing of silicon nature, produced such an intensely personal work. So personal, in fact, that he, the fervent antihumanist, often sounds all too human" (p. 205). In pointing out these contradictions, these critics are applying a version of "the fallacy of authorial intent" argument to draw out the ways Kittler's writing exceeds his intentions (Wimsatt Jr. & Beardsley, 1946/2001). The irony here is that this argument was originally developed as a critique of inherited tropes of Romantic authorship. Kittler unwittingly has become the Romantic author he thought he'd buried.

This contradiction runs throughout Kittler's work. Weber (2018) takes up the title of a collection of post-structuralist texts Kittler assembled and edited, which became a bit of a Kittlerian motto: "die Austreibung des Geistes aus den Geisteswissenschaften," most intuitively translated as "driving the human out of the humanities," but literally, "the exorcism of Spirit from the spiritual sciences." As Weber (2018) notes, "the process of *Austreibung* [exorcism] implies or entails an exorciser, with priestly powers, but also as what Lacan once called the sujet supposé savoir, the subject supposed to know. The spirit as absolute knowledge thus returned to haunt the extraordinarily erudite and remarkable stylist that was Friedrich Kittler, establishing yet another 'school'" (p. 76). It's the Nietzsche problem: smashing up values often leads to the re-entrenchment of new ones, complete with a poster-boy who can show us the light. Kittler emerges as a kind of priestly human, in possession of a total picture, with which he can drive priests, humans,

and total pictures out the window. Whereas the gurus of Silicon Valley seem to revel in their proselytizing power as Romantic visionaries, Kittler seems to step into this role more unwittingly. Safely convinced that the Romantic author was dead and gone, he does not interrogate the ways his own writing might revive it. If only Kittler was a machine, there would have been no contradiction. Instead, he must give voice to the machine through human, all too human, writing.

Ironically, this is a similar move to one that one of his key targets – Hegel – makes in *The phenomenology of spirit* (1807/1977). Hegel sets up the book not so much as written by him, but as the historical vehicle through which Spirit becomes conscious of itself (Hegel describes himself more as the instrument through which the progressive march of Spirit actualizes itself in self-consciousness). It's a latent Hegelianism that leads Winthrop-Young (2015b) to theorize Kittler as "an updated German Idealism downloading itself into cyberspace" (p. 82). At the beginning of his exorcism book, Kittler retells the story of the Gadarene swine, when Jesus drives a host of spirits out of a single man and into a herd of pigs. Kittler turns the exorcism of many into the exorcism of one, driving out Spirit in favour of a multiplicity of spirits (Winthrop-Young, 2015a, p. 4). But the problem with exorcism is you have to send the spirit(s) somewhere. While Jesus drove the spirits into some pigs, Kittler seems to have driven Spirit into Media.

To me, the best readings of Kittler are the ones that tarry with these hauntings, whether Hegelian, Romantic, or humanist, resisting the impulse to try to resolve the tension. Weber (2018) walks this fine line by reading Kittler's contradictions through his enthusiasm for recursions. The categories of the Romantic era sneak in "through the rear window – or rather, to use Kittler's vocabulary, return transported by the 'bus' of the circuit board, through the 'gates' or 'ports' of Boolean algebra" (Weber, 2018, p. 74). Weber allows Kittler's work to be haunted by Romanticism. This doesn't affect the core of Kittler's project, which is aligned, not against Romanticism per se, but against "self-identical, universal, and unchanging meanings" – including those potentially adopted by Kittler and his followers (Weber, 2018, p. 71). For Weber, this necessitates a Kittlerian self-critique (itself a Romantic gesture), a challenge to the more orthodox tendencies of post-humanist media theory. I would add that this gesture takes on especial significance when Romantic values like visionary genius, self-directed subjectivity, and empowerment

over mediation return via Silicon Valley – a power structured on the production of new media. How and why is Romanticism sneaking back into history through this computational media that (at least according to Kittler) was supposed to vanquish it, once and for all? This question reads Kittler against Kittler to open a politicized understanding of Silicon Valley media.

Recursions are not just about the past returning in the present, but about the present looping back to change the past. In addition to exploring the ways Romanticism returns in Kittler's work, both Weber and Smith also show how a kind of post-humanism emerges from the shadows of Romanticism when we look at it from the perspective of Kittler's work. In other words, the discourse network of 1800 was always already undermining universal meanings, progressive Spirit, and autonomous human subjectivity. Smith has the neatest description of this: Goethe (paragon of 18th-19th century humanism) theorizes the similarity of humans and other mammals through the presence of the intermaxillary bone. This bone had been a key marker of human-animal difference, believed to be absent in humans: but "with the discovery of the intermaxillary bone, discourse network 1800 was already working to displace the human subject from its privileged position and precisely along the lines of the suture lines of a bone" (2018, p. 143).[6] In this recursive operation, it takes the later development of post-humanism for us to return to the anticipatory significance of this moment.

These thinkers take up Kittler's emphasis on recursion, and apply it back onto his own theories. They show that the exorcized elements of the discourse network 1800 return to haunt Kittler's very writing, and they show that Kittler's very writing allows us to see similar ideas actually developing around 1800. As Smith (2018) argues "this return with a difference is the defining characteristic of Kittler's method" (p. 141). This is an immanent critique of Kittler's work, taking up his emphasis on recursion to challenge the hard rupture with Romanticism he stages in *Discourse networks.*

What Weber (2018) and Smith (2018) don't quite explain, however, is how this recursion to the discourse network of 1800 plugs into contemporary media. What would be the media theoretical explanation for the presence of Romanticism in Kittler's work?

[6] Hegel fans will get the reference: "Spirit is a bone" (Hegel, 1807/1977, p. 208, §343).

Both point out the contradiction embodied in Kittler *writing*. Kittler, however, distinguishes between at least two forms of symbolic writing, each opening onto distinctive subjectivities – the flowing, autonomous, hallucinatory cursive of Romantic geniuses and the stochastic, mechanical type-writing of stenographers. What then is the rear window that Romanticism is sneaking in through?

Answering this question means turning to one last element of Kittler's work and the Kittler-inspired media theory that followed: namely, the split between analyzing techniques of power and analyzing media in-itself. The latter method tends to decenter the human in relation to a subjectivized technology. In a context in which Silicon Valley proudly proclaims the opposite – that humans are masters of media, innovating their own empowerment over and through technology – this kind of theory needs to discover the political stakes of its own arguments. Instead of proclaiming the human and the Romantic author dead and gone, this kind of theory needs to confront, politically, how these figures are sneaking back into history, post-Kittler.

Autonomous humans/Autonomous machines

The question of Kittler's own disavowed Romanticism establishes a resonance between the contradictions of Kittler's work and the contradictions of the digital discourse network: both, I argue, deal with a crisis of Romantic authorship. Whereas Kittler ends up being a Romantic author in his efforts to destroy Romanticism, digital subjects today are offered the experience of Romantic subjectivity, even as machines work to undermine this position. If, as Kittler argues, datafication destroys Romanticism once and for all, what allows this style of Romantic authorship, both in Kittler's work and in Silicon Valley's discourse network? How does an experience of Romantic subjectivity emerge in a world of numerical, algorithmically-determined meaning?

These questions can be addressed by thinking through the split in Kittler's work between techniques and media. On the one hand, some of his work focuses on investigating how social forms arise from being processed by certain techniques of power; on the other hand, some work goes deep into hardware, to assess the alien ontologies of machinic worlds. This split seems also to inform the fields founded by his students, which can be broken down into the study of "cultural techniques" and "media

archaeology."[7] Here, I want to show how Kittler makes use of both these approaches, how they structure certain debates in media studies today, and how they can help address the contradictions of datafication.

Kittler's early work, heavily influenced by Foucault, focused more on techniques of power. Indeed, it was partly a response to an oversight in Foucault's work: what actually causes the changes in epistemic regimes that Foucault (1966/2005) describes in *The Order of Things*? Kittler's answer: changes in the cultural techniques of information processing, storage, and transmission. This leads Kittler (1985/1990), in *Discourse networks,* to an analysis of how states, media, human subjects, and power congeal into a system propagated (in 1800) by the rigid gender roles of the nuclear family. Later, Kittler's work becomes more media-centric, focusing on media apparatuses themselves, their technical specifications and internal workings.[8] While this hardware-centric approach still loops back to the question of subjectivity, it is more interested in the ontological specificity of the apparatus itself. Media archaeology, understood as the study of hardware ontologies, foregrounds the non-human temporalities and technical recursions that unsettle progressive, user-centered narratives.

Whereas analyses of media ontology tend to scrap human agency in the face of machinic operations, analyses of cultural techniques tend to explore how a certain kind of human subject arises out of a medial context. Putting these approaches together offers a method for analyzing how a Romantic subject can arise in a very un-Romantic hardware context: while datafying the world *should* be the death of Romanticism, interfaces and techniques mediate this universal significance into Romantic forms. As machines eliminate white noise in the coding of everything as meaningful, humans get to participate in this Romanticism via the interfaces of social media, self-tracking apps, and recommendation algorithms. Unfortunately, the inheritors of these traditions of Kittlerian analysis tend not to see them as compatible, and to argue over which one is primary. I'm going to mediate these disagreements by being specific about what these differing

[7] For more, see (Winthrop-Young, 2013).

[8] This is a simplification for the sake of not getting side-tracked. Kittler still writes about literary texts late into his career, and still later moves from hardware to cultural techniques (Winthrop-Young, 2011a, pp. 3–4).

methods are good for. To develop their compatibility, I'll turn to a recent staging of the cultural techniques vs. media archaeology debate in the work of Mark Hansen (2015b) and show how using both methods is necessary for understanding Silicon Valley.

In his essay "Symbolizing time," Hansen (2015b) sketches out this same split, positioning himself in the hardware camp and Alexander Galloway in the other. He pushes against Galloway's claim in *The interface effect,* that the effects of computational media are best grasped through the interface. Conversely, Galloway (Galloway, 2012, pp. 17–18) criticizes Kittler for being overly focused on media objects, and not enough on processes of mediation. For Galloway, subjects are called forth ideologically by interfaces. By interface, Galloway does not mean a static object, but the process that structures interaction between humans and machines. As a site of translation and control, the interface is where ideology and computation are made to appear seamless. Governed by protocols and rules, interfaces enmesh humans in a power relationship with this capitalistic technology. Hansen (2015b) finds this view "overly pessimistic" and returns to Kittler to remind us that "underneath the layers of software that obfuscate the materiality of the computer at the very moment they afford us functionality, there lies an irreducible sensory reality" (pp. 214–215). While Galloway reads the social effects of the interface, Hansen argues for a focus on the technicity of computation.

For Hansen, the interface is merely an anthropocentric view of the machine. He finds in Kittler a refreshing way of letting the machine have its own autonomy, "its own proper operation…without functioning as a surrogate or substitute for human sense organs" (Hansen, 2015b, p. 219). In other words, by studying hardware, Kittler opens a way of viewing machines as having their own ontology. Hansen (2015a) develops these ideas further in his book *Feed Forward*, where he argues that "life in twenty-first-century media networks reveals something that has perhaps always been the case…: agency is *resolutely not* the prerogative of privileged individual actors…We can no longer conceive of ourselves as separate and quasi-autonomous subjects facing off against distinct media objects" (pp. 2–3). Influenced by Kittler, Hansen is arguing for a view of machines that is not subordinate to humans; and therefore, a view that does not prioritize an autonomous human in relation to the machine. In concluding, he calls the very concept of the "I" into

question, through the assemblage of human and non-human agencies that constitutes subjectivity (Hansen, 2015a, p. 258).

But, has the figure of the autonomous subject, served and extended by machines, really disappeared, as Hansen implies and as Kittler predicts? Hansen (2015a, pp. 2–3) argues that we actually *cannot* think of ourselves in this way anymore. But if this "can no longer" is really the case, why is the vulgar McLuhanesque view of media as the extensions of man so popular in Silicon Valley, among the very people tinkering with the allegedly de-subjectifying hardware? For instance, why do we get someone like Silicon Valley venture capitalist guru Marc Andreessen writing in his 2023 "Techno-Optimist Manifesto" "*All* the machines work for us" (emphasis in original). Andreessen's polemic offers a sweeping, grand-narrative of technological progress and human endeavor. Written in paragraphs that are mostly one sentence long, the staccato theorizing begins by telling us that "we are being lied to." The deception, we learn, has made technology appear much as Mark Hansen describes it, something alien, agential, unpredictable – something undermining human agency. Lies! Andreessen's real target, however, are those who put brakes on progress, who want to talk about "'sustainability'… 'tech ethics'… 'social responsibility'" (Andreessen, 2023). Instead, Andreessen argues, technology is inherently progressive and at our command – these deceiving views are masking this truth, by preventing the development of truly world-changing technology.

This view is explicitly Romantic.[9] "We believe in the romance of technology, Andreessen (2023) writes, "we believe in *adventure*. Undertaking the Hero's Journey, rebelling against the status quo" (emphasis in original). This techno-romance revives even "the soul" that Kittler (1985/1990, 1986/1999) would insist was crushed out by post-Romantic media: "we believe technology is liberatory. … Liberatory of the human soul, the human spirit." Indeed, Andreessen suggests that the progress of technology

[9] And implicitly. The style of writing in fragments, for instance, dates to the Jena Romantics, who used and celebrated this form, though Andreessen is likely taking this style from an intermediary: Nietzsche. Likewise, Andreessen's wide cast of citations echoes Romantic efforts to synthesize knowledge across disciplines into a universal, meta-knowledge. Andreessen moves from futurist/fascist poet Franco Marinetti, to actress (of Princess Leia fame) Carrie Fisher, to German philosopher Friedrich Nietzsche, to computer scientist Ray Kurzweil, to accelerationist neo-reactionary Nick Land. Blending poetry, philosophy, art, science, and politics is part of the Romantic project, in texts like Novalis' *Allgemeine Brouillon* (D. Wood, 2007, p. xxiii).

could lead to a kind of Pure Spirit. "Technology ultimately drives the world to what Buckminster Fuller called 'ephemeralization' – what economists call 'dematerialization'. Fuller: 'Technology lets you do more and more with less and less until eventually you can do everything with nothing'" (Andreessen, 2023). In this total transcendence of matter, "doing more" reaches infinity, and "with less" reaches 0, until only the human spirit is left.[10] Technology here is not just about human progress, but about the emergence of Romantic heroes, who are not afraid to wield it to open strange and wonderful realities. Both the world and the individual are re-spiritualized, transcending all limits.

Andreessen is not alone in the view that technology is there to create and re-create this kind of human figure. Elon Musk gives the narrative a darker valence, arguing we need to merge with machines in order to prevent them from taking over – but if we do merge, we humans will become magicians (see Chapter 4 of this dissertation). Even the more left-leaning "Silicon Valley visionary" turned tech critic Jaron Lanier takes the position that "the solution is to double down on being human" (Adams, 2017). In light of this, it's important to ask of Hansen's (and Kittler's) work why, in the moment that machines reveal themselves in their own autonomous existence does the individualized, agential human subject return with such a vengeance?

My answer is a synthesis of Galloway's (2012) and Hansen's (2015b, 2015a) approaches: even as we acknowledge that "21st century media" operate on their own, their interfaces are designed to call forth human subjects who *think* they are separate from and in charge of machines. In other words, Silicon Valley rests on the interface to call forth this understanding of technology. Andreessen here marks a strange inversion of futurism, which he celebrates. Walter Benjamin (1936/2008) defined futurist-fascism as "self-alienation [that] has reached the point where it can experience its own annihilation as a supreme aesthetic pleasure" (p. 42). Whereas art movements like futurism created a spectacle out of this technological destruction of the human, the interfaces of Silicon Valley create an aesthetic spectacle of agency that covers over the human- and environment-shattering effects of digital systems. Andreesen's futurism flips Marinetti's:

[10] Heinrich Heine's (1836/1985) critical reading of Romanticism describes the movement in precisely these terms: "Romantic art had to represent, or rather, suggest, the infinite, and purely spiritual relationships" (p. 9).

it aestheticizes a human autonomy and control that transcends technological destruction. Understanding the interface, as Galloway does, as a process of mediating the relationship between humans and machines, explains how interfaces can reinforce this subjective understanding. This emphasis on the interface is not to dismiss Hansen's work, but rather to pose the question from Samuel Weber (2018), cited above: how has "the autonomous subject" managed to sneak back in through media that seem, in their operations, to challenge it?

The strength of Kittler's (1985/1990) earlier approach in *Discourse networks* is its ability to answer this kind of question. Instead of making normative claims about how media must rupture ontology, it maps out how subjects can *experience* themselves as autonomous, even as they operate as functional components of a large, technical system. It tries to link a certain kind of subjectivity with the medial or technical conditions that a system deploys to train and harness those subjects. It is not so much saying "media prove the subject is dead;" instead it is saying "certain techniques give rise to the illusion of this kind of subject."

In computing, this illusion dates back at least to the advent of time-sharing in the 1960s. This distributed access to computer power from a distant terminal, "resulted," according to Laine Nooney (2023) "in a *sensation* of immediate interactivity and individualized use" (p. 24, my emphasis). Tung-Hui Hu (2015) highlights how this impression is actually based on the inhuman speeds with which a centralized computer switches between time-sharing users, such that "it *appeared* as if the computer were responding instantly to each user's commands" (pp. 38–39, my emphasis). Bernhard Siegert (1998), the name most associated with the "cultural techniques" approach of German media theory, says it explicitly in a somewhat snarky attack on Jürgen Habermas: "we are the masters of the media as long as they are domesticated by user-friendly interfaces in the system of everyday language," an effect that only exists to appeal to "the self-advertising of the software industry" (p. 79). This is why I would agree with Galloway that the interfaces of 21st century media are equally important

objects of study.[11] Silicon Valley's interfaces give humans the impression of autonomous subjectivity, while connecting them to the overall system in ways that facilitate its massive, human-crushing functionality. In other words, a gramophone never had an abyssal user interface, designed to call forth a certain kind of value-creating user. While the gramophone had affordances that shaped user interaction, it lacked the recursive, user-centered interface logic of contemporary digital systems. Today, to see an autonomous ontology in media means a *political struggle* against the interpellation of the interface. It's at the level of the interface that the autonomous subject sneaks back in. And if we are part of this kind of system, we won't be above its illusions, either.

Of course, interpellation is never universal or fully successful. As Elizabeth Ellcessor (2016) shows, interfaces can obscure, frustrate, or exclude, especially for those whose needs or bodies differ from normative design assumptions. Yet even this friction can reinforce the interface's ideological power. So often, the recursive response to this kind of friction is accessibility upgrades, as I've critiqued elsewhere (Melling, 2025b). This automatic upgrade already presumes an interface that mediates human agency in relation to machines. The failure of a subject to be interpellated by the interface becomes a recursively generated occasion for an upgrade that can draw their body in. This re-entrenches the ideological assumption that machines are there to serve humans.

This isn't to reject the more hardware focused approach, but rather to politicize it. It involves asking what is preventing us from relating to computers in the way Hansen recommends we do. This is only really possible by resisting Silicon Valley and its techniques of subjectification. Hansen's refusal to center the interface risks missing the full ideological function of Silicon Valley's apparatus. In short, I think Hansen's work actually misses its own political potential. This potential lies in the fact that it poses a challenge to a system of power that relies on subjects seeing themselves as autonomous, and it opens potential alternate relations with computers than the ones we've gotten stuck in. These ideas are indeed challenging to Silicon Valley: if the figure of the media-

[11] Though he misses something when he writes that "Kittler elevates substrates and apparatuses over modes of mediation, [and thereby] forfeits an interest in techniques in favor of an interest in objects" (Galloway, 2012, p. 18). Kittler addresses both. The discourse network of 1800, for example, is not a result of new media objects, but of new cultural techniques.

empowered subject wasn't threatened by technology, Marc Andreessen (2023) wouldn't have to write an embattled manifesto declaring how in charge of media we are. Silicon Valley is haunted by the autonomy of its own machines, by the extent to which media has taken over the "operational role" of consciousness (Hansen, 2015a, p. 254). The kinds of analyses of media ontology that Hansen and others undertake help to facilitate and study this haunting. The materiality of media is a counter to the interpellation of the interface.

The other advantage of this method is that it explores the possibility of alternative computational relations. Computers contain other potentials than the ones we live with! Beatrice Fazi (2018, p. 159) argues that we shouldn't understand computers as ushering in a rigid logic, but a radical openness and contingency. Wolfgang Ernst (2011) reveals the alien temporality of machines, that exists alongside humans: "media …turn out to be nondiscursive entities, belonging to a different temporal regime" (p. 240). Similarly, Hansen (2015b) argues for a "focus on the material, micro-physical effects of computing" (p. 215). While Silicon Valley is haunted by machinic autonomy, these scholars celebrate its psychedelic openness. If you peer into the internal workings of computational processes, your mind will be blown by how wild and alien they are. When I met Wolfgang Ernst in 2023, he said something like "one time I got so deep into the hardware that when I looked up hours later, I was totally de-subjectified," a fulfillment of what he elsewhere calls "the media-archaeological desire to be freed by machines from one's own subjectivity" (Ernst, 2011, p. 250). These are wild readings of computation that open out onto its radical potentials. Not only do they provide an approach for rejecting Silicon Valley's incessantly failing promise of freedom through technology, but they also suggest that celebrating the unexpectedness of computation could break out its repetitive cycles of recursion. Rather than discipline computers into incessantly reproducing a system of power, it means unlinking them from social reproduction and allowing them to produce new forms. In the conclusion to this dissertation, I focus on the contingency of computers as a political opening to prepare for: recursive systems predictably glitch, providing an opportunity for something different.

So, why aren't we living in this radical, open and psychedelic world? Or, alternatively, why aren't we, as Kittler envisioned, being left alone by computers? In *Gramophone, Film, Typewriter,* Kittler (1986/1999) predicts that computers will

eventually talk only to each other, transcending the human: “instead of wiring people and technologies, absolute knowledge will run as an endless loop” (p. 2). Originally written as an anti-humanist paean, today Kittler’s vision is strangely appealing to the humanist; it signals a relief from the dreary duty of endlessly upgrading our OSs and posting on Instagram. In contrast, we seem more enmeshed in the circuitry of computation than ever, functioning as appendages to a system that depends on users’ constant data production. Rather than leaving humans behind, computers have drawn users in by constructing the interface as a Romantic mirror.

Media archaeology struggles to explain this phenomenon. In all the emphasis on machinic agency and autonomy, it’s hard to then bring machines into the human-all-too-human realm of politics. If we are politicizing who controls the machines, then we’re already buying into the premise that humans (us or them) are in charge of media. Ironically, this recapitulates the Valley’s very ideology. It’s a bit of a double bind. If we insist on machinic autonomy, we risk depoliticizing Silicon Valley tech in the very moment that, some scholars argue, this is enabling a new form of political power (Varoufakis, 2023; Wark, 2019; Zuboff, 2019); but in insisting on the political stakes of Silicon Valley technopower, we risk returning to Silicon Valley’s own narratives around human control over tech.

Navigating this tension requires a model that allows for experimental, non-totalizing relations between machines and humans. Shintaro Miyazaki (2023) offers such an approach, that cuts through this depoliticized tendency in media archaeology. Miyazaki argues that the autonomy of machines can open political possibilities, precisely through performing operations their developers cannot anticipate or control. Machines, in other words, do not directly obey power. These unanticipated functions are not necessarily liberatory, but they invite experimentation towards something different. Importantly, he emphasizes that “data storage is limited” (Miyazaki, 2023, p. 37). Data must not be captured from everything. Sometimes it must be deleted. Algorithms must be paused. This opens a reading of media archaeology as not stopping at the ontology of machines, but exploring how computation could organize social life otherwise. A vision of machine agency open to indeterminacy and change suggests a counter to a meaning

regime that insists machines draw meaning out of everything. I'll return to these political possibilities of a media archaeological approach in my conclusion to this chapter.

So far, this chapter has set up a tension between machinic determination and interfaces of Romantic subjectivity, both in Kittler's work and in contemporary theorizations of media. I've argued that media theory needs to account for the disavowal of a Romanticism that seems to have returned via the very media that supposedly signaled its demise. This tension is not just of theoretical interest; it also reveals how Silicon Valley's data systems simultaneously undermine and reproduce the myth of authorship in an ocean of machinically-encoded data. What follows examines this contradiction through concrete studies of datafication, noise, and consumer-facing media. This illustrates how Silicon Valley's system of datafication – that insists on datafying absolutely everything – takes recourse to a Romantic discourse network that codes meaning everywhere. This means confronting not only the collapse of the information/noise distinction, but also the ambiguous status of authorship in a system where machines write the world yet mirror Romantic authorial status to humans.

As machinic and human systems converge in a shared symbolic system, authorship itself becomes a recursive, contested function. This contradiction draws on the two aspects of Kittler's method developed above: analysis of media ontology and techniques of subjectification. I begin by tracing how meaning is produced by technical infrastructures that code meaning everywhere and thereby eliminate white noise; I then turn to the techniques of self-recording and personalization that reflect this machinic meaning back to users as subjective expression. Coming at the discourse network from both ends—machine and human—reveals how the Romantic author is simultaneously revived and undone in contemporary datafication.

Universal scrape

To see how this shared symbolic system operates today, I turn to the moment when the internet shifted decisively toward a logic of total recording—what I call the *universal scrape*. This system does not merely capture meaning but *demands that everything become meaningful*, recursively linking technical inscription with subjective reflection. As Kittler (1985/1990) argues, the discourse network of 1800 functioned

through a recursive loop between mothers who coded the world as throbbing with subjective meanings, and subjects who processed these meanings into Literature for a female reading public. Similarly, as the digital discourse network has moved since the 2010s to a logic of total machinic recording, it has also looped subjects in with Romantic media that allow the recording and construction of subjective meaning. Two moments in 2010 mark the transformation to this discourse network: the federal prosecution of Aaron Swartz for scraping JSTOR, and the first public revelations about Facebook's sale of user data through third-party apps. These two events offer a stark contrast between competing logics of datafication – one aimed at public access and open meaning, the other at making everything meaningful and then enclosing meaning in private databases. This transition to total recording not only marks a shift in data regimes, but also in the conditions of subjectivity, where producing meaning and extracting data coincide.

In September 2010, the hacker-activist Aaron Swartz famously attempted to scrape the academic database JSTOR and leak millions of paywalled academic articles to the public. When he was caught, JSTOR agreed to settle with him: he would delete the downloaded data, and JSTOR wouldn't take legal action. Despite JSTOR's reluctance to file suit, MIT and federal prosecutors went ahead anyway (Gerstein, 2011). In a decision that was heavily criticized by activists, legal experts, and government figures, Swartz was charged by federal prosecutors with 13 felony crimes, ranging from fraud, to theft, to vandalism, and carrying a potential prison sentence of over 50 years and a fine of $1 million (Zetter, 2013). By all accounts, this was excessive. Swartz took his own life, an act which friends, legal experts, and journalists attributed to the unusually aggressive prosecution. In an irony of history, it's also in 2010 that Facebook was first outed for harvesting and selling user data via its third-party apps, in breach of its own rules (M. Harris, 2023, p. 599). Facebook wasn't prosecuted; it just committed to doing better.[12]

Swartz and Facebook represent two different logics of data scraping. Swartz championed the logic of the "open internet," the internet of wikipedia, piratebay, craigslist, and wikileaks that tried to circulate information outside corporate and state power. This was a time when, for some, "it seemed possible and self-evident that in the

[12] For a history of Facebook's long line of meaningless apologies, see (Chun, 2021, p. 3).

near future all knowledge and all information goods would become commons and would be forever liberated from ownership" (Miyazaki, 2023, pp. 27–28). The logic that has come to dominate today, known colloquially as "Big Data," is in many ways the inverse. Aaron Swartz scraped databases that were inaccessible to the public and made them freely available; Big Data privatizes and profits from data, derived from content that appears in public, or in pseudo-public enclosures. As Malcolm Harris (2023) argues in *Palo Alto*, this form of datafication winning out over others is largely a historical question of U.S. prosecutions and legal decisions, like Swartz's. The kinds of data scraping and sharing/selling that end up dominating are those that went unchallenged in the early struggles of Web 2.0: "Tickets.com, yes; Napster, no. Google, yes; Facemash, no. Acxiom yes; Aaron Swartz, no. Facebook, yes" (M. Harris, 2023, p. 521). These ironies persist throughout this hinge moment. Another famous irony: in 2013, Edward Snowden was charged with espionage for scraping data on how the NSA was…scraping data (to surveille U.S. citizens). NSA, yes; Edward Snowden, no. Big Data, yes; open internet, no.

The violence of these prosecutions underlies what has come to appear normal. This normalization is also the Romanticization of the interface, a logic of individualized mediation, rather than collectivized information. My point here is that the logic of datafication that governs the internet today is contingent, and that its specificity involves a certain way of coding and deciphering meaning. This logic ushers in a whole new reality of meaning making and subjectivity. Whereas cultural techniques usually process the distinction between information and noise, Big Data's techniques collapse this difference. It is a logic of discerning information *everywhere*, even in what might at first appear as noise. For Aaron Swartz, meaning was contained in an already enclosed database that he sought to copy and publicize; Big Data, on the other hand, tries to code everything as meaningful in order to enclose it into a database. As Kate Crawford (2021) argues, it is a highly specific and unusual logic to think "that *everything is data* and is there for the taking" (p. 93, my emphasis). Following this hinge of history, subjects see a different regime of meaning and a different idea of self.

Crawford (2021, pp. 105–106) relates an historical rupture that illustrates the transition from one data discourse network to another. In 1993-1994, George Mason University ran a federally-funded facial recognition technology study called FERET. This

study relied on deliberately "making data" by asking for volunteers to be photographed in various, carefully-constructed positions. Data had to be created; it wasn't just lurking in the shadows, shimmering with potential meanings. Two decades later, this had flipped. Duke, Colorado, and Stanford Universities (some funded by the U.S. Army) set up cameras to simply record hours and hours of uncurated footage of students, confident that meaning could be extracted from it. As Kelly Gates (2011, pp. 49–50) shows, this flip is necessitated by the technical and political framework within which facial recognition was being developed. FERET was only meant as a test to see if developing the technology further would be viable. As a security technology, it would eventually have to scan the real world, meaning that lab-created data would not be up to the job. This reveals a deeper, media-political premise underlying facial recognition. It assumes that in any given crowd, at any given time, there are hidden enemies, and the medium allows this assumption to be actualized. The technology seems to weirdly operationalize Carl Schmitt's(1963/2004) statement that "the enemy is our own question as *Gestalt*" (p. 61).[13] The enemy, in this phrase, reveals our question; and when facial recognition asks this question automatically of every single face, the whole world becomes suspect. This is a world full of secret meanings, in which everything must declare an answer to sensors that see meaning everywhere.

This is also the logic of the NSA's "'whole haystack' approach," which played out this same transition at the same time (Hong, 2020, p. 59). In an earlier discourse network, surveillance would attempt to separate information from noise ahead of time, finding targets and intentionally listening for meaning; in the era of datafication, everything must be recorded, because everything is potentially meaningful. Rather than look for the needle, the NSA collected the whole haystack: nothing is *a priori* noise. This isn't just a superficial change, but one that fundamentally changes what counts as meaning and how it is processed. The idea that meaning is everywhere and everything needs to be recorded constitutes a very different "system for writing things down."

What is this *Aufschreibesystem,* in which this form of recording information is not only possible, but inescapable? This is a model that sucks up *everything,* confident that it

[13] Originally from Theodor Däubler's poem "Song to Palermo."

contains some meaning, somewhere. It forms the basis of the exploitative system that Shoshana Zuboff (2019) calls “surveillance capitalism,” Yanis Varoufakis (2023) calls “cloud capital,” and McKenzie Wark (2019) calls “vectorialism.” It produces an incredibly strange reality, in which secret meanings are always lurking, ready to be deciphered from almost any action (or non-action). I call it the universal scrape. It’s this logic of universal significance that I analyze here as a recursion to Kittler’s discourse network 1800, which functioned by saturating the world with positive meaning. In the next section, I’ll analyze this at the system level, before turning to how the system operates in a recursion with media of subjective reflection.

Symbolic inundation

A system that wants to datafy absolutely everything has to deal with the problem of noise, created by the technical media of 1900. As Kittler argues, in 1800 everything contains a secret meaning; in 1900, “white noise appears” (Kittler, 1985/1990, p. 183). The discourse network of universal scrape datafication, I argue in this section, codes white noise back into meaning, back into the realm of the symbolic. Already, though, careful readers will notice that this language is inaccurate: in turning noise into meaning, the distinction between the two actually breaks down and no longer makes sense. To write about turning noise into meaning is still hanging onto distinctions relevant to a prior discourse network. I necessarily write here in language that is rendered obsolete by the process I’m studying, but the reflexive use of this obsolete language will help to show the transition. As sensing technologies record noise as meaningful, the discourse network functions once again through universal significance, making noise diminish as a category. Humans, however, occupy an ambiguous place in this network. It is, after all, sensing technologies and algorithms that enable this return to symbolical inundation, leading to an unsettling contradiction: who is the real Romantic subject, when the condition of universal meanings is an artificial intelligence? I turn to this question in the next section, after addressing the problem of noise.

Part of the reason universal significance circulated in 1800 was because writing was the only storage medium (Kittler, 1985/1990, p. 116, 1986/2013, p. 102). When the only way to store things is in symbolic form, you can only store meaning, not noise.

Writing stores words, not vocal resonances, and words are always meaningful.[14] As Kittler (1986/1999) argues, the distinction between meaning and noise is born out of technical media like phonographs, which "do not only store …the one signified or trademark, of the soul. They are good for any kind of noise" (p. 70). This noise reveals something extra lurking within the subject that is not a reflection of a self's understanding of itself – Freudian slips, meaningless bodily sounds, the signs of the unconscious. The Romantic sense of authorship is based on the idea that a self mediates its own interiority through writing – this is what Kittler is referencing when he talks about "the soul." Revealing an interiority of noise displaces this Romantic of self, allowing the storage of something extra, beyond this singular, interior self.

If this is obscure, think about the feeling of listening to a recording of your own voice. The sound of my voice is alien, unrecognizable: is this who I really am? And do I really make these horrible smacking sounds with my mouth all the time? I thought I was constantly expressing my self-aware, inner meaning! Whereas the discourse network of 1800 could only store expressions of the self, the storage of the discourse network 1900 undermines the possibility of self-expression. What is expressing itself on the phonograph is no longer an individualized, agential human whose interiority corresponds to their self-concept. The phonograph reveals something strange to ourselves, lurking within.

Kittler (1986/1999) demonstrates this through Salamo Friedlander's 1916 story "Goethe Speaks into the Phonograph" in *Gramophone, Film, Typewriter*. The protagonists, armed with 20th century technologies that will enable them to capture and store the still reverberating sonic vibrations of Goethe's voice, expect this voice to speak to them out of the discourse network of 1800; that is, proclaiming poetic meaning. Reaching into the past with new media, however, imposes the new discourse network's conditions over the old: namely, voices become frequencies, not expressions of inner soul. After a somewhat delirious speech, Goethe is simply heard snoring. This noise offers a break in the flow of meaning, giving the engineer in the story a chance to whisk

[14] For Kittler, it takes the advent of media like phonographs to enable the creation of nonsense words, as in something like Dadaist poetry.

his love interest away from the seductions of the dead poet. As Kittler excitedly notes, the engineer emerges romantically-triumphant: engineering has reduced Goethe's once en-souled voice to sound waves, and the poet is displaced by the one who can master them. Henceforth storage is not a matter of symbolic meaning; snores replace sonnets.

The gramophone registers the unconscious by recording the meaningless noises bodies make – groans, coughs, Freudian slips, sputtering convulsions. Carlo Ginzburg (1979/1980) shows that, in the late 19th century, these automatisms are what allow state institutions to subjectify bodies in a decidedly un-Romantic way. Using signs of individuality that those bodies cannot control – finger prints, autonomous behaviours, facial structures – the state captures an individual apart from any notion of "the self." It is precisely because these markers lie beyond the self that the state can wield them to pin people down. The discourse network of 1800 individualizes by storing only writing, the symbolic expression of self; the later discourse network individualizes by storing precisely those expressions that are *not* reflective of subjective interiority.

The digital recursion to the discourse network of 1800 is not a simple return, but a way of incorporating noise back into the symbolic. Unlike the poets of 1800, the universal scrape is not naïve to noise. It has to deal with the discourse network of 1900 and the white noise it discovered. To recalibrate it as the symbolic, it develops new techniques to extract meaning from what hitherto was white noise. Mark Hansen (2015b) shows this through his analysis of the slew of new sensor technology that characterize what he calls "21st century media." These computers usher in "a non-human or machinic symbolic that…captures a vast amount of what lies outside human perceptibility and, via time axis manipulation, makes it (at least potentially) experienceable [by humans]" (Hansen, 2015b, p. 224). By capturing what is outside human perception, these machines render a "symbolic of the real" (Hansen, 2015b, p. 223). In other words, what is previously in-sensible, in the double sense of the term, is symbolized by machines and thereby revealed to humans. And any realms of noise remaining are simply waiting to be commodified into data. All you need to do to enclose noise into the symbolic is to design the correct, symbolically-trained ears, the purview of countless tech startups.

Hansen (2015b, 2015a) is focused on the hardware capacity to capture previously in-sensible phenomena. However, it is also important to consider the cultural techniques that govern how this occurs. It's not just a question of the hardware potential to capture new phenomena, but the specificity of this capture in practice. How are information and noise differentiated in this new state of affairs? This is a return to the question of the discourse network, or "the network of technologies and institutions that allow a given culture to select, store, and process relevant data" (Kittler, 1985/1990, p. 369). The institutional practices of capture are equally important. As Sun-ha Hong (2020) argues, datafication is "not merely a set of technological functions but also an *institution*," that produces "norms and rules by which the calculation and circulation of datafied bodies are brokered" (p. 180). I'm extending Hansen's focus on the new potentials of recording media, by including the norms of the universal scrape. In datafying *everything*, machinic sensors don't just capture new realms, they also turn the noise of discourse network 1900 back into the symbolic, thereby collapsing this distinction.

Just try it: whatever sounds you make to your Alexa, she will search for meaning in them.[15] As Stephen J. Neville (2020) writes, an AI voice assistant "indiscriminately treats all sounds as data" (p. 345). For instance, it "not only listens to linguistic flows but overhears one's vocal biometrics, affect, and the daily rhythms of the body in its domestic habitat" (Neville, 2020, p. 347). Today, there is great anxiety about the incoherence of algorithmic output; yet, the input side of the circuit is equally incoherent, as algorithms toil to render a slew of household gibberish into some kind of signification. Like the minimal signifieds of 1800, ma, ba, sh, these random sounds get pieced together until they register as meaning on an interface. Thanks to this tireless algorithmic labour revving in a data centre somewhere in Nevada, your sneezes and coughs become the building-blocks of potent signs. There is no noise you can make anymore, that can't be turned into some kind of meaning. And when *everything* is recorded as potentially meaningful, then all information is once again forced through the grid of the symbolic. It is up to AIs to squeeze some meaning out of it, but it will be found.

[15] As of 2025, this is literally the case, as Amazon revokes its "do not send voice recordings" privacy feature (Harding, 2025).

These twists and turns of recursion in and out of the symbolic might be a bit hard to follow, so I'll illustrate with an example. Let's record poor snoring Goethe with the technologies of the 21st century, and see if we can help him out. Goethe merely has to slip on his Oura Ring Horizon sleep tracker to see how his oral emissions once again speak an inner truth! As long as he's also purchased the wearable detector patch, even his snores will register ensouled truths. Correlated with his bodily spasms, his REM heart rate, and the rhythm of his breath, Goethe will receive a stream of recommendations on who he really is, for this is "data so accurate, *it's personal*" (*Oura Ring*, 2024). Every belch and gyration is a harbinger of inner truth. The very premise that a device "translates your body's most meaningful messages" (*Oura Ring*, 2024), already assumes that bodies have been coded as emitters of subjective meaning. While body and consciousness were riven apart by the recording media of 1900, Oura is "uniquely designed to pair your mind and body" (*Oura Ring*, 2024). Bodies speak in the symbolic once again, as "Oura Membership gives your body *a voice*" (*Oura Ring*, 2024). Goethe's AI trackers can reveal an inner self he always knew was lurking somewhere in the noisy sea of meanings, waiting to speak: his best self. Whereas the phonograph records the Real and so processes the limits of the symbolic, Big Data processes the Real back into the symbolic. What the discourse network of 1900 would have registered as meaningless noise or pure frequency, sensors like Oura Ring code as revealing the innermost subjectivity of their emitters: contra 1900, "white noise [dis]appears" (Kittler, 1985/1990, p. 183). Today, these bodily emissions register once again as expressions of a Romantic individuality, recorded and processed by a new female muse, going by the names of Alexa, Siri, Cortana.

In other words, AIs take recourse to the fundamental medium of Discourse Network 1800: the mother's mouth. It is this maternal speech organ that is capable of encoding meaning into everything, even into noise. Today, it returns through the universal scrape of datafication. The Oura Ring and countless other trackers mediate this data Romantically, mirroring it back to its users as a form of self-mediated growth: whether in terms of fitness, health, mental focus, or workplace productivity, the goal is self-directed self-development. Through these interfaces, the project of datafication renders the coldly un-Romantic flow of numbers into Romantic subjectivity, grounding the discourse network I call Digital Romanticism.

This comparison, however, presents immediate difficulties. First, sleep-tracking data is not poetry, bodies are not souls, and passive emission of meaning is not *Bildung.* Second, Goethe is having meaning reflected back to him by the Oura Ring Horizon app interface, not drawing it out of nature himself: who is actually channeling meaning out of the sea of information? Who actually gets to be a Romantic subject here? I'll address the question of the Romantic author in the next section, and the problem of tracking vs. poetry in the one that follows.

Contested authorship

If Romantic authors only emit meaning, not noise, then techniques of datafication seem to re-open the possibility of this kind of subject position. Destroyed by the noise-capturing media of 1900, the Romantic self gazes once again into an interior depth of pure significance via the tracking technologies of the 2020s. However, these technologies themselves immediately present a difficulty to this subject: Who's the author, the machines or us? The author here stands in for that self-writing subject, in charge of mediating self and world, producing its own individuality.

For Olga Goriunova (2015), this is a fundamental question raised by techniques of datafication. Analyzing the art project *Curating YouTube,* which compiles identical gestures users have posted to YouTube into a massive video grid, Goriunova argues that datafication recreates elements of both the discourse networks of 1800 and 1900. On the one hand, the "generic, meaning-lacking aesthetic and cultural acts" posted to YouTube function something like a meaningless "language speaking itself to fill a gramophone record" (Goriunova, 2015, p. 158) – that is, they mirror the noise that undermines Romantic subjectivity. On the other hand, "it is poetry, diaries, writing exercises that previously individuated people into singularities - and it is now the database, among other computational algorithmic systems, that enables the creation of individuated subjects" (Goriunova, 2015, p. 164). Ultimately, Goriunova settles on the database as inheriting the mantle of Romantic subjectivity: "the *real author* here is not even the database manager or designer, but the database model itself" (Goriunova, 2015, p. 169). In other words, this is the opposite authorial picture to Marc Andreessen's (2023) technologically-heroic

human. It's a mistake to settle this question too quickly; in this inundation of meanings, it's more significant that the author is a question, than what the answer to this question is.

Who counts as the real author? This question preoccupied Romantic era literature, too. The mass production of texts, aided by changes in printing technology, publishing, and education, meant an inundation of pulpy, imitative literature to a public with a hunger to read. Capital L Literature had to find ways to "to dissociate the mechanically manufactured from the truly inspired original text" (Benesch, 2002, p. 15). According to Klaus Benesch (2002), the theory of "originality" or "authenticity" popularized throughout Europe by Edward Young's 1759 text on "Original composition," serves this function for Romanticism. The idea behind this concept is that it allows the differentiation of works that spring directly from the poetic interior of the author, from mass produced texts that lack this flow of interior truth. As this is a problem of mass production, it also becomes a technological anxiety. Romanticism has to square "the modern notion of authorship and the evolving concept of the machine as all-encompassing technological system" (Benesch, 2002, p. 13). Romanticism attempts to guard the status of "author" from both imitative hacks and a mass producing technological apparatus.

The Romantic situation we find ourselves in today is, as in the early 19th century, one of contested authorship - not between authentic poetry and the mass production of texts, but between human users and AIs. As Philipp Schönthaler (2024) argues, AIs have changed from their origins as rational computing machines and have been configured along more Romantic lines; this machinic auto-poietics invites equal parts hope and fear over the future they will produce in their alleged self-determination. The question, then, is not who "the real author" is, but the situation in which the real author is a question. AIs and humans both take on the trappings of autonomous subjectivity and authorship, in a contested situation. Even as AIs do the work of determining meaning, Silicon Valley must find ways to mediate an authentic subjectivity to humans: as AIs make sense of the sea of data, humans must find ways to sail across it.

"Sea of data" is a phrase taken from the NSA, who complain that they have so much data, it is beyond human comprehension to produce meaning from it. In other

words, it speaks to their own impotence as authorial subjects. This hermeneutic situation is described in Hito Steyerl's (2016) essay "A Sea of Data." Steyerl troubles the very distinction between information and noise: when everything is harvested as data, patterns will be found, whether they reflect reality or not. This search for meanings is the job of AIs. Faced with the sea of data, they are tasked with hallucinatory pattern-recognition, an activity Steyerl terms "apophenia." Apophenia means finding patterns in random data, seeing meaning where there isn't any in actuality – reading stars as constellations is the example she gives from the human world. But here, distinctions begin to break down: meaning/non-meaning, actuality/virtuality, information/hallucination. The sea of data itself necessitates that AIs find meanings in it, whether they are there or not.

However, to speak of meanings "being there or not" is incorrect: this phrase I've just used is speaking the language of an older discourse network to the new one. This clean distinction between information and noise, meaning being present or absent, no longer applies to the Sea of Data. "Meaning" itself changes to match the patterns AIs find in data – and meaning will be found. It is always already "there." We live in a world of machinic meaning, and social reality reshapes itself to fit AI apophenia. Drone strikes of random people are Steyerl's (2016) most pressing example of this reshaping of meaning; and examples of false arrests, missed ambulances, denied bail, and a host of other incoherent oppressions are now commonly known consequences of hallucinatory algorithmic decision making (Cheney-Lipold, 2017; Hong, 2020; O'Neil, 2016). Contrary to the use of the term since the advent of generative AI and its gaffes, hallucination here is not a bug, but a feature. Just as Romantics learned to hallucinate an audio-visual feed from the rustlings of nature (Kittler, 1985/1990), AI scans the sea of data for hallucinated patterns, which, regardless of questions of accuracy or bias, will determine what counts as meaning. We live in the meaning of the hallucinated patterns AI find in ubiquitous data.

As Steyerl (2016) relates, this coding of meaning everywhere includes things that are patently non-meaningful (from the perspective of an earlier discourse network), such as static and blank images. An image of television static is labeled "secret." An AI is able to recognize patterns in "pure noise," revealing a certain kind of "machinic vision," or "hardwired ideolog[y]" of ubiquitous meaning (Steyerl, 2016). If we live in this world of

machinic vision, then, as in 1800, there is no such thing as white noise. There is only the endless processing and production of meaning.

Yet here it is important to make some distinctions: Silicon Valley's network has its nuances. Whereas the German school system trained poets and bureaucrats who could perform the "complexity reduction" necessary to producing determinate meaning in this excessively coded world (Kittler, 1986/2013, p. 110), datafication depends on AI. Today, it is algorithms – not humans – who both imbue the world with meaning (transform it into data) and interpret this meaning. In Kittlerian-Romantic terms, AI seems to be both muse and poet, mother and bureaucrat: the total subject. As Goriunova (2015) writes in this situation of machine authors, "Kittler…would be happy now" (p. 169).

Silicon Valley, however, is not going to let this situation stand. Take Silicon Valley guru Chris Anderson's (2008) highly influential and somewhat megalomaniacal essay from the advent of universal scrape datafication, "The End of Theory." Here, Anderson praises the work of entrepreneur-biologist J. Craig Venter, who uses "high-speed sequencers and supercomputers that statistically analyze the data they produce" to genetically sequence, not "individual species" but "entire ecosystems." Note the collapse here: these sequencers both "produce" and "analyze" the data. In this tautology of meaning-making, what's left for humans to do? How about LARPing as Captain Cook? In 2003, Venter took his supercomputers aboard his private yacht *Sorcerer II*,[16] and went about "retracing the voyage of Captain Cook" in order to sequence "much of the ocean," before moving on to "sequencing the air" itself! In this process, he "discovered" thousands of new, invisible species (Anderson, 2008).

Importantly, this discovery is near meaningless, as we only know the species are there, we don't know anything about them. It is a kind of perfect encapsulation of the data-rich discourse network: we know there is meaning all around us, we just don't know what it means! In Kittler's Lacanian terminology, datafication has tried to collapse the distinction between the Real and the symbolic by bypassing the imaginary. The imaginary

[16] A reference to the William Friedkin film *Sorcerer*? In the film, "Sorcerer" is the name of the truck which the protagonist must drive on a deadly course through the jungle, while laden with leaking explosives. Venter is in fact doubly LARPing, as an 18th century explorer, and a 1970s Byronic, action hero. Perhaps he's playing the Tangerine Dream soundtrack on his voyage.

is the illusion that all the fragments add up to some kind of whole. For Lacan (1949/2002), this is what allows egos to imagine themselves as whole; for Kittler (1986/1999), this is what allows technological processes to appear as a continuous flow. In Venter's expedition, as in datafication more generally, this imaginary whole is simply deferred: once we get enough data, the pieces will assemble into a total understanding! Datafication turns out to be the data fiction that there is a whole, out there somewhere.

Deferring discovery means that the journey is endless. Perhaps the most interesting move in Venter's project is the invocation of Captain Cook. This massive 'discovery' of meaningless meaning seems less to be about increasing knowledge, and much more to be a stage for subjective self-stylization as 'discoverer,' that can then be celebrated as a model in the pages of *Wired* magazine. It seems almost redundant to point out the neocoloniality of this narrative of infinite abundance and extraction, given that Anderson and Venter perform the connection themselves! More subtle here is the way the narrative puts humans back in the driver's seat of a world mediated by machines. The hermeneutically-abundant world is not just for AIs: anyone with a private yacht and an itch to cosplay as a colonizer can also take on the trappings of Romantic subjectivity.

In short, there is a conflict here, that Silicon Valley resolves through the promise of this kind of self-mediation. Anderson's text is vaguely Kittlerian – in the stream of numbers, it declares the end of theory, of hermeneutic knowledge production, and of the human in determining meaning. Like Steyerl's essay, it implies that AIs will scan the sea of data (literally) for meanings that humans must simply accept. But then, it makes a decidedly non-Kittlerian move: through Venter, Anderson doubles down on the figure of heroic, individualized, self-fashioning human, who can take on the role of discoverer, even though his job is basically just steering the boat.[17] Silicon Valley must find ways to mediate human autonomy out of this AI-induced hallucination. That this subject position is maybe only available to the thin slice of the population with private yachts is disavowed. At the helm is the tech entrepreneur, whose charted course may leave

[17] How "non-Kittlerian" this is, is up for debate, given that Kittler populates his work with a slew of Romantic heroes. These are the inventor-engineers of technologies that surpass the human – Edison, Turing, de Forest, etc. The point, however, remains the same: there is a reassertion of Romantic forms, even in a disavowal of Romantic values.

thousands jobless or destitute, the unavoidable flotsam of this voyage of discovery. But! Silicon Valley can offer us the next best thing: a host of cheaper consumer technologies that grant the same experience of self-directed mediation. While Venter interfaces with datafication technology through his ship, consumers can do so through the interface of countless apps that mediate data into their own private journey. I'll discuss these interfaces in the next section to show how machinic apophenia can become Romantic meaning – even if you don't own a yacht.

This contestation between AI and human subjectivities is fundamental to this discourse network. The system is always anxious about who is really determining meaning for whom. This conflict has its origins not only in early computing (Chun, 2021, p. 13), but also in the early cultures of Silicon Valley. Silicon Valley's foundational promise was to offer an alternative to the crushing, bureaucratic technologies that govern factories and nation states (O'Mara, 2020, pp. 115–122). It begins with anxiety about technological ordering, but this anxiety is now mapped on to its own creations. Today, this tension manifests in "AI = The Apocalypse" anxieties of machines going *Terminator,* and taking over the world (Chun, 2021, p. 12). Likewise, it structures the narrative of popular films like *The Social Dilemma* (Orlowski, 2020). Masquerading as a critique of consumer tech, this film actually depicts things in Silicon Valley's very terms: either we are empowered absolute subjects, or we are totally brainwashed by manipulative algorithms who are determining the world. Even those who pose as Silicon Valley tech critics, like Geoffrey Hinton, play into this dynamic, by repeating the same stakes (Rothman, 2023). Indeed, Hinton's apocalyptic visions seem slightly bad faith given his continued financial investment in the very AI he claims will threaten humanity (Schönthaler, 2024, p. 162). In his narrative, it is precisely because AI threatens our autonomy from technology that we need to get rid of it: who's in charge, the machines or us?

The terms of this either/or question structure each other and are never resolved. Calling on Hegel, Wendy Chun (2021) argues that this is a product of treating computers as "slaves," which "inevitably invoke[s] fears of absolute dependence and rebellion" (2021, p. 2). Yet, the Hegelian master-slave dialectic resolves itself into the higher truth of self-consciousness, and ultimately a shared unity of "perfect freedom and

independence" (Hegel, 1807/1977, p. 110). The Silicon Valley master-slave dialectic seems, instead, to endlessly circulate, stuck in a recursive loop. If our definition of our own autonomous, self-creative individuality rests on controlling machines, then we will always be anxious about the technologies we rely on.

This tension is the paradoxical and recursive logic of Silicon Valley's discourse network. Silicon Valley offers ever new technologies to mediate the brute objecthood of data into subjective becoming; yet, these very technologies call this position into question, requiring an upgrade in an anxious recursive looping. This is a dialectic without *Aufhebung*, or resolution into a higher form; instead, an endless, anxious loop, that generates more and more "solutions." Digital Romanticism functions recursively, both in its return to the media-subjectivities of the early 19th century, and in a tighter loop, in which the very conditions that are supposed to fulfill its Romantic promise end up undermining that fulfillment, thereby demanding a repetition. At any moment, we might be subjectively empowered users, mediating our own self-creation out of the world, like J. Craig Venter…but then again, we are simultaneously objectified bits of data, groomed, extracted and manipulated by machines.

The alphabet of discourse network 1800 functioned as a medium that could only store expressions of inner subjectivity; hence, deep subjectivities came into being through the use of this medium. The universal code of datafication is different. Although it similarly creates an order of meaning without white noise, it stores machinic subjectivity, rather than human subjectivity. As Philipp Schönthaler (2024) argues, AIs have long since left their origins as rational, externally-determined, calculating machines and have become Romantic subjects. Like Romantic poets, they process the hermeneutically abundant world, writing its meaning as self-determining, agential beings. This means that Silicon Valley requires other techniques to mediate a human Romantic subject against the perceived threat of auto-poietic AIs. As I'll show in the next, final section, the interfaces of Silicon Valley tech are designed for the same kind of subjective stylization that Venter performs in his explorer cosplay. Silicon Valley offers interfaces precisely to mitigate this autonomously created machinic ontology, and remediate the sea of data as a reflection of self-creativity.

Subjective occasionalism of the feed

Can we all be like J. Craig Venter, sailing the sea of data as heroic subjects, self-mediating our own becoming? In this section, I argue that self-tracking sensors, recommendation algorithms, and social media fulfill this function within the discourse network. They operate through a certain kind of Romanticism, what Carl Schmitt (1919/1991) calls "subjective occasionalism" (p.17). Subjective occasionalism is a framework through which any and every experience is taken as an "occasion" for subjective becoming. Say you're looking at a mossy old grave. This fills you with feelings of sublime emptiness and yearning. Subjective occasionalism means that you take this as an opportunity to cast yourself as a deep thinker, confronting dark truths, and, if you're Wordsworth, then you can write a poem about it. The grave becomes a reflection of your own genius. Or say you're at an Earth Day rally. You take a selfie with Greta Thunberg, post it on Instagram, and head home, satisfied that you are someone who cares about the Earth – look, there's even proof!

Schmitt's (1919/1991) target in *Political Romanticism* is not Romanticism per se, but liberalism. The conservative, and later Nazi, uses Romanticism to criticize the politics of Weimar democracy, which he claims is unable to identify with a cause for any reason other than individual caprice. Political Romantics take on their political positions solely for the ways they allow them to cultivate personal identity, not for any larger goals. Schmitt's conservatism, however, prevents a more interesting, structural analysis. By overly focusing on frivolous liberals, he doesn't ask the media question: what systemic processes actually allow subjects to constantly mediate the world as an occasion for their own subjective cultivation? To answer this question, it's important to shift the focus from shallow individuals to techniques of mediation. In many ways, this reframing of Schmitt is precisely what Kittler (1985/1990) does in *Discourse networks.* Though he doesn't cite Schmitt in this book, Kittler deals with him at length in other contexts. In other words, he was familiar with Schmitt's work, and *Discourse networks* seems very much to be an (unattributed) update to *Political Romanticism*, with a focus on cultural techniques rather than political flakiness: the discourse network rests on techniques that mediate the world as always already filled with subjective meaning.

Kittler's update takes the pressure off the individual and puts it on the system. For Schmitt, insouciant Romantics go around narcissistically seeing only themselves in everything; in other words, this is an individual failing. For Kittler, the system codes subjective meaning into the world, which creates this kind of individualized Romantic subject in the first place. Subjective meaning is not produced by Romantic individuals; rather, it produces them. It is already waiting for them in the world, mediated through a technical system.

Like Schmitt, many critiques of 21st century media also turn to the individual to analyze the problem of self-absorption. In psychology and the social sciences, the prevailing discourses on digital subjectivity are narcissism and addiction (Andreassen et al., 2017; Steffens, 2020; Taylor, 2020; Vanhoffelen et al., 2024); these frame the social problems of digital media through individual pathology. A related set of critiques with a more humanistic approach focuses on psychological decline (Carr, 2010; Chayka, 2024; Keen, 2012; Lanier, 2018; Turkle, 2011). These tend to view digital technology as perverting the human in some way, and call for changes to individual use. As I discussed in the introduction, even critical takes that see technology as part of capitalist power also tend to recreate this individualizing frame (Seymour, 2019). In many ways, these repeat Silicon Valley's own stakes, discussed above, of facing off an autonomous human against a threatening machine.

I propose a different approach. Instead of viewing narcissism as a decadent decline or a problem of individual willpower, I'm moving the focus to the way Silicon Valley media frames the world for its subjects. In the previous sections, I've shown how universal datafication codes everything as meaningful; in this section, I show how this meaning becomes a reflection of subjective interiority, through the interfaces of user-friendly media. Subjective occasionalism – treating any encounter as an occasion for subjective reflection – is a media problem, more than a problem of human behaviours. It stems from power mediating the world in a certain way, such that subjects always see themselves reflected out of it. User interfaces take their cue from J. Craig Venter's Captain Cook cosplay, remediating the world as a kind of virtual playground for Romantic subjects to play out their own becoming.

For Silicon Valley, there is huge benefit in subjects seeing the world as throbbing with an abundance of personal meaning. While universities can set up cameras to record their students for data-mining purposes and the NSA can tap your phone, it's a real coup to get everyone to individually record everything *for you.* Everything must be recorded! This is not only the proclamation of the discourse network, but the automaticity of the fingers that reach for the smart phone to take another picture. In a discourse network where everything has meaning, subjects record and process information, autonomously, all by themselves. Interfaces offer this form of mediation: they show us something like our own subjectivity reflected back out of the world, thereby compelling us to (autonomously) produce even more data.

Let's return to Goethe snoring contentedly as his Oura Ring gives voice to his nocturnal spasms. This example can offer a demonstration of how a wider array of self-tracking technologies operationalize subjective occasionalism. Remember, Oura produces "data so accurate, *it's personal*" (*Oura Ring*, 2024). This is the Romantic gift of AI mediating data through the interface: the inhuman stream of numbers becomes a series of personal insights. Perhaps the Oura Ring tells you "your readiness score is above your average today. How do you feel? Looks like you're ready for some sharp thinking today!" (as cited in Oh, 2024). On the back end, the data flows as a stream of un-Romantic numbers; but here, AIs mediate it to you as a reflection of your deep interiority. You, in turn, can mediate this objectified version of yourself back into your own becoming: Ach, my readiness score is so high! Today's the day, I sit down and write my dissertation! I am a true scholar!

The ring tailors this mediation to your subjective state. For instance, by activating "Rest Day," its recommendations will shift to taking it easy, releasing stress and strain (Song, 2021). By undergirding a discourse network in which everything has *a priori* meaning, AIs invite humans to bask in a world that mirrors a subjective significance and becoming. Rather than these sensing devices undermining the felt autonomy of the human (Hansen, 2015a), or inaugurating "ultrarationalism" (McQuillan, 2022), they double down on the subject by ensuring it can see itself in the plenitudes of meaning that ground this system. And by experiencing the world and the self in this overly-meaninged way, subjects cannot help but constantly record everything. Data might standardize nature

into exchangeable and monetizable units, but Silicon Valley's technologies of the self can mediate these units back to each individual subject in terms of their own self-becoming.

Under the aurality of this maternal AI, human subjects cannot help but incessantly write themselves. In an era of ubiquitous sensing technology, bodies are constantly emitting data and receiving signals that inform their milieu (Berson, 2015; Hansen, 2015a; Hayles, 2017). It is, as in Kittler's (1985/1990) description of the poets of 1800, a "writing that no longer require[s] the virtues of vigilance and attention" but which writes on automatically, "without disturbance or channel interference" (p. 112). Just as the discourse network of 1800 was "a culture in which reading and writing were coupled and automatized" (Kittler, 1985/1990, p. 108), today Big Data erases the distinction between "reading, writing, and being written" (Chun, 2016, p. 94). In both cases, information flows ceaselessly, automatically, in and out of bodies; there is a constant production of meanings that are "fed forward" to the subject in terms of their own self-understanding (Hansen, 2015a). It is in this context of incessant tracking and storage that Jeremy David Johnson (2021) argues that "in an algorithmic world, the self is simultaneously everywhere and the center of everything" (p. 39). The human Romantic subject returns, reflected by the algorithmic muse.

In his ethnography of early self-tracking enthusiasts, Josh Berson (2015) shows how this kind of tracking inaugurates a new relation to the body. Even as constant datafication of the body "invites a kind of self-estrangement, a becoming-other," it also allows a leveraging of this estranged self-writing into new and more authentic experiences of subjectivity (Berson, 2015, p. 103). Berson describes how technologies like sleep trackers, originally designed to aid people with disabilities, open the possibility of self-augmentation and change. Self-tracking might seem to desubjectify the self by turning it into an object. However, this object is remediated back into the self. Self-tracking thus "promise[s] not a future where users are turned into hyperrational machines but, rather, a more 'authentic' relationship to one's humanity" (Hong, 2020, p. 164). In apprehending themselves as objects, self-trackers can appropriate and develop themselves as subjects.

In other words, self-trackers sit somewhere in the Fichtean tradition of Romanticism, inherited by Schlegel, Novalis, and others. *Ur-Romantiker* Johann Gottlieb Fichte articulated the most radical expression of Romantic selfhood, which later Romantics took up, tempering it somewhat of its solipsistic excesses. Fichte (1795/1982) argues that consciousness arises through a radical act of self-creation: "the self is that which it posits itself to be, and there is nothing in it that it does not posit in itself" (p. 222). However, it constantly comes into contact with "the non-self," its own oppositions and limits. For Fichte, this tension is repeatedly resolved as the self confronts the objecthood of its own limitations in the world. Through the work of Romantic mediation, it finds ways to appropriate the non-self and overcomes its limitations; but then, it always finds itself confronted by new limits, itself as object once again. In other words, the self is constantly striving towards its own absolute subjectivity and then having to remediate itself in a frenzy of self-productivity. Novalis and Schlegel, discussed in greater detail in the previous chapter, both take up the possibility of the self mediating itself as an object, with the goal of thereby developing and forming itself.

"Recommendation" is the name given by the discourse network to this world of objective data being remediated into subjective meaning. The Oura ring sends out a stream of recommendations based on the data it harvests from your body. But recommendation is not just limited to self-tracking. It is a broader cultural technique within the discourse network, which ensures that the world is inescapably framed for the self as always-already subjectively meaningful. Whether that self likes it or not, it has no choice but to inhabit a world of its own projected interiority; it is constantly interpellated into realizing its own desires.

Netflix is the entity responsible for this recommendationization (or Romanticization) of the world, as is influentially argued by Blake Hallinan and Ted Striphas (2014). Studying Netflix' competition to improve its recommendation algorithm, they argue that recommendation has inaugurated a more general "algorithmic culture" (Hallinan & Striphas, 2014, p. 119). In this culture, cultural artifacts, like Netflix productions, are selected and produced according to algorithms' understandings of people's preferences. In other words, the world begins to mold itself to reflect each individual's desire.

Netflix' goal in improving its recommendation algorithm is to "'connect people to the movies they love'" (Netflix, as cited in Hallinan & Striphas, 2014, p. 117). This sentence deserves a close reading: at first, it seems paradoxical. If people love certain movies, then aren't they definitionally already connected to them? In what situation would it make sense to need to connect people to something they already love? The paradox is dispelled within a discourse network in which personal attachment is an *a priori* rather than an *a posteriori* phenomenon, coded in advance rather than developed over time. In this situation, love is constantly emerging from out of a world that is pre-coded with subjective meanings. Netflix is revealing recommendation as a cultural technique for coding worlds as always-already resonating with love, even before any connection is made. Subjective attachment is already present, even before watching, because the meaning lurking behind all things will be your desire.

The discourse network of 1800 relied on a gendered division of labour to achieve this effect, in which "the idol of 'Woman'" functioned as "the transcendental signified" or "Desire" (Kittler, 1986/2013, p. 107). All language resonated with this love that ultimately traced itself back to the mother; poets were enticed to language by this promise of love, and feverishly read its meaning out of the world in pursuit of it as desire. Netflix has no need for such clumsy substitutions: it can code the world directly as subjective reflection, as desire. Recommendation is not a series of discrete, helpful suggestions that a subject actively responds to; rather, it is a cultural technique that creates worlds as an *a priori* reflection of self. This is not a question of users actively poeticizing themselves via the Netflix profile; the point is that they inhabit a totality in which their own personal growth is constantly being suggested to them from out of the ether.

Even if I don't see myself in the recommendations, it is only because I have not yet discovered the lurking attachment. As Nick Seaver (2022) argues, the goal of recommendation systems changed by the time Netflix completed its recommendation algorithm: "instead of predicting explicit ratings, developers began to anticipate implicit ones, and more importantly, they no longer had to be right." (pp. 68). In other words, recommendation is not just about mirroring, but becoming. It is about "facilitating exploration and discovery, and…thinking about taste as something…to be cultivated and grown" (Seaver, 2022, p. 9). As with self-trackers like the Oura Ring,

recommendation reveals an interiority the subject may never have known about, until they confronted themselves mediated algorithmically as an object. Through cultivation, also known as *Bildung,* they unfold into the subject they were meant to be. Recommendation means a subject aligning themselves with a love that is lurking in the world, unknown to them before they interact with the interface.

So far, these examples are all still fairly passive. AIs mediate subjects back to themselves as objects, setting the stage for their own becoming. Key to Kittler's (1993/1997) analysis, though, is that the discourse network of 1800 creates a situation in which "all individuals become authors or Goethes narrating their own life stories" (p. 132). The world of subjective meanings leads ultimately to self-narration. A passive self-writing occurs automatically through algorithmic sensors and recommendations; an active self-writing takes place on social media. I'll offer a shorter analysis of this here, and a more in-depth critique in the following chapter.

Social media as a site for self-writing has been studied thoroughly by many scholars. Social media calls forth practices of self-narrativization and meaning-making. It promotes "the imperative to 'be true to oneself'" (Chun, 2021, p. 140), it "disciplines its users into…*self-expression*" (van Dijck, 2013b, p. 204), and "encourages users to perpetually work at posting and crafting themselves online" (Hearn, 2017, p. 73). A new digital subject emerges, induced into authentic self-expression (Banet-Weiser, 2012), and eager to constantly self-narrativize (Marwick, 2013). Wendy Chun (2021) in particular highlights how datafication presumes and calls forth a true, or authentic interiority to subjectivity, and how social media acts as a stage for performing this inner truth. All these scholars point to social media as a mode of consistent self-narrativization.

I would, however, invert these scholars' claims, which again slip into a pseudo-behaviouralist frame. Instead of an algorithm or platform training users to reveal their interior to algorithmic sensors, I suggest the opposite: the media of subjective occasionalism make the external world throb with personal meaning, and a certain kind of inner subjectivity emerges from this mirror. Users come to understand themselves as subjects with interiority in this mirror. This historicizes the self, helping explain why selves are understood in this way today. For example, "interiority" in early 20th century

psychoanalysis is the opposite; it is an alien, hostile force, disrupting the self. Perhaps algorithmic power is less a training of interior selves, than a construction of the concept of selfhood on the model of correspondent interiority. The idea of training the self already presumes an interiority that needs to be historicized.

Looking beyond the app and examining the media capacities of storage, processing and transmission is one way to understand the construction of this interiority. For Kittler, this kind of interiority that corresponds with its self-expression is an effect of the discourse network of 1800, and the supremacy of symbolic writing as a storage medium. Additionally, in a situation in which writing has a monopoly on storage, the postal system has a monopoly on transmission. This is why Kittler (1986/1999) writes that, in 1800, "only that exists which can be posted [*postiert*]" (p. 8). Bernhard Siegert (1993/1999) elaborates this "postal-historical a priori," arguing that this circulation of symbolic meaning creates the individualized citizen-subjects of the burgeoning nation state (p. 9). Letters are disclosures of interiority, signed by the author, and sealed into individual privacy until they reach their reader, ready to disclose an inner truth. When letters are the sole means of transmission, they draw out individuals that record symbolic interiority, creating subjectivities with a meaningful, interior depth – what Kittler would characterize as Romantic selves. With the rise of social media, we could say that once again, nothing exists unless it is posted.[18] In a situation in which the post is supreme, meaning drives out noise. In this new condition of postal supremacy, everything is brought into the condition of potential postability, a reflection of interiorized meaning.

Today, social media takes place on smartphones (Instagram, for instance, does not let you make posts via the home computer). This means that social media apps move around with their users, into all areas of life, and are attached to multiple recording media - photography, video, sound, text, biometric data, etc. The perpetual presence of recording media creates a kind of totality: recording is always present. This means that every situation a user moves through is ready to be self-narrativized via the profile, transforming social media into a technique of subjective occasionalism. Anything from a

[18] More in English than in German, where the verb "to post" on Instagram is the Anglicized *posten*, whereas to post mail is *postieren*.

plate of salad to a mountain summit is always already waiting to be remediated as a site of self-narrativized becoming; and as we scroll through Instagram, the melange of photos of salads, mountaintops, and human bodies – one after the other – somehow coalesces into a subjectivity. Carrying a social-media equipped smart phone fundamentally changes the world itself – the world and everything in it becomes postable. It is a kind of Pokemon-Goification of the world, in which the interface reveals the world as containing secret things. In a condition of universal postability, the world calls out to be recorded in its throbbing meaning, and subjects are made as they heed this call. The discourse network functions through cultural techniques of *recordability* and *postability*: it makes the whole world recordable as self-narration.

If media are defined by the three capacities of recording, processing, and transmission, the analyses of social media self-narrativization cited above have focused primarily on processing. They ask how the interface processes its users, and how algorithms process user data to predict their behavior. This is particularly the case with scholarship focused on "authenticity" as a way of understanding social media (Banet-Weiser, 2012; Burton et al., 2023; Chun, 2021; Hearn, 2017). In this view, algorithmic power functions by correlating an authenticated user with a set of actions online, and predicting this user's future actions. Data becomes valuable when it is reliable, meaning when outer action reflects an inner self and can be mapped across platforms (Burton et al., 2023; Chun, 2021). Algorithmic prediction constructs a subjectivity based on this user data, assuming that the future user will repeat past actions. In these studies, "posting" is depicted primarily as a user's response to prompts from this predictive algorithm. This makes sense at the level of processing, but without a discussion of recording and transmission, this isn't the whole picture. Even as we analyze algorithms, it's also important to zoom out into the meaning regime that these machines create. Thinking of datafication as a totality, as I do here, suggests correlation is maybe less important than inundation.

Indeed, Nick Seaver (2022) argues that it is out of date to correlate algorithmic power so strictly with prediction. He critiques Chun (2018, 2021) for this view, which assumes "machine learning's essential conservatism," closing the future by basing its predictions solely on past data (Seaver, 2022, p. 67). According to Seaver, prediction was

the main driver in the early days of recommendation algorithms, but changed fundamentally by the end of the 2010s with the generalized rise of captivation metrics, or measurements of user attention. Correctly predicting user desire via a data-double became much less important than more varied strategies of keeping users engaged (Seaver, 2022, p. 58). As Seaver notes, Netflix' main problem in developing its noted recommendation algorithm was not accuracy, but sleep. The goal was not to correctly correlate data into a picture of the user, but to experiment with strategies that would keep users from going to bed: a stream of experimental recommendations for users to explore as latent desire.

Showing people variations on what they had already seen was not a winning strategy; rather, recommendations began showing users new and unexpected things in an effort to cultivate their taste. The predictions "no longer had to be *right*," instead they had to provoke a response (Seaver, 2022, p. 67). This response was not so much an attempt to force users to reveal themselves and pin them down, as in Chun's account (2021, p. 161); instead, it was about cultivating a subjectivity along a model of transformation. As argued above, recommendation is a technique for users to continually discover new parts of themselves, mirrored in the interface. In other words, this is less a question of algorithms training user behaviour to be predictable, and more a question of algorithms creating an infrastructure in which users constantly expect to see their desire emerging from out of the world.

If the discourse network of 1800 yielded new genres of Romantic writing based on this coding of subjective significance everywhere, so too does the system of datafication. Self-tracking enthusiasts, for instance, have creatively invented myriad ways of expressing their data in narrative or artistic form. These range from telling stories through data on social media, to creating 3D printed edible objects that mirror self-tracking data, to casting Tibetan sound bowls that sonically embody self-tracking data (Lupton, 2016). Even as humans develop these new genres in a context of subjective occasionalism, AIs also offer new forms of writing that mirror the user's self. For instance, the astrology app Co-Star has developed an AI astrologer, housed in a photo-booth. As users ask highly personal questions, it gives intimate responses based on their birthdates, printed out on receipt-paper, including a photo of their face (Niami, 2023).

Such AI-written self-narratives emerge and reproduce a system in which the self is constantly mirrored in all things. Similar examples of algorithmic self-revelation are TikTok filters that read your true personality from your face and Generative AI therapists. These new genres point less to an algorithmic training of the self and more to an historical condition that produces this model of the self. The expectation is that technology will offer a mirror that can mediate my self development.

There is a pitfall to fixating overly on algorithmic processing, rather than a broader system of inundation and meaning. In such an approach, political critique is in danger of sliding into a project of redesigning the conditions of the totality, rather than opening a meaningful difference to it. The problem I identify here is that datafication algorithms construct totalities of meaning. They do not have to be right; they have to construct enclosures that users will remain in. It is not so much that algorithms train users to be true to themselves, but rather create a world in which users see themselves mirrored in all things. Subjects wade through an audio-visual feed of hallucinatory desire. In this totality of reflected desire, what can subjects do but self-narrativize? Like the poets of 1800, who literally heard poetry speaking to them out of the trees, users today are immersed in a hallucinatory world, throbbing with their desires. The significance of studying authenticity today may be that this highly individuated self-narrativization is the condition of totalitarianism today. This changes the political stakes of datafication. As I'll argue in concluding, critiques of online selfhood require approaches than go beyond designing different kinds of algorithms (Chun, 2021) or investigating why disinformation can seem authentic (Burton et al., 2023).

Subjective occasionalism masquerades as an opportunity for self-development, but really functions as a way of drawing humans into the labour of total recording. When the world throbs with a totality of meaning, subjects record it for you. Like AIs, humans are equipped to constantly decode the subjective meaning all around them in this discourse network. Contemporary Romantic subjects, armed with smart phones and other technologies of the self, can mediate every situation as self-referentially laden with meaning, spreading an archival hysteria that constantly produces new data. In a situation in which everything is coded as meaningful, humans conduct their own universal scrape.

This functions as part of a new labour situation. Mackenzie Wark (2019) describes a new overclass, who owns, not the 'means of production,' but rather the "the capacity to transmit, store, and process information" (p. 14). In other words, these are the owners of the discourse network itself. [19] Whereas Kittler describes a state monopoly on the discourse network of 1800, a different kind of monopoly reigns over the contemporary discourse network, governed by five of the wealthiest companies in the world (Larson, 2019). In Wark's account, workers here are not labourers in the strict Marxist sense, defined by producing the same object repeatedly. Rather, the new underclass produces information, or "*different* things over and over" (Wark, 2019, p. 37). In other words, the ideal members of this class are constantly recording information, and coding it in terms of their own self-growth, They are restless subjects, trained to what Byung-Chul Han (2014/2017) calls an "*unlimited self-production*" (p. 6). Or, in the vocabulary of the Romantic era, these subjects should "forever be becoming and never be perfected" (Schlegel, 1798–1800/1991a, p. 32, §116), constantly making themselves anew.

In sum, subjects are induced to this recording and processing of the self through an array of techniques for coding subjective meaning everywhere. The creation of this kind of autonomous, self-creative subject relies on a recursion to the Romantic discourse network that codes meaning into everything. At the same time, this endless return to the self allows the processing of data into exchange value on the back-end. While the discourse network of 1800 created subjects who incessantly produced and interpreted meaningful discourse to serve state power, the contemporary mode of Romanticism seems to produce subjects who incessantly produce and interpret meaningful data to serve Silicon Valley.

What's the difference between disinformation and noise?

By reading datafication as a discourse network, and by interpreting how a certain kind of autonomous, self-productive subject emerges from its user interfaces, I'm intervening in debates across critical data and media studies. The first is a debate

[19] This is almost identical to Kittler's definition of a discourse network: "the network of technologies and institutions that allow a given culture to select, store, and process relevant data" (Kittler, 1985/1990, p. 369).

somewhat niche to German media theory and its adherents, regarding the eclipsing of the human subject by autonomous machines. By reading Kittler's oeuvre as more open to the recursion of Romanticism than it seems, I'm arguing that a Romantic subject returns via the very media that seem to displace it. I've tried to show this in Kittler's work, and in the examples of self-recording that I discuss throughout. If media archaeology wants to challenge the autonomous human subject, this challenge needs to become political. Media doesn't just make this subject go away; we need to pay attention to how Silicon Valley power mobilizes a discourse network to call forth this subject.

In this way, I'm also addressing studies of Silicon Valley, by offering a reading of the Valley's recursive anxiety about a media-empowered subject. While the discourse network of datafication produces a self-creative subject, this subject is constantly anxious about technologies that threaten to take charge of determining meaning. Even tech billionaires, like Jack Dorsey, get caught in this cycle. Sun-ha Hong (2022) describes Dorsey's trip to Burma to escape the technological shitstreams he helped create, but how the detox itself takes the form of new technologies that will allegedly lead to self-empowerment. Anxiety over technology is assuaged only by new techniques, which then create their own anxieties. App-detox-apps abound. Techniques equally disturb and reassure us in our position as auto-poietic subjects. Rather than attempting to settle the question of who's really in charge, the machines or us, I'm arguing that this uncertainty is constitutive of Digital Romanticism and Silicon Valley power.

The systemic reading I provide here offers a different approach than scholarship in critical data studies. This scholarship is perhaps too reasonable in its identification of problems and proposition of solutions or improvements (Chun, 2021; Noble, 2018; O'Neil, 2016) What I've tried to show here is that what's wrong with datafication is not any isolated problem or fix, but *its totality,* and that we can only really approach this totality as its subjects. It demands that all things become meaningful to its sensors. It is its inescapability, its lack of exterior, and its universalising mission which allows it to change what counts as meaning itself. I've called the cultural technique governing this meaning-system *the universal scrape*, and argued that it functions by coding meaning into everything.

I've also tried to highlight how weird this system is: "we're going to record absolutely everything that happens, and then tell you what you secretly desire." It whips its subjects through a recursive circuit in which new meanings are constantly popping up for users to record as a reflection of self-development. In this context, we subjects of the digital discourse network see ourselves reflected out of our technology. In other words, we expect technology to function in our image, and seek to bend it to our will when it doesn't work this way. Critiques of tech often recapitulate this situation, mirroring Silicon Valley in suggesting upgrades that will create tech in our vision. This is the subject of the discourse network speaking the discourse network's truth. In contrast, analyzing datafication as the basis of a discourse network is an attempt to assess the broader reality that these technological systems create. We need to address the discourse network itself – its way of coding meaning – rather than specific technology.

Following the method of negative recursivity outlined in the last chapter, the task is not to recursively develop the technology, improving it based on the obstacles to its intended function. Instead, the task is to stop the incessant loop that draws users into labouring for Silicon Valley power through a constant coding, recording, and of deciphering meaning. Given that this system rests on a fundamental absence of noise, this chapter's analysis suggests that introducing some kind of noise, some kind of unintelligible externality, might put the brakes on this frantic spiral. This might not only stop the endless loop, but also open some kind of differentiated space that could allow the kind of considered relationship with technology that the more politicized branch of media archaeology advocates (Miyazaki, 2023). To open space for some kind of relationship, we need to see technology as something different from us, something strange, rather than a mirror of our subjective development. But what kind of noise can we possibly inject into a system that recodes all noise as symbolic meaning, as data?

Noise is different from disinformation. In fact, the analysis here suggests that the information/disinformation distinction doesn't really make sense within the digital discourse network. A system that codes meaning into everything, and then attempts to mirror this meaning back as subjective desire, does not differentiate between true and untrue: both information and disinformation are equally effective at generating meaning for users to appropriate. Getting tech companies to fact check information cannot halt the

assembly-line hallucination that insists on extracting meaning from the correlation of everything with everything else. We cannot insist on both holding onto "truth," and universally datafying the world. Fascism mobilizes meanings into shit-streams of affect, with horrifying consequences. Liberalism responds by attempting to control, or cordon off these meanings. Neither of these approaches threatens the universal scrape that forms the basis of this problem. Both double down on the system, by insisting that *my subjectivity and my reality* be the one to appear, reflected out of the Romanticized world. This system works precisely by pitting polarized groups against each other, each insisting on the truth of its own subjective position, and the lies of the other (Chun, 2021). Disinformation is fine with the data harvesters because it remains positive, datafiable meaning.

The definition of noise is specific to each discourse network. As I've argued throughout this chapter, the digital discourse network relies on eliminating what registered as noise in an earlier discourse network. Introducing noise, then, cannot rely on the old definition, but must find what can uniquely disrupt meaning within this specific meaning-context. In other words, what might complicate the recording of everything as subjectively-meaningful data? A potential candidate here is "slop." Taking its name from pig feed, slop is the meaningless garbage mass-generated by AIs and uploaded to the internet at break-neck rates. Known as the spam of the internet, it includes gibberish words, nonsensical information, and bizarre images. Spend half an hour watching it and observe the weird headspace of total fragmentation. A black and white video of expressionist mask-faces attached to 1930s American farm equipment screaming in agony, set to a hard trance soundtrack: the caption reads, "Wheels don't kneel. They conquer" (Shockfactor AI, 2025). A visual chart of how to fry an egg that reads "Step 1: Heat pan, Step 2: Crack Pan, Step 3: Pouk egg," then moves on to "Step 2" again, which is a picture of eggs, courtesy of Insane Facebook AI Slop (2024). A recurrent trope of Tom Hanks holding out a fork as if to bend it with his mind, or stabbing at a door camera.

The journalist Jacob Silverman (2025) provides a comprehensive and apocalyptic description of a slop internet, hostile to humans, with his analysis gaining traction among academics and the broader public. He describes it as "bots all the way down" (Silverman, 2025). As content and clicks have been monetized in and of themselves, AIs can produce

value by generating gibberish content, posting it, and consuming it, all by themselves. This marks an attempt to automate the value production of universal datafication without actual reference to any human activity. The goal of this internet is not a human goal, but rather the circulation of content in the most abstract sense. As Max Read (2024) shows, this sloppification supports an underground economy of spammers, who mobilize these AIs to generate ad revenue. The resultant internet is a degraded space, one in which it is increasingly difficult to find basic information, complete basic tasks, or understand what is going on – because it is so overrun with slop. In my view, this internet arises by torquing the logic of universal scrape datafication to its limit: if the *a priori* assumption of datafication is that everything has a secret meaning, then total gibberish can be monetized as content. The discourse network still treats it as meaning, at least for now – *après moi, le déluge*. In this way, the internet of universal signification is giving way to an internet flooded with noise.

Even as slop supports an underground economy of spamming entrepreneurs, it is of concern to the those with a financial stake in datafication. As *The Guardian* reports:

> Farhad Divecha, the managing director of UK-based digital marketing agency AccuraCast, says he is now encountering cases where users are mistakenly flagging ads as AI-made slop when they are not. 'We have seen instances where people have commented that an advert was AI-generated rubbish when it was not,' he says, adding that *it could become a problem for the social media industry* if consumers 'start to feel they are being served rubbish all the time.' (Hern & Milmo, 2024, my emphasis)

Nick Clegg, former UK politician and currently Meta's president of global affairs, is also concerned: "as the difference between human and synthetic content gets blurred, people want to know where the boundary lies" (as cited in Hern & Milmo, 2024). These positions represent the fears of a class that actually relies on people buying things somewhere at the end of the chain of content posting and clicks. Abstract machine clicks are not enough; advertising agencies must show evidence of increased sales. The sloppification of the internet is a cash grab that threatens to undermine the whole operation. How long will content and clicks remain monetizable when increasingly these correspond to AI-generated cycles of recursive gibberish? The Turing test doesn't end in the singularity, but in the garbage dump.

A lot of public discourse on slop mirrors the anxieties of these tech executives in taking the tone of moral outrage and fear of post-truth dystopia (Doctorow, 2024c; Malik, 2025; Paas-Lang & Young, 2024; Silverman, 2025). Something weird is going on when tech critics are echoing tech executives, which suggests that it is important to scratch a bit deeper. Many of these critiques of slop have the narrative arc of a fall from a prior internet. Silverman (2025), for instance, writes, "can we find a way back to an internet that puts people in lucid conversation with one another…where anger and insanity aren't the dominant modes of thought?" The idea that the internet of yesterday was about "lucid conversation" is somewhat dubious. Silverman (2025) qualifies it as a "*pseudo*-public square" (my emphasis), yet, this narrative of a media fall from grace seems to fit more within a long-standing Enlightenment hangover that continually bemoans the death of a fantastical public sphere at the hands of the newest media (Siegert, 2015). Without necessarily celebrating slop, I would suggest a more critical or curious perspective.

Slop is not a fall from a world of deep meanings, but the logical outcome of this world – of the discourse network I've described throughout this chapter. There is a very porous line between a world in which everything is full of meaning and a world in which nothing means anything at all. Indeed, as I showed through my reading of Sophie Tieck's (1800/2015) story "The old man in the cave" in Chapter 1, Romanticism struggled with this line, too: when subjective meaning continually appears for you in the world, the boundary between inside and outside is blurred in a kind of psychosis. Likewise, Silverman (2025) explicitly describes sloppification in the language of mental illness: "today's internet seems to, if not make us actually crazy, make many of us seem crazy. Always connected, always posting and consuming, we resemble madmen now, giving voice to thoughts that are normally the province of the eccentric ranting on a street corner." This appearance of madness is actually a good sign, allowing us to see the hallucinatory loop of compulsive recording, posting, and processing content that has been the normal-madness of digital media since the smartphone era. Recording all our vital signs to have a computer tell us whether it was a good idea to go for a jog; photographing every meal I eat and aligning this with my identity; looking to Amazon to discover my latent desires; all these things already hinted at unstable beliefs. Hallucinating meaning everywhere seemed totally normal, until we started to see noise everywhere. Maybe ads

were garbage all along! In other words, we were always crazed by the internet; slop just lets us see it, thrown into relief by the negative space created by its noise.

If slop is the logical outcome of this discourse network, then it is not good or bad, but an opening. Suddenly, in this system of totalizing meaning, noise appears. Of course, bots and spam always existed, but generative AI accelerates its production and recursively reconstitutes the system as it learns off the trash. Will we attempt to loop back to the system of universal meaning, back to the hallucinatory recording of everything, where we compulsively reach for our phones as subjective mirrors? Forward, into a hostile internet where we are forced to consume gibberish and endlessly enter authentication passwords to prove that we are real? Or, could slop's emergence on the world stage allow a political articulation that resists the dominance of Big Data and AI? This would not be a subjective transcendence of the online world, but a participation with the trash that asserts that meaning is a constant political struggle. The sudden rise of slop signals that meaning will not be guaranteed by our devices, but must be struggled over, politically and collectively. This strange nonsense seems to represent an opportunity to break out of the recursive process of human-AI meaning-making that governs this discourse network.

The idea that the internet has fallen from a prior public sphere puts these critics in the strange position of insisting on a restoration of positive meanings – a recursive reconstitution of the system that I argue throughout this dissertation is Silicon Valley's circuit of power. Silverman (2025) oddly bemoans that "ads started appearing that didn't even look like ads any more — less veiled marketing than promoted posts that sold nothing." Yet, ads that sell nothing don't seem so bad. This crack in the system seems actually to house a utopian kernel, in which the system degrades its own injunction to constant consumerism. Rather than insist on the recursive restoration of positive meaning, I would advocate trying to think with this noise and what possibilities it opens. As Leif Weatherby (2023) argues, we are using generative AI for the wrong purposes: it shouldn't be for producing efficient meaning, but for studying the collective mash of human language, including its biases and slippages. In other words, we should ask what lies behind generative AI and slop and how this noise might change our understanding of the internet, language, and of ourselves.

There is a strange truth in the warped language and the non sequiturs of slop and AI hallucinations. News reports often describe these as "failures," yet to me they are worth tarrying with. For example, *The Guardian* laments an AI summarizing content from a door camera's daily recording with the phrase "Dog took boot. Kitten cheese escaped the house," and content from Gmail with "Russia launches missile and drone attack; shop early for Black Friday Deals" (Booth, 2024). What do these strange phrases mean? While they are not Information, they are a kind of dark truth: online consumption is eloquently captured by juxtaposing a flat listing of military strikes alongside consumer deals. A camera that records everything is forced to mash this into a singular, coherent meaning. Could it be that this is not a failure of AI, but that we are asking the impossible, for meaning to appear where there is none? This reveals a dark nonsense at the heart of a system that promises to constantly produce a plenitude of meaning. It is not the AIs hallucinating, but that these technologies have made the world hallucinatory. Slop jostles us out of the demand of the discourse network that meaning constantly appear as a reflection of my vision; in these bizarre phrases, my desire is mirrored back to me as a dark, non-sensical melange.

In other words, slop is a kind of de-reified output of datafication systems. It is the Real of the sea of data. It is the limit of the expectation that correlating everything with everything else will be a voyage of discovery. As in the case of Alexa discussed above, perhaps what is wrong with this system is the input, not the output, the idea that a day's worth of belches, farts, and groans adds up to some kind of sublime secret. Straining to produce meaning from the sea of data, the mangled output turns out to be an unintelligible mix of letters, or a screaming face attached to a tractor. Is this really a shock? We need to avoid the knee-jerk response that pleads to produce coherence and thereby restore the reification of data. Slop is the output of a system that tries to derive truth from blending billions of people's posts and recordings, de-reified from the idea that universal datafication will eventually produce ultimate meaning. Slop reveals the mash. The mash is the massive collective labour of data production in this discourse network. Behind the first-person singular of the AI lies the Real of slop: a massive collective labour of data production. In slop, we hear the channel of datafication itself.

The collective labour of the dataset is always latent in generative AI; smooth, individualized outputs reify the social relation of this mashed-together collective work. Rather than insisting AI be a Romantic subject, that produces a flow of meaning, we should read the hallucinations that keep erupting through this façade for what they are: signs of a great collective melange, whose incoherence will not be remedied by semantic fidelity, but by a politics that can give this collective incoherence a shape, a collective subjectivity. If we can relate to the garbage-internet not as a failed information space, but as a weird mutualism, then perhaps we can assert collective power over it, and unhook from the feedback loops of self-affirmation that sustain surveillance capitalism.

Slop will not make these changes happen on its own, but it represents an opening to refuse generative AI, power down the data centres, and reorient our relationship with technology. I say this from a perspective that tries to operate from within the garbage dump, rather than take the morally principled stance that we stop the deluge. I recognize the deep dangers here, but in the Romantic spirit of Hölderlin via Heidegger, also the openings: "but where danger threatens / that which saves from it also grows" (Hölderlin, 1961/1966, p. 463). Maybe the AI mass-production of gibberish could herald a new internet – not filled with lies, but with trash. Relating to the internet as trash, rather than a plenitude of meaning, would change the social relations of this discourse network. Rather than seeing our own productivity mirrored back to us from the prompting interface of generative AI, we should see it as a mirror of our collective detritus in all its wonder and horror. It is the strangeness that occurs when we can see the pre-chewed efforts of billions of people mixed in the great collective trough, and we should marvel at this weird collective work. The fear that AIs might degrade from recursive learning off their own gibberish – what Jathan Sadowski (2023) calls "Habsburg AI" – could be celebrated as a form of sabotage. Such sabotage is increasingly called for in explicit terms, as AI is revealed to be a displacer of jobs and an aider in genocides (Algorithmic Sabotage Research Group, 2024; Alkhatib, 2024). As the AIs fade into the noise, we could see them less as mirrors of personal productivity, and more as masticated interpretations of our collective output. Absolute nonsense will run in an endless loop.

The noise of the new internet will only be politically efficacious if a new subjectivity arises to meet it, ready to insist not on getting what I want online, but on an

undulating multitude. This subjectivity will no longer be conditioned to seeing subjectively-laden truth all around it; no longer grasping for the line between information and disinformation in the sea of positive meaning. Rather, it must insist on asserting its own meaning in the world, beyond what the algorithms say. This begins with answering the question of what texts, images, films, and other "content" *mean* beyond subjective development or exchange value; it ends at a political meaning in which this collective subject can assert power over what the internet means, what it should be for. We are in the moment between the datafied internet of universal meanings, and the garbage internet of AI generated slop. Our subjectivities have not yet caught up. The upshot is huge: the basis of "surveillance capitalism" is under threat through the very machines that allow it to function (Zuboff, 2019). And a crappier internet may be one that we relate to as separate from us, that we actually *enter,* like back in the old days, when it was a different space, called "cyberspace" and we could hear the white noise in our phone lines.

Chapter 3.

Instagram: Novelizing the self

Doing it for the plot

In the middle of Novalis' (1802/1981) unfinished novel *Heinrich von Ofterdingen,* the protagonist, Heinrich, discovers a strange book in a mine.[1] He and his entourage are on their way to Augsburg to visit Heinrich's grandfather and (his mother hopes) find him a girlfriend. The mine is one stop of many adventures along the way, and inside they find an old scholar with a vast library. The book Heinrich discovers here is written in a mysterious language that he cannot quite place, but it is filled with pictures that seem to tell a story. As Heinrich reads the book, he realizes that the pictures are actually of him, and the last ones in the book depict the recent days of his journey. The book is unfinished, the latest pictures too blurry to make out; it is as if the pictures are being produced by this magical book in real time, narrativizing and embellishing Heinrich's life even as he lives it. This mysterious book is a medium that can collapse the distinction between life and literature.

In his philosophical work, Novalis theorizes this kind of mediation as an active project of Romanticism. Novalis was invested in the idea that, with the right kind of mediation, life itself could become a novel. "We live in a colossal novel," he writes in the *Allgemeine Brouillon*; participating in its writing just requires a "Romantic orientation, examination, and treatment of human life" (Novalis, 1798–1799/2007, p. 155, §853). In other words, if we mediate life Romantically, it becomes a novel; and novels provide a means for this kind of Romantic mediation. As Mikhail Bakhtin (1979/1986) notes, Romantic novels are fixated on "becoming," whereas other novels "know only the image of the *ready-made* hero" (p. 20). The Romantic novelization of life, then, is also about rejecting stasis and instead directing the development of the self. In collapsing art and

[1] Novalis died in 1801 before he could finish the novel. Despite being circumstantial, its unfinished character resonates with Romantic celebrations of the fragment, and of an endless becoming, an "infinite perfectibility" (Schlegel, 1963, p. 506), and Novalis' own celebration of life as "an endless novel" (Novalis, 1965–1968/1997, p. 33, § 65).

life, the novel becomes a medium for this kind of self-directed transformation. The celebration of the novel here is intertwined with the idea that a self is something that changes itself, rather than something that is the product of social forces or biological determination (as would be the case in literary Realism and Naturalism). Romantic novelization both posits a transforming self, and gives a self the means to mediate and thereby transform itself.

I began an analysis of this kind of self-writing in the last chapter. I showed how Silicon Valley power operates through encoding the world as mysterious and wonderful, throbbing with meanings just waiting to be brought forth by users willing to record them. Here, I extend this analysis by showing specifically how social media takes recourse to the medium of the Romantic novel to facilitate this kind of self-writing as self-becoming. This is the upshot or promise offered to users by the discourse network. To show this, I analyze the case study of equiano.stories, an Instagram adaptation of the 1789 slave narrative *The Interesting narrative of the life of Olaudah Equiano,* by Olaudah Equiano. I argue that this literary text is very un-Romantic in the way it depicts media and mediation, yet the Instagram adaptation transforms it into a Romantic novel. In the first sections of this chapter, I theorize the Romantic novel, before turning to a comparison of equiano.stories and its source text.

Romanticism is etymologically connected to the novel, as the word for "novel" in both French and German is *Roman.* As Ernst Behler (1993) points out, the early Romantics played up this etymological connection, while also referencing the genre of the medieval romance. Romanticism is a kind of "novel-ism," an orientation that can give life the quality of a story; and for Novalis, this novelization or Romanticization becomes an active practice. Romanticism is more verb than noun: "by endowing the commonplace with a higher meaning, the ordinary with the mysterious respect, the known with the dignity of the unknown, the finite with the appearance of the infinite, I am making it Romantic" (Novalis, 1965–1968/1997, p. 60). Throughout this dissertation, I've developed a theory of Romanticism as a project of mediating self and world; here, Novalis shows the ways Romanticism allows a subject to mediate themselves as the protagonist of an unfolding story that they simultaneously live and write.

Behler (1993) notes that the early Romantics had such a broad definition of the novel that it shouldn't be understood as a strict genre, but a stand-in for literature itself. Indeed, the Romantics were drawn to the novel because it allowed a collapsing of genres, the combination of poetry and narrative into a single text. As Novalis (1798–1799/2007) writes in the *Allgemeine Brouillon* under the heading "ROMANTICISM," "Shouldn't the novel include all sorts of styles, bound together in a varying order, and animated by a common spirit?" (p. 26, § 169). Friedrich Schlegel (1798–1800/1991b) writes that "many of the best novels are compendia, encyclopedias of the whole spiritual life of a brilliant individual" (p. 10, § 78). The novel then, is less a genre than a way of mediating genres, and ultimately of mediating life itself. In this understanding, the novel transcends its status as a book and becomes a medium in a broader sense. I would argue the novel stands in less for literature, as Behler (1993) suggests, than for media of Romanticization. We should think of the novel here not strictly as a book, but rather as techniques of novelization. These techniques can include the actual writing of novels, but also any kind of practice that Romanticizes life, turns a subject into a protagonist, and allows the subject to write reality as if it were a novel.

Following Leif Weatherby's (2014, 2016b) reading of Romanticism as developing techniques of mediation, novelization is a technology for Romanticizing the world and collapsing art with life. Novalis (1965–1968/1997) writes in *Pollen,* "all the chance events of our lives are materials from which we can make what we like…Every acquaintance, every incident would be for the thoroughly spiritual person…the beginning of an endless novel" (p. 33, § 65). With the right orientation, life can become a novel; and novels themselves can provide a means for this Romantic mode of mediation. The book Heinrich finds in the mine fills this double role of a medium for Romanticizing life and for writing life into a multi-medial novel. Magically written in real-time, Heinrich's book is a Romanticism machine, automatically novelizing Heinrich's life as he lives it; and when Heinrich reads it, he can see his life unfolding in this Romantic way as he continues on his journey. This medium not only allows a self to see itself as transforming, but also provides techniques for a self to mediate this becoming.

According to Friedrich Kittler (1985/1990, 1986/2013), this capacity for mediating life is a Romantic misrecognition – then, as now, this individualized direction

of mediation is a self-congratulatory delusion. As discussed in Chapter 2**,** Kittler reverses the terms under which Romanticism understands itself: whereas Novalis imbues "the thoroughly spiritual person" with a unique capacity to Romanticize the world, Kittler claims that it is actually the medial conditions of literature in 1800 that have already Romanticized the world, calling forth subjects who can decode it and themselves as Romantics (Novalis, 1965–1968/1997, p. 33, § 65). Through this argument, Kittler (1986/2013) deconstructs the medial basis of this Romanticism to show how it functions in "an altogether unromantic way," along the technical parameters of a transmission channel (p. 110). For Kittler, literature (*Dichtung*) becomes a medium around 1800 that harnesses the poet as a receiver of signals, a distiller of the rustling flow of information from the world into the Romanticism of universal signification.

In Kittler's (1986/2013) reading of *Heinrich von Ofterdingen*, Heinrich is "nothing more than an ear," a receiver of signals that he distills into a flow of Romantic meaning (p. 109). Rather than a Romantic protagonist mediating his own becoming, he is a kind of antenna, programmed to process the world into a stream of discourse for the higher-functioning of a complex system. Kittler flips Novalis' claims: the novelization or Romanticization of life rests on media that render its subjects able to receive the signal that they are the protagonist-author of their own "endless novel;" their feeling of being "thoroughly spiritual" is an aftereffect, not a pre-condition (Novalis, 1965–1968/1997, p. 33, § 65). The mystical book within the book embodies literature as this kind of medium. It automatically processes life as a novel, or *Roman,* constructing the author as always already inhabiting a novelized, Romanticized world. Reading and writing, character and author collapse. The decoding of the world's Romantic signal coincides with the writing of the *Roman.*

In other words, Kittler re-interprets the compulsion to constantly write as a subordination to power, rather than through the Romantics' own self-understanding of writing as a liberated means of self-transformation. Richard Seymour (2019) offers a similar argument about social media in *The twittering machine*. Though I critiqued Seymour in the introduction for focusing too heavily on individualized frames of addiction, his book also contains an underdeveloped metaphor that offers an alternative to this: the titular "twittering machine." Seymour begins the book focusing on this image of

a mass of subjects obsessively producing discourse via Twitter/X and other social media. Even as each individual instance of writing/posting appears to be a personal self-narrativization, the collective result is the twittering machine, a massively productive discourse network that spews writing uncontrollably. The question both Kittler and Seymour pose to these related discourse networks is: who is the author and who is the medium? Am I writing myself, or is the discourse network inducing my self-writing to use as a medium for its own development?

In Chapter 2**,** I argued that the basis for this compulsion to write was universal datafication – this recreates the Romantic "signal" Kittler talks about. As AIs code every object and gesture as throbbing with strange meanings, users tune into this world of ubiquitous information through tracking devices, recommendation algorithms, and social media. Through these media, subjects apprehend the world Romantically. This generates a frenzy of self-writing that serves on the back-end as a constant production of data. If we follow Kittler (just for a moment) in denigrating literature as a "data feed" like any other, then Heinrich von Ofterdingen is the first social media subject.[2] In the automated Romanticism of his multi-medial book, Heinrich becomes the protagonist-writer of a life-story, whose higher communicative purpose is to produce a flow of information that closes the informational circuitry of the system. In other words, like today's social media users, the promise of autonomous individuality is the condition of him becoming a data-productive subject for the system.

In this chapter, I'll build on my arguments from Chapter 2 through a case study of Instagram. Specifically, I'll analyze its capacity to "novelize" the world and set up its user in the image of a kind of master mediator, who finds its highest expression in the figure of the Influencer. Whereas Chapter 2 focused on the substrate to the discourse network - datafication - this chapter examines the means through which users mediate this substrate into subjective meaning. I argue that Instagram functions as a Romanticization machine, much like the magical book in *Heinrich von Ofterdingen*.

[2] Kittler is trolling here, characterizing literature as a "data feed" to piss off the stuffy, Heideggerian hermeneuticists that dominated the German literary academic scene through the 20th century (and, as noted in Chapter 2, tried to block him from moving forward in academia).

Like the Romantic novel, Instagram acts as a medium for both recording life into a narrative, and for living life as if it is a novel. In fact, it mediates the two such that they become the same thing. This novelization of life is best demonstrated in popular hashtags and phrases like "be the #maincharacter," "#maincharacterenergy," "doing it for the plot," etc. These specific phrases became viral among Western Gen Z's during the Coronavirus pandemic, but captured an already existing ethos of social media. Self-narrativization is an essential attitude for any Influencer-aspirational social media user, also in the Global South (Abidin, 2016). As an example of how a user might express this, user Oems (2024) writes that he is "serving main character energy," to caption an image of him gripping the visor of his motorcycle helmet with a muscley, tattooed arm, while at Mount Everest. "In a world full of side characters," he writes "be the main in your own story and never settle for less." User Miranda (2025) puts it more bluntly: "Feeling like the main character in my own story," she writes as she poses in a feathery jacket in front of an French, 18th century palace. This phrase captures social media's injunction to authentic self-expression that has existed since its early iterations (Banet-Weiser, 2012).

If we're concerned that the comparison between Instagram and the Romantic novel denigrates great literature to banal status updates, then we can put it like this: profile-based social media is not new or innovative. Rather, it takes recourse to Heinrich's book and the Romantic novelization of life to get its subjects to channel the world into a data feed. Instagram promises the power to mediate novel and life through a media-empowered self-narrativization. Novel and life collapse into the same thing. This goes far beyond something like auto-fiction or keeping a diary. It is not merely the capacity to write the self; it is a collapsing of writing, living, and the self. Instagram acts as a medium or process of novelization because it actually changes and Romanticizes the world. As I showed in my discussion of subjective occasionalism in Chapter 2, social media codes the world as something to be recorded as a stage for self-novelization. Not through any individual act of posting, but through the condition of universal postability, the world becomes a data-feed to be channeled into the Instagram profile.

At the same time, it's necessary to account for the inverse trend on social media: Influencers who act out NPCs. NPCs are "non-playable characters" in computer games; they are decidedly side characters, who can only say a handful of phrases and are

generally there to help the protagonist along with the main story. NPC Influencers on social media act as if they are these kinds of side characters. They perform pre-scripted lines and stock actions for money, attracting sometimes millions of followers who provide lucrative subscriptions to their channels (Hill, 2023). For instance, Tiktok user @pinkydollreal has 2 million followers at time of writing, with her posts primarily acting out these kinds of roles. This reads as an almost fetishistic inversion of the "main character" ethos of social media. Why do these characters arise in the very moment that we are doing it for the plot?

Staying with the historical frame of Romanticism, these NPCs can be read as embodying the anxiety that always seems to accompany claims of authorial power. Such anxiety was already present in Romanticism, and becomes increasingly present in literature throughout the 19th century. As Klaus Benesch (2002) argues, Romanticism actually arises amidst an anxiety about media. As the printing press reaches a critical mass of production in the 18th century, literature must find a way to differentiate legitimate writing from mass produced pulp fiction. Confronting this machinic force that produces interchangeably consumable texts, Romanticism theorizes the author as an original genius. The author automatically produces good Literature, because writing springs authentically from within him. Art shifts away from being a mimetic activity and becomes an expression of individualized inner genius, creative force (Battersby, 1989). As the possessor of creative force, this figure's art is automatically world-transforming, as in Romantic mediation. In other words, the preoccupation with the authorial power arises against "the material onslaught" of mass produced, pulp literature (Benesch, 2002, p. 15). Authenticity arises as an important concept in the moment of its perceived destruction. Authenticity today has added a turn of the screw to this contradiction. Something that is supposed to be a locus of expressive freedom turns out to be a social requirement (Chun, 2021). In this context, the NPC Influencer trend seems to paradoxically reclaim some kind of autonomy, in the extravagant performance of authenticity's inverse. Even as Instagram makes us feel like main characters, there is an anxious sense that we are actually the NPCs in the twittering machine's game.

The possibility of self-novelization today also emerges from the failure of this Romantic project in the 19th century. As Franco Moretti (1986/2000) argues, the novel of

self-development provided a model for individualized, bourgeois subjectivity in the 19th century; yet, as the ruptures of industrial capitalism fragmented this self-determinate subject position over the 19th century, this genre became more and more impossible, until it was finally foreclosed by the First World War. This shift reflected an increasing sense that larger social forces determined the individual. As I've argued elsewhere, the return of this narrative structure in the 21st century has to find ways of dealing with the contradictions raised by the systemic determinations of capital, crisis, and identity that foreclosed this genre in the early 20th century (Melling, 2025a). "Being the main character" in the 21st century also means transcending the social forces that previously foreclosed this possibility. Yet, this appeal only exists under the constant threat of social determination. It is in a situation where we could become NPCs that it feels so vital to "be the main character." It is simultaneously the promise of this system, and a compensatory gesture for the ways this system threatens this possibility. In this context, the lucrative popularity of social media NPC Influencers may be precisely their performance of this contradiction. Simultaneously side characters and Influencers, they have negotiated the strange paradox of the twittering machine: being ourselves is a requirement of the system.

As scholars have shown, social media shifted over the 2010s to deliberately elicit self-narrativization through the profile and encourage this sense of being the main character (Banet-Weiser, 2012; Chun, 2021; Hearn, 2017; Marwick, 2013; van Dijck, 2013b). Instagram was an early vector of this transformation. Who remembers Hipstamatic, Instagram's main competitor at the time of launch? Like Instagram, Hipstamatic allowed users to filter photos in ways that made them look professional or interesting. Instagram took this model but made the app primarily about communication, not photography; it developed an understanding that the profile-based app was specifically *for* self-narrativization (Leaver et al., 2020). While Hipstamatic's filters allowed users some level of Romanticization in their ability to colour the world in fantastical ways, it was not the developed Romantic medium that collapses protagonist and writer, story and world, in which the user becomes the main character in their own story. This required a different technical basis, a different user interface, and new economic conditions, some of which I've already discussed in Chapter 2.

To help explain this trend towards self-narrativization, José van Dijk (2013b) points to two key developments that emerged across social media around the time of Instagram's launch in 2010. The first is the protocol-based injunction that a singular, online identity homogenize across platforms and correspond to the offline, flesh-person. The title of van Dijk's essay is "you have one identity," a quote from Mark Zuckerberg. As Wendy Chun (2021) shows, these protocols demand an online authenticity, or correspondence with the self, that elicits self-narration. At the same time as these protocols were being shorn up, van Dijk (2013b) notes that social media began introducing interface features, such as the linear "Timeline," to frame the platforms as means of self-narrativization (p. 204). The Instagram profile is likewise structured as a linear feed that recedes into the past as one scrolls down, implying a narrative structure of temporal development. These features can be dated to the rise of "platform capitalism" after the 2008 financial collapse, which began monetizing user data as a primary source of revenue (Srnicek, 2017).

As I argued in Chapter 2, this mode of self-narrativization also relies on the smartphone, which emerged and became popular around the same time (the first iPhone was released in 2007). The user must be constantly attached to digital recording equipment with high-speed processing capacities in order to perceive anything and everything as material for the unfolding novel of one's life. Instagram's name highlights the importance of instant film development, mirrored by the Polaroid camera that was its original app icon; likewise the [tele]gram implies real-time, electronic communication (Leaver et al., 2020). What Heinrich's book achieves through magic (or the properly attuned poet), the smartphone achieves through portability and minimal signal delay. Armed with the social media-equipped smartphone, the user is set up to decode an endless stream of signals from the world in real-time and distill this into meaning via the social media profile. Like the poet of 1800, the user becomes "an ear" receiving signals, which they process into a self-narrativization, known on the back-end as data (Kittler, 1986/2013, p. 109). In this way, the user processes the world into a data feed that can be picked up by algorithmic sensors; and these algorithms in turn help code the world in this Romanticized way, through an endless stream of recommendations that places the user-

self at the centre of the story. As the example of the NPC Influencers shows, this centring of the self is not entirely secure, a problem I'll return to in the conclusion to the chapter.

In the rest of this chapter, I move to a discussion of the "front end" of this Romanticization, looking at Instagram as a Romantic medium in the sense discussed above. My method is a close reading of the Instagram profile equiano.stories.[3] This is an "Insta-film" adaptation of Olaudah Equiano's famous 1789 slave narrative *The Interesting narrative of the life of Olaudah Equiano, or Gustavus Vassa, the African, written by himself.* As I'll argue below, the literary source text has a very unromantic view of mediation, whereas the adaptation Romanticizes the text as it mediates it through Instagram. This, I'll argue, is not just circumstantial: equiano.stories depicts itself as a thought experiment in what would have changed if Equiano had had social media when he was captured as a slave. This suggests that equiano.stories is less an adaptation of Equiano's text, than a narrative about Instagram itself. Given that equiano.stories was funded and produced by a tech billionaire who manages a surveillance and data analytics company, this opens a reading of the ways Instagram and the power of the discourse network itself function through Romantic media. The comparison of source text to Insta-film shows the ways Instagram Romanticizes the world for its users, figuring the power to mediate as the ultimate freedom. Ultimately, I argue that this constrains the field of political possibility into the figure of an individualized, media-empowered subject.

Mediating freedom

In 2022, the film production company Stelo Stories and the DuSable Black History Museum released its adaptation of Olaudah Equiano's famous slave narrative *The Interesting narrative of the Life of Olaudah Equiano.* The film was part of a new genre of feature-length films shot in a series of short Instagram stories and posted to the platform. Stelo Stories had already released eva.stories in 2019, under the premise "what if a girl in the Holocaust had Instagram?" (Stelo Stories, n.d.). This was an adaptation of the diary of Eva Heyman, a Hungarian-Jewish girl who documented the Nazi invasion of Hungary

[3] Thanks to Kaushik Tekur for the invitation to participate in a rich panel discussion along with Zachary Wagner, Shruti Jain, and Seb Franklin at the Early Caribbean Society Global Equiano Conference in 2024 that informed my work here.

and was murdered in Auschwitz in 1944. Both these adaptations were filmed in the first person, as if the protagonists anachronistically had access to smartphones and social media. As Stelo Stories (n.d.) puts it, "these young people had a pen and paper to tell their stories. We give them a phone, social media, and other technologies to allow them to communicate directly with their 21st century peers." These are a new kind of adaptation from text to Instagram, that involves an imaginary profile for these historical figures. What's especially interesting about this new genre of "Insta-film," is the way it alters these narratives when mediated through Instagram. These become texts as much about the imaginary of Instagram itself, as about the source material.

In this way, the remediation of Equiano's narrative from text to smartphone provides an interesting way of examining cultural presumptions about smartphones, Instagram, autobiography, and political freedom. Equiano.stories invites this comparison directly, asking "What if an African child in 1756 had Instagram when he was enslaved?" (DuSable Museum, 2022). The question is unanswered, but leading: would it have been asked about other media? What if Equiano had a radio, or a calculator, or a diary, etc.? The question is already full of assumptions about Instagram as being some kind of inherent counter to the slave system and its ability to subjugate Africans; this in turn suggests a host of implications about the racially-liberatory power of social media in the present.

The DuSable webpage for equiano.stories makes this implication more blatant: under a banner headline that reads "our story starts in freedom" is a full-page image of a Black boy, his face half-obscured by a smartphone which he holds up; one eye is replaced with the camera. The story begins in freedom, because Equiano's story begins in Africa before his enslavement; but it also seems to begin in freedom because of the phone Equiano will be able to take with him into slavery. This automatic ability to self-novelize seems to transcend the condition of slavery, offering a freedom no one can take away: the power to mediate. As Kaushik Tekur and Zachary Wagner (2024) point out in their article on equiano.stories, "there is an anachronistic assumption that Equiano was always already a western liberal or Enlightenment subject capable of using a smartphone." In other words, equiano.stories naturalizes the smartphone and its affordances, while attaching an ahistorical conception of freedom and self-expression to it. When the film

was screened to the United Nations General Assembly (more on this later), the then President explicitly described its purpose as "to reimagine the effects of social media during the slave trade era" (United Nations, 2022). We are set up to watch the film with the idea that Instagram is a kind of abolitionist media that inherently works counter to the institution of slavery; at the same time, we forget the racist and colonial history of Silicon Valley, as well as the ways these histories continue in transnational labour practices, despite access to smartphones (M. Harris, 2023).

Notably, this radically reverses the narrative of the book. Equiano learning to read and write (and learning other skills) is a key part of his literary narrative of becoming a free subject, able to relate his story to others and campaign for abolition. Self-narrativization is something he learns in slavery, in the language of his masters, rather than something guaranteed by technology or arising in a pre-slavery freedom. As such, his ability to self-narrativize is by no means unambiguously empowering and freeing, but is fraught with contradictions. Below, I'll argue that equiano.stories romanticizes the narrative through this change. By this, I mean that it depicts Instagram as offering its user the power to resolve the contradictions of freedom and mediation that Equiano can't in his written text. My method is to show how Instagram Romanticizes a text with a very unromantic relation to media and mediation.

As an important aside: why was equiano.stories played at the UN? Presumably because the film was financed by an Israeli tech billionaire with high level diplomatic contacts. Stelo Stories was founded by Israeli filmmaker sisters Maya and Adi Kochavi, and the films were bank-rolled by their billionaire father, Mati Kochavi, who takes credit as producer (Kochavi, n.d.; Shemer, 2022). Mati Kochavi is founder and chair of AGT International, a data analytics and AI company that specializes, according to Kochavi's webpage, in "harvest[ing] sensor-based data from the physical environment, and turn[ing] that data into actionable insights that can help urban planners solve…complex issues" (Kochavi, n.d.). While this new urbanist palaver depicts the company as some kind of smart city start up, AGT is actually a surveillance and security company. This company is not far off Palantir; and like Palantir, it has creepily expanded from security-surveillance to health care and smart cities (one of the Kochavi sisters has seemingly moved on from Stelo Stories to work for her father's company Korro.AI, a gamified, AI-based health app

for children). Mixing this kind of security mass surveillance with health and urban data analytics is especially disturbing given that Kochavi openly promotes predictive policing as a necessary strategy for security (AGTInternationalComm, 2012).

AGT has also, for decades, facilitated secret security relations between Israel and the United Arab Emirates, until these relations became publicly normalized with the signing of the Abraham Accords in 2020. With many of its employees coming out of Israeli's defence and security forces, AGT has brokered the sale of spy and surveillance technologies to the UAE, including Canadian-produced spy planes intended for surveillance of Iran (Blau & Scharf, 2019; Melman, 2008; T. Nassar, 2019). This means AGT is directly involved in American efforts to reshape the Middle East according to its strategic objectives, which include aligning Israel, the UAE, and other Arab states in an alliance against Iran (Strobel & Nissenbaum, 2019). Other AGT contracts with the UAE involved installing security cameras, license plate readers, and other surveillance equipment throughout the country. All this to say that the money producing equiano.stories comes from a high-tech surveillance, state security, and data analytics company with involvement in Israeli military ventures.

Strangely, this is not the only big tech company to take up Equiano as a figure of digital freedom. In 2019, Google named its submarine communications cable that runs from Europe down the coast of Africa, *Equiano*. Google (2019) writes, "Named for Olaudah Equiano, a Nigerian-born writer and abolitionist who was enslaved as a boy, the Equiano cable is state-of-the-art infrastructure based on space-division multiplexing (SDM) technology, with approximately 20 times more network capacity than the last cable built to serve this region." Seb Franklin (2021) points out the utter strangeness of this sentence, that begins with a description of Equiano's enslavement, and ends with technical details of state-of-the-art infrastructure.

> This extraordinary sentence registers an equation between freedom, self-expression, and data transmission capacity. Enslavement provides the counterweight necessary to elevate those values and that capacity. In other words, Equiano's name is used to signify the attainment of liberal personhood and to imply that high-speed internet access will confer the prospects with which that form of personhood is associated. From another perspective, the sentence makes it clear that the promises of digital culture

> remain relationally bound to Atlantic slavery and its afterlives. (Franklin, 2021, p. 2)

Below, I'll read equiano.stories as participating in this exact confluence of freedom, self-expression, and media capability, depicting media empowerment as a transcendence of slavery into freedom.

Readers can draw their own conclusions about whatever cognitive dissonance or psyops are at play in a surveillance security company with ties to the Israeli secret service making weird adaptations of abolitionist slave narratives that promote the liberatory power of Instagram.[4] In the overall arguments of my dissertation, however, what's more significant is the contradiction between equiano.stories' narrative of media liberation and the data harvesting and surveillance that undergird the film production. As I'll discuss in the conclusion to this chapter, this helps figure the recursive cycle of power I describe throughout this dissertation. Instagram and equiano.stories figure a model of recursive self-development in which self-mediation leads to empowerment and ultimately to the figure of the Influencer, for whom self-mediation becomes world-mediation. Yet, the shadowy presence of the surveillance company shows how this self-mediation actually recursively feeds back into the power of the system, rather than the user. Instagram's promise of protagonism functions by turning the world into the setting of one's own personal novel. It is a medium for transcending the social determinations that would disrupt the possibility to live life as one's own narrative. Yet, this promise comes up against economic power. The power to mediate the world actually seems to reside in the inaccessible realm of the tech billionaire, which Silicon Valley justifies through deploying another Romantic trope: the visionary genius. No matter how much influence we accrue through repetitive acts of self-mediation, we seem to be living in Elon Musk's novel, not our own.

[4] Readers can see Simone Browne's (2015) *Dark Matters* for the history of how Black slavery is foundational to Western epistemologies of surveillance and control. Likewise, they can note how a constant sense of surveillance structures Equiano's *Interesting Narrative* (Venkata, 2024).

Stubborn media in Olaudah Equiano's *Interesting narrative*

In this section, I'll offer a reading of Olaudah Equiano's (1789/2007) *The Interesting narrative of the life of Olaudah Equiano, or Gustavus Vassa, the African, written by himself* to set up the comparison with equiano.stories. Specifically, I'll look at the way media operate within Equiano's text, and the way Equiano self-referentially explores the capacity and incapacity of his text to itself act as a medium. In the section that follows, I'll show how equiano.stories depicts Instagram as resolving many of the problems of mediation Equiano raises in and through his book. In this way, the adaptation Romanticizes the source text, figuring Instagram as offering its user the capacity for seamless mediation.

Equiano's *Interesting narrative* has become one of the most important texts in 18th century English literature and is a foundational work in slave and abolitionist autobiography. It cuts across multiple genres, including ethnographic description, autobiography, picaresque novel, epistolary text, and seafaring adventure. Narrated from adulthood, the *Interesting narrative* begins when Equiano is a child, free in West Africa. After being captured by slave traders, he works across England, the Caribbean and North and South America, participating in historically significant events, such as the 7 Years War. He learns to read and write English, as well as skills such as navigation, commerce, and hairdressing, and goes on various voyages of trade and exploration. Through the skills he learns, he is eventually able to acquire enough money to buy his own freedom. He ends the book with an impassioned plea for abolition, that attempts to appeal equally to the plight of Black slaves and the economic interests of a white readership.

So far, I've presented Equiano's *Interesting narrative* as being "unromantic." However, some scholars describe it as an example of Transatlantic Romanticism. Lance Newman (2019), for instance, sees Equiano's journey from slave to free as participating in a Romantic genre of self-possessive individualism. Matthew Leporati (2023) sees Equiano's *Interesting narrative* as anticipating various Romantic forms, such as the epic genre that follows the protagonist's education. Debbie Lee and Lewis Kirk McAuley (2015) see Equiano as participating in a variety of Romantic abstractions that ultimately allow a kind of transcendence of the particularities of his identity into a representative of

free Blackness. These readings contrast with other scholarly work that problematizes Equiano's journey into free subjectivity as not quite so neat and tidy, calling into question the idea of Romantic transcendence (Gates Jr., 1989/2014; Lowe, 2015; R. Paul, 2009; Pudaloff, 2005). Equiano's Romanticism, then, is up for debate.

Rather than hash out this debate, I'll be more specific about what I mean by Romanticism in this context. Reading the *Interesting narrative* as a text about media and mediation, which I will do below, shows how it contrasts starkly to the Romantic view of mediation I develop throughout this dissertation. The *Interesting narrative,* in my reading, continually depicts Equiano *trying* to enact the kind of Romantic mediation that would allow him to transcend or mediate the contradictions in his identity, but constantly running up against the limitations of a rigid media regime that disallows this. In other words, the Romantic organs that Equiano learns to use don't work as promised. If Romanticism is defined through a subject who can mediate distinctions in world- and self-changing forms, *The Interesting narrative* is a story of a protagonist who masters all manner of Romantic techniques, but sees them repeatedly fail to achieve this kind of mediation.

Henry Gates Jr. (1989/2014) discusses media in Equiano's *Interesting narrative* in a way that provides a nice contrast with Romantic mediation, as discussed above through the work of Novalis. Gates (1989/2014) focuses on the trope of the talking book which fails to speak, which he describes as "the ur-trope of the Anglo-African tradition" (p. 143). This is a repeated trope in early Black literature, in which the protagonist thinks that a book transmits language through speech. It is notable too, that it is also a repeated trope in white, Western modernity, in relation to any new media. As Byron Reeves and Clifford Nass (1996) argue, people tend to talk back to new media, from radio, to television, to computers, treating them as if they were humans. Treating media as objects then becomes a way of signalling media literacy, and thereby an alignment with the forces of progress. Equiano's talking book scene takes place after he arrives in England, as he describes a more general culture shock:

> I had often seen my master and Dick employed in reading; and I had a great curiosity to talk to the books, as I thought they did; and so to learn how all things had a beginning: for that purpose I have often taken up a

> book, and have talked to it, and then put my ears to it, when alone, in hopes it would answer me; and I have been very much concerned when I found it remained silent. (Equiano, 1789/2007, p. 75)

The prevalence of this trope in early Anglophone Black literature not only establishes the beginnings of a canon, but also shows the shared concern with media in the work of many Black writers.

Gates (1989/2014) interprets this trope as an allegory of the racist imperatives under which these authors wrote. 18th century Europe was profoundly concerned with Black writing, because "literacy, the very literacy of the printed book, stood as the ultimate parameter by which to measure the humanity of authors struggling to define an African self in Western letters" (Gates Jr., 1989/2014, p. 144)**.** Literacy became a ground on which to prove or disprove the humanity of Africans; media literacy becomes a kind of test. Yet, defining the self through Western literacy put Black writers in a paradoxical position, particularly in relation to their own spoken language. The talking book that doesn't speak acts as an allegory for this paradox of literary identity, in which Black humanity could only register in white writing. The silence of the talking book plays out the complexity of a media system that forces Black writers into using Western literature to define their identity, erasing Black voices even as it transposes them to the written text.

As a slave, Equiano has a social status akin to the silent book - an object that cannot be heard. Only through learning to write in this voice can Equiano understand the language of the book and refigure himself as a human. Taking on "the master's voice…serves to enable the object to remake himself into a subject" (Gates Jr., 1989/2014, p. 170). In other words, this silent book is the unromantic inverse of Novalis' automatic picture book from *Heinrich von Ofterdingen*. Rather than a subject uniquely endowed with a spirituality that allows the automatic narrativization of life as literature, this media system only allows self-narrativization through the rigid parameters of a racist transmission channel. The message of subjectivity can only be transmitted in the language of subjugation. The trope of the talking book shows that these Black writers are all too aware of the "altogether unromantic" parameters of the transmission channel, or the ways racism is built into its circuitry (Kittler, 1986/2013, p. 110).

I propose taking Gates'(1989/2014) interpretation further and reading the *Interesting narrative* as a text about media. Read closely, the book is filled with media - everywhere letters, legal documents, lists, and other bits of paper circulate around the globe, facilitating the social reality Equiano tries to navigate. The most vital piece of paper in the narrative is one Equiano acquires half-way through: a written declaration identifying him as a freed slave. As I'll show below, this declaration oscillates between being a medium and a brute object. It seems to have the power to mediate Equiano's body as free, but continually becomes a fragile piece of paper that loses this power to speak. The silence of the talking book then, is not just about the paradox of proving Black humanity; it also refers to the ways media can suddenly 'turn off' when their users are Black, and cease processing the reality they are supposed to.

My reading builds on Philipp Schweighauser's (2023) interpretation of Equiano's text through Bernhard Siegert's (2015) concept of cultural techniques. Schweighauser (2023) interprets Equiano's journey to freedom as not just about attaining literacy, but also about "master[ing] a good number of cultural techniques," such as sailing, commerce, swimming, and mathematics, that allow him to excel in European culture "as a self-made man" (p. 28). Schweighauser point outs the ways in which freedom and humanity are as much technical as conceptual categories, and he sees Equiano's journey to freedom as based on a set of technical skills that allow the production of an individuated, autonomous subjectivity, counter to the condition of slavery.

Reading Equiano's *Interesting narrative* through the theory of cultural techniques has great potential, but there are a number of problems here. The first is the absence of a concern with race in Siegert's theory (and in German media theory more generally) that Schweighauser to some extent inherits. Schweighauser's ultimate point is that these cultural techniques automatically produce modern, autonomous, and self-actualizing subjects: subjects who read, write, count, and sail become autonomous individuals in this media system, full stop. There is little discussion here of the ways race complicates this subject position; rather, in this reading, Equiano's mastery of these techniques allows him to transcend his racial position. Equiano attains an unambiguous freedom in this account, something other scholars call into question (Lowe, 2015; R. Paul, 2009; Venkata, 2024). This reading would benefit from a discussion of the ways technical knowledge is itself an

important way European colonialism processed the distinctions between Black and white. As Thomas Dekeyser (2024) shows, European colonial projects characterized their racialized subjects as inhuman precisely because they appeared to lack a European relation to technology. In this context, Equiano's capacity to master technical knowledge is continually reprocessed through a racial category that ontologically denies he has this capacity. In other words, no amount of mastery of various technologies of the self can ever definitely prove his humanity to a racist system.

To account for this, I propose reading the text through a different definition of cultural techniques than Schweighauser (2023), as means for "the production of ontological distinctions" (Siegert, 2015, p. 9). This means studying the techniques through which distinctions like black/white, slave/free, subhuman/fully human are produced as natural givens in a specific culture. I read the narrative as depicting Equiano's (Romantic) desire to mediate these distinctions himself, but constantly running into the very unromantic technical parameters of the information network that have the final say in where the line is drawn. As Saidiya Hartman (1997/2022) argues, the failure of emancipation to achieve its promise in practice "troubles an absolute and certain divide between bondage and freedom" (p.11). Schweighauser's reading needs to account for the ways distinctions like free/slave are not cleanly processed when they apply to Blackness, even when the correct cultural techniques are at work. Here, I read the *Interesting narrative* with this in mind, to open Equiano's text to a richer media theoretical reading. At the same time, this reading nuances the stakes of the theory of cultural techniques, by taking into account the ways cultural techniques process and are processed by race.

The *Interesting narrative* is awash in circulating paper. The book itself is partly epistolary, containing full letters quoted in the text, and these also function as important objects in the narrative. These include a letter declaring his freedom, signed by his old master, and letters attesting to his character, signed by various white people. These letters are meant to mediate his body as free, trustworthy, knowledgeable, and reliable, beyond his era's racist assumptions. Likewise various government letters appear quoted in the text, which organize the bureaucracy of the system itself. The book ends with a flurry of letters, concerning Equiano's involvement with a failed attempt to settle a group of freed

Black slaves in Sierra Leone. The letters are strange: they are simultaneously all powerful in their ability to transcend or reorganize the system, and kind of impotent, in their potential to be ignored, disbelieved, lost, or destroyed. The most vital of these letters is the letter declaring his freedom, and he spends most of the first half of the book trying to attain it. Read through the theory of cultural techniques, this piece of paper is the only possibility Equiano has of informationally situating his body on the free side of the free/slave binary. However, other mediations are at play, and the letter does not actually function as promised.

Equiano shows this failure shortly after quoting the full text of his freedom letter and declaring his joy at receiving it. Almost immediately, he is back in a slavery situation. He is now working as a paid sailor on his former owner's merchant ship. While in port in Savannah, Georgia, he has an altercation with a slave, whose owner comes to flog and imprison Equiano. Equiano relies on the mercy of his captain to conceal him; but once forced into this desperate position, the captain tricks and swindles Equiano and forces him to work against his will. Equiano (1789/2007) makes the irony explicit, writing "I consented to slave on as before" (p. 139) and that he "was very apprehensive that my free voyage would be the worst I had ever made" (p 140). Despite the letter, his body is not properly processed as free within this system. Other mediations send him back to slavery, in practice. Ironically, this pseudo re-enslavement leaves Equiano in charge of the ship, as the captain and the first mate get too sick to helm it. Equiano's ability to navigate makes him a de-facto captain for the duration of the voyage, refiguring his status yet again: "many were surprised when they heard of my conducting the sloop into the port, and I now obtained a new appellation, and was called Captain…it was quite flattering to my vanity to be thus styled by as high a title as any free man in this place possessed" (p. 141). In the course of a few pages, Equiano's ontological status switches back and forth repeatedly, suggesting the instability of the techniques that promise to process him as free.

Throughout the book, Equiano describes the mediation of his freedom as a constant struggle. Shortly after this temporary return to pseudo-slavery on his first free voyage, Equiano is threatened again by the loss of freedom. After reaching port following a disastrous shipwreck, he is accosted by two white men who pretend he is their runaway

slave and try to kidnap him. His freedom letter plays some mediating role, as does his linguistic ability, but these are by no means decisive. Ultimately, he threatens violence and the two men eventually back down. Similarly, later in the book he is re-captured into slavery, despite his letter and the other techniques he deploys to mediate his freedom. Kaushik Tekur Venkata (2024) emphasizes how Equiano attempts to narrate himself as a subject possessing a past, and thereby to "stake a present claim in liberal personhood" (p.119). Despite using this technique of self-narrativization, which should process him as a liberal individual, he is summarily ignored and threatened with death. Contrary to Schweighauser's (2023) reading, Equiano's mastery of cultural techniques and informational networks does not actually code his body as free. Instead, other chains of operations influence the way his body is mediated. Both of these examples show that the final determination of ontological distinctions ultimately rests on violence.

Simon Browne (2015) offers insight into this reprocessing of freed Blacks as slaves, through her study of surveillance and Blackness. Browne interprets the runaway slave advertisement as a technology of surveillance; it makes "the already hypervisible racial subject legible…as 'out of place'" (Browne, 2015, p. 54). Surveillance here is not just about watching, but about processing bodies. The physical descriptions included in the runaway slave advertisements mean that all Black bodies will be processed through the description and constantly assessed as in/out of place. Even Black bodies that can mediate themselves as free, are assessed afresh in each interaction as being potentially escaped. This means a constant processing; every time a cultural technique of surveillance seems to settle on freedom, it recursively loops back to check again. Constant surveillance is constant ambiguity, because it is always asking about the free/slave binary, never answering. Indeed, the only end-state it will stop at is slavery: IF 'freedom' AND 'black' THEN 'restart.' Loop back, and check again. Contrary to the Romantic recursion articulated in Chapter 1**,** this is a return to the base case *without* transforming it. It is an endless feedback loop, rather than a return that changes the subject. In the examples of re-capture, Equiano depicts how this constant processing of his body through the free/slave distinction renders his powers of mediation fragile.

Equiano describes the recapture of freed slaves as a common occurrence. In these moments, the freedom letter loses its status as a medium and becomes a piece of paper. In

the *Interesting narrative,* techniques for processing the black/white distinction seem over and over to have ontological primacy over those that process the slave/free distinction. Further up the operational chain, some primary mediation has coded any and every Black body as potentially capturable. For Browne (2015), this ur-technique of slavery and Black surveillance is the slave ship. Through the construction of the ship, Black bodies are produced as cargo, remediated into objects, and categorized according to rigid typologies built into the ship's design. Afterall, the slave system relies on the capturability of Black bodies in Africa, that cannot be so easily undone in the Caribbean. The looming mediation of the slave ship comes into conflict with Equiano's attempt to mediate himself through his freedom letter, his mastery of English, and the other technical skills that associate him with freedom.

These examples are not isolated in Equiano's narrative, but rather are so recurrent that they shape the book's genre. In his introduction to *The Interesting narrative,* Robert Allison (2007) describes it as a picaresque novel: "[picaresque] novels focus on a central character, or *picaro*, who is snatched from an ordinary life and thrust into a series of adventures in a hostile world, his or her fate dictated by uncontrollable forces" (p. 28). This genre plays out as each time Equiano seems to attain freedom, self-possession, wealth, or status, it is almost immediately snatched away - or at least, called into serious question. In another example, Equiano takes care of a dying man who promises him a bag of money to buy his freedom, if Equiano will take care of him until he dies. The bag appears to be filled with paper banknotes…but when Equiano opens it, he realizes it is just scraps of paper: "while we thought we were embracing a substance we grasped an empty nothing" (p. 133). This is one of many examples of objects that should function as media, suddenly becoming voiceless scraps of paper. All the techniques he harnesses that should code him as free, civilized, European, human, etc. constantly melt as he is snatched away by larger forces. The book uses the picaresque genre, then, to play out the ambiguity of Equiano mediating his life into a narrative which he cannot actually direct.

Equiano's text investigates the contradictions of this media system, showing how techniques of processing freedom are set up to fail for Black bodies. This sounds a bit like Afro-pessimism, or the theory that anti-Black institutions, like slavery, persist in unending cycles rather than disappear through linear progress (Hartman, 1997/2022;

Wilderson III, 2017). Saidiya Hartman's (1997/2022) work is foundational for Afro-pessimism, in arguing that freedom and slavery are co-constructed in Western humanism. This means that abolishing slavery can never rest on granting freedom to slaves, as this concept of freedom relies on the continued existence of slavery in practice. Equiano seems to play with a similar idea that freedom has no distinct ontology, but instead is constantly processed in a binary with slavery. However, the tone of his text is different from Afro-pessimism. The picaresque genre is much more about a protagonist who repeatedly *believes* that he has achieved freedom, and so repeatedly confronts this cyclical snatching away. The protagonist never pessimistically resigns himself to the system's duplicity, but rather keeps trying. This allows the text to play out a tension between the mediations of the protagonist and those of the system.

While these letters are important media within the narrative, they also act as a meta-textual means of mediating the book itself. Various scholars have shown how the inclusion of letters helped Equiano (and other Black authors) to authenticate his narrative to a racist reading public, that would insist he was aided by a white writer (Allison, 2007; Carretta, 1999; Gates Jr., 1989/2014). As Vincent Carretta (1999) notes, later editions of the text even include a supplementary letter, providing names of people who could authenticate Equiano's African identity against charges in the news media that his text was ghost-written by a white Anglophone. This meta letter, that sits outside the text but within the book, helps code all the letters in the book as media: quoted in full, all these letters are working to process the book as authentic, even as they act as objects in the narrative itself.

The goal of processing the book as authentic is to mediate Equiano as the literate author, thereby recursively mediating Africans as civilized and fully human. In addition to these letters, the *Interesting Narrative* includes images of Equiano reading, descriptions of learning to read, and most blatantly the subtitle "Written by himself." These all attempt to mediate the Black body as capable of literacy. Yet, reviewers at the time still accused him of fabrication, or having received assistance from white Anglophones (Carretta, 1999; Gates Jr., 1989/2014; Rezek, 2015). What the book shows is the ways this transmission channel is built to scramble messages coming from Black bodies, even when they input the correct (white) code of humanistic literacy. The

insistence on singular authorship leaves the text in need of an authentication that will always be questionable to a racist system. While the narrative depicts how the larger system interrupts Equiano's attempts to mediate himself as free, the book itself plays out this tension. Power functions here by revealing the codes of authentication, yet re-asserting its racist relations even when bodies pass perfectly through them. Rather than an author in charge of mediation, it shows a media system that produces authorial subjects according to its own racist transmission channel.

The problem of the book's authenticity continues to reverberate two centuries later. While this was called into question for racist reasons in the 18th century, recent scholarship has assembled credible evidence that suggests Equiano's text is fabricated, that he was born in North America, not Africa (Carretta, 1999; Ogude, 1982). This claim remains debated and is not likely to be definitively resolved (Carretta, 1999, 2007; P. E. Lovejoy, 2007). However, seeking a definitive answer to the question of the text's authenticity misses the point. What's more interesting here is the fixation on the question itself over several centuries, which takes on a Romantic frame by asking: does the *Interesting narrative* successfully mediate writing and life? The *Interesting narrative* remains a fraught and ambiguous effort at using media to process identity. As I've shown above, the narrative itself plays out this exact trope. The possibility of self-mediation, of rising above social determinations and mediating one's own life, is continually undermined in the text. This establishes an interplay between Equiano's efforts at mediation as a character *in* the text, and Equiano's efforts at mediation as the author *of* the text. The book depicts the ways Romantic mediation is rendered impossible for Black bodies, even when they use all the right techniques. The status of Equiano's authenticity is less interesting here than the way the book calls this very frame into question.

In this way, the *Interesting narrative* provides an inverted mirror to the medium of the Romantic novel, described above. The Romantic novel functions as a medium by collapsing writing and life, such that the author becomes the protagonist of their life as a story; and through this re-writing, Romanticism promises techniques that can reprocess ontological oppositions, collapsing them together, and creating new distinctions in the world. Equiano's book shows this attempt failing in the face of transmission channel that scrambles these messages. In a meta-textual way, Equiano's book tries to reprocess the

ontological status of Africans, but comes up against a racist system that shuts down his book's capacity to perform this mediation unperturbed. The idea of the Romantic novel, by comparison, is that it would automatically transform this ontology simply through its writing. Within the book, Equiano repeatedly shows the failure of media that are supposed to process his ontological status as a free, individualized, mediating subject; suddenly, he ceases to be the author-protagonist of the story "written by himself," and becomes an object circulating according to a higher logic. The *Interesting Narrative* depicts its own impossibility of actualizing the novel as medium. Like the talking book that doesn't speak, media in Equiano's text suddenly become silent, unable to process the distinctions they are supposed to. The *Interesting narrative* suggests that Romantic novelization is not so much the property of an author, but rather an experience allowed or disallowed by the switch of the transmission channel. The extent to which white authors might be able to Romantically mediate the world is not due to their inherent genius, but to their ability to pass through the logic gates of the discourse network.

Reading Equiano's *Interesting narrative* as a text about media suggests an unromantic theory of mediation, and a more developed theory of cultural techniques. Compared to Equiano's narrative, Siegert's (2015) theory of cultural techniques is a bit too clean. For Siegert, cultural techniques are autonomous, processing distinctions definitively, and on their own. Yet, they do not function like this in Equiano's description. For example, the cultural techniques of alphabetization and literacy should automatically process Equiano on the human, free, civilized side of various distinctions, as Schweighauser (2023) argues they do. In turn, these individual categorizations should recursively process Africans in general along these terms, something Equiano is explicitly trying to do with his book. Yet the *Interesting narrative* continually suggests that somewhere further up the operational chain something is overriding this; other media, such as slave ships and escaped slave posters force Black bodies into a constant reprocessing that scrambles any coherent signal of full humanity. As Hartman (1997/2022) puts it, "even the status of free blacks was shaped and compromised by the existence of slavery" (35). The looming presence of the slave ship means that all Black bodies are processed as capturable, no matter how much they process themselves as free through the acquisition and practice of techniques. An analysis of race is necessary for

the theory of cultural techniques. Thinking about a racist system in terms of cultural techniques: cultural techniques of racialization override cultural techniques further down the operational chain.

This invites an analysis of the way power can deploy cultural techniques not to definitively process a binary, but to leave a binary in a state of constant switching. While the analysis of Equiano shows how this operates to support a system based on racist subjugation, it also extends beyond this context. We see this mode of power operating through the instability of binaries today. In an eerie echo of the instability of Equiano's papers, the U.S. Citizen Juan Carlos Lopez-Gomez was detained by ICE in Florida, despite proving his citizenship (Saloman, 2025). The ability to switch binaries also operates as a way of projecting power. Elon Musk's Nazi salute at Donald Trump's inauguration, for instance, was able to switch its signification back-and-forth from white supremacist symbol (to appeal to the white supremacists) to an ancient Roman gesture (to disavow its white supremacy). Similarly, the chaos of Trump's tariffs, which constantly switch on and off, seem to bolster a power that leaves everyone scrambling to respond to a constantly shifting reality.

The way power renders cultural techniques unstable creates the strange effect in the *Interesting narrative* of media 'turning off.' Suddenly Equiano's command of English, his freedom letter, his European style of dress cease to be media. They fall silent, like the talking book, and fail to process the distinctions they are supposed to. In Siegert's account, media always function as the third term processing the distinction, meaning that they "therefore cannot be restricted to one or the other side of the distinction" (Siegert, 2015, p. 14). This means that Siegert's theory does not account for media that process the distinction between media/non-media, a switch that transforms an object into a mediating third, and back again. In contrast, Equiano's text depicts the potential for a medium itself to be reprocessed, switched off, turned into a mute object. Below, I'll explore how equiano.stories provides Equiano with a superior media suite, that can trump whatever mediations the system throws at him. This adapts the text with a Romantic relation to media. It seeks out the organs that will allow an individual subject to occupy the position of the middle third, and process these distinctions, himself. In this way, it reclaims

authorial status for the subject, rather than depicting the ways it is allowed/disallowed by the racism of the discourse network itself.

Transcendent media in equiano.stories

The Instagram page equiano.stories contains 30 permanent Instagram "stories," as well as a handful of posted photographs. The stories are short films that, watched in sequence, offer a live-action adaptation of the first two chapters of Equiano's *Interesting narrative*. The series of short films begins while Equiano is a child living in his Igbo village and ends when his slave ship leaves Africa. It is mostly filmed as if Equiano himself is filming, and he frequently uses a selfie-perspective to film himself. Stylistically, it takes on the tropes of 21st century social media culture, including filters, effects, and what Kaushik Tekur (2022) describes as a "fun kid" affect. In this way, equiano.stories acts out the medial conditions under which it is written, something it makes explicit through the tagline: "What if an African child in 1756 had Instagram when he was enslaved?"

This "what if" implies that equiano.stories is more a film about Instagram than about slavery or Equiano. It asks how Equiano's text and life would have been different if he had access to digital media, and it proposes to demonstrate an answer through the Insta-film. This "what if" structures my method for reading equiano.stories against its source text. I take the "what if" at face value, positioning the Insta-film as an exercise in Instagram talking about Instagram. That the film was produced by a powerful tech company and written by a team that includes "AI, computer vision, and Metaverse technology experts" opens the film to a reading as the discourse network's own description of itself (Stelo Stories, n.d.). In this way, I read equiano.stories similarly to the way Kittler (1986/2013) reads *Heinrich von Ofterdingen*. It is enacting the parameters of the transmission channel: it "does not depict 'actions.' Instead, it acts" (Kittler, 1986/2013, p. 121). Through the changes equiano.stories makes to its source text, it reveals the logic of the underlying media system in which this new version is produced.

Part of the ostensible purpose behind the aesthetic of this Insta-film is to appeal to young people and thereby act as a pedagogical tool. The film even embeds links to further information that could educate casual watchers about slavery in the 18th century,

or be used more intentionally in a classroom. Putting Equiano's text into a 21st century vernacular, the production company states, makes it relatable to contemporary viewers (Kochavi, n.d.; Stelo Stories, n.d.). However, this rests on a big assumption that Instagram is a neutral pedagogical tool. Here, Instagram is already framed as pedagogically better than books, the media Equiano had access to. Even before we begin watching the movie, we are already set up to read it as a way of comparing media through the idea that young people will learn better watching the movie than reading the book. In embedding assumptions about Instagram's media capabilities, this pedagogical narrative is already playing out the "what if" scenario of the Insta-film. Through this frame, equiano.stories explicitly depicts itself as exploring and demonstrating the affordances of Instagram. Not only does it express fantasies about the educative or liberatory power of Instagram, it also already sets up the Insta-film to resolve the contradictions of media in the *Interesting narrative*. This reframes the story as one about media-empowerment. Equiano here becomes a subject who was just in need of more liberatory media that could properly process the distinctions he struggles to mediate in and through his book.

The most drastic alteration equiano.stories makes to the source text is cutting short the narrative after Chapter 2, thereby ending the story when Equiano departs Africa on the slave ship. By leaving out Equiano having to learn English in order to disseminate his narrative, the Insta-film dissolves the tension in the *Interesting narrative* of Equiano having to prove his humanity in the language of the enslavers. Kaushik Tekur (2022) notes the effect of this absence:

> Equiano's struggle with slavery is also a struggle to narrate in his own voice, a struggle with Western media, commodities, and genres of storytelling. It is this simultaneous struggle with the medium that the insta-film effaces, in the process mischaracterizing Instagram as a natural and transhistorical mode of storytelling.

Likewise, the aesthetics of the Insta-film depict a user skilled at posting, filtering, time-stamping, etc., implying that "Equiano's image was already posting these, utilizing the technology, before the forced entrance into the European world-hood through the experience of learning" (Tekur & Wagner, 2024). Ending the story after the second chapter, equiano.stories can elide all of the media contradictions that come from having

to express his humanity in the language of his enslavers. Instagram itself mediates these contradictions.

Tekur and Wagner (2024) depict this as a short-coming of the Insta-film, a missed opportunity for resistant media. While I don't disagree, I'm interested in pursuing a different reading than this kind of assessment. If we take the "what if" frame of the Insta-film at face value, then these changes are merely the logical outcome of imagining the story as if it was told via Instagram. Read in this way, cutting out four fifths of the Interesting narrative seems more to be a way of saying that "if an African child in 1756 had Instagram when he was enslaved," he wouldn't have needed to write the rest of the book! His access to Instagram means that he doesn't need to subjectify himself through Western literacy, meaning the narrative can lose the parts where he learns to read, write, and master other techniques. The book depicts these as fraught techniques by which he tries to mediate his freedom, whereas the Insta-film suggests that Instagram renders them superfluous. His humanity and ability to express himself are already guaranteed by social media within the digital discourse network.

Literary Equiano encounters a variety of media on board the slave ship, including a clock, a portrait, a telescope, and the talking book. Tellingly, Digital Equiano encounters everything except the talking book. In the Interesting narrative, the talking book renders media of self-expression ambiguous; on Instagram, it is erased from the narrative. The digital discourse network does away with such ambiguities, automatically giving the user-author the techniques for their own self-mediation and subject formation. The user does not need to be subjectified into a system that contradicts their subjectivity; rather the user is always already narrativizing their life, sharing their story even as they live it. Like the Romantic novel, Instagram is depicted here as automatically and seamlessly collapsing the distinction between life and narration.

Perhaps the most interesting aspect of equiano.stories is the simultaneous presence and absence of the smartphone that is seemingly filming the videos. In this way, it offers an inverted mirror Equiano's self-referential preoccupation with media. Similar to the way letters in the Interesting narrative function as both objects in the book and parts of the textuality of the book, the smartphone in equiano.stories functions

simultaneously as an object in the story as well as the capacity to tell the story. However, unlike the letters in the Interesting narrative, the smartphone is functional and ephemeral, never a brute object that loses its voice.

Though ostensibly shot from Equiano's point of view, the filming continues regardless of Equiano's situation. This becomes especially strange in scenes of capture and captivity. The Insta-film depicts first-person scenes of Equiano seized by slave traders, having his hands bound, being accosted and imprisoned. Such scenes are uncanny; as viewers we assume they might hamper the capacity of the smartphone to keep filming. However, no one else seems to notice Equiano has a smartphone, and his ability to film is undiminished by these events. In one scene, the film even breaks with the first-person perspective, without explanation, depicting Equiano and his sister bound in a makeshift cell. This scene is, we must assume as viewers, autonomously filmed by the floating smartphone itself. By rendering the smartphone ephemeral, the Insta-film gives the sense that Instagram automatically provides the capacity to collapse life into a story. The phone never becomes a brute object, but continues to mediate unabated.

Rather than see this as a continuity flaw, I would continue to read it through the "what if" ethos of the film. This phantom smartphone makes perfect sense within its logic. By rendering media ephemeral, the power to mediate becomes an abstract property of the subject; life is automatically narrativized. Like the strange book in Heinrich von Ofterdingen, the Instagram-equipped smartphone takes on a ghostly quality, writing all on its own, despite bound hands and the loss of all possessions. It is as if the medium of self-expression transcends its technological basis in hardware, and becomes autonomous, spiritual. Unlike the letters in Equiano's Interesting narrative, the smartphone never 'turns off;' nor, seemingly, can it ever by lost, stolen, or destroyed. The camera moves around the slave ship, depicting shackled hands. It continues to mediate its user's life regardless. The medium's affordances of portability and constant narrativization become the subject's own, transcending the surveillance and control of the slave ship.

The smartphone is a strangely present absence; it acts as an object in the narrative by adjusting the perspective, yet vanishes as material in its seeming invisibility and transcendence of captivity. This is doubly uncanny as viewers realize the absence of any

other smartphones in the narrative. No one else seems to have one, and Equiano's phone cannot film itself; it is never seen. This implies, in turn, the absence of a telecommunications network. If Instagram functions here as a "medium," as Tekur and Wagner (2024) argue it does, it is only a medium in a limited sense. If media are defined by the three capacities of recording, processing, and transmission, the Instagram of equiano.stories is not a medium, as it seems incapable of transmission within the narrative. It cannot send signals to other phones. This is apparent in the thirteenth segment of equiano.stories (2022a), when Equiano asks "mama, are you still waiting for me?" He then shouts the question at a tree, and viewers realize it is meant rhetorically, as an exclamation of painful yearning. We are suddenly made aware that, despite addressing his mother via social media, Equiano cannot actually send her a message. This is another uncanny moment, throwing into relief the absence of a telecommunications network. As such, it is important to be more specific about how Instagram functions as a "medium," within the Insta-film.

In my reading, the Insta-film depicts Instagram as a medium in a different sense of the term: it is a pure means of mediation. It gives a subject the ephemeral and abstract capacity to mediate life into a story, to mediate the user as fundamentally free, human, and bearing subjectivity. In other words, Instagram seems to serve as a medium in the sense Siegert (2015) uses the term in Cultural techniques. It is the middle third that is capable of processing ontological distinctions. Here, this capability becomes the subject-users own, a Romantic organ. Equiano.stories depicts Instagram's capacity to connect and transmit as less important than the way it can ontologically refigure its subject-user. Even as you chain my hands, it seems to say, I render myself free.

Throughout this dissertation, I turn to Leif Weatherby's (2016b) reading of Romanticism as a "technological metaphysics" (p. 275). This means that Romanticism seeks out techniques that can intervene in the mediation of self and reality. Reading this with Siegert's (2015) theory suggests that Romanticism seeks to develop its own, intentional cultural techniques, its own ways of mediating ontological distinctions, processing new ones and switching existent ones at will. Equiano.stories figures Instagram as this kind of Romantic medium. Unlike the media in the Interesting narrative, Instagram seems to give Equiano the power to switch ontological binaries

unperturbed: he mediates life into a story, he mediates himself as fundamentally human and free, he transcends the material bonds of captivity as his smartphone continues expressing himself as a subject even as the slave system tries to render him an object.

Admittedly, this capacity to process oneself as "free" remains somewhat abstract. It is not so much a material freedom, as an essential human freedom that even the shackles of slavery cannot ever fully overcome. In the end, however, the Insta-film depicts a higher transcendence of slavery, mediated by Instagram. While in the early scenes of the film the Instagram-equipped smartphone allows Equiano to transcend his material bonds, by the end it allows him to transcend the slave system altogether, by becoming an "Influencer" enacting abolition. This occurs in a textual summary at the end of the Insta-film, that narrates the aftermath of Equiano's freedom from slavery. The final segment of equiano.stories (2022b) begins, "Equiano became one of the biggest Influencers of his time," recursively depicting him as a proto-social media subject, who merely awaited a more effective medium of abolition. It goes on to condense the last 10 chapters of the Interesting narrative into several paragraphs of text, collapsing them with details from Equiano's abolitionist biography:

> Equiano became one of the biggest Influencers of his time. Although it was forbidden he learned how to read and write in English. He also learned to trade as a merchant, so he could quietly make some money. With it, he bought back his freedom…In 1788, Equiano wrote a letter to the Queen of England herself, demanding an end to slavery. Just one year later, Equiano shocked the world with a book targeting slavery. In it, he exposes the details of his enslavement as a child and later as an adult…Equiano had been cheated many times in his life. Trusting no one but himself, he decided to self-publish and to keep all the rights. The book was a massive hit, and was quickly selling globally. Equiano took off on a promotional tour that took him all over. He used every platform to fight. The impressive list of people who financed the book was printed in its first pages, which got many to read it. The world could now see how renowned and influential Equiano had become. The book was so powerful that it played a critical role in getting England – at the time the biggest nation behind the trade – to end its enslavement of African people. (2022b)

This narrative heavily glosses Equiano's book and autobiography. The Insta-film does not film the parts of the story, discussed above, in which Equiano has to mediate his freedom with legal documents, letters, demonstrations of his literacy, etc. Above, I discussed these

as key moments when media fail or 'turn off' in Equiano's text, suggesting a more fraught relationship between media, freedom, and race. The Insta-film instead depicts Equiano as overcoming these through an Instagram-based logic of influence. His capacity to mediate higher ontological binaries, such as slavery/abolition no longer relies on messy legal documents. While the *Interesting narrative* depicts the complications that racism poses for seamless mediation, here Equiano becomes a transcendent mediator: an Influencer.

The Influencer, as depicted here, is not only able to mediate their own ontological status. They have transcended to higher level of mediation, in which they process binary distinctions not just in the self, but in the world. Here, Equiano is not only able to figure his own body as abstractly free; he is able to figure all Black bodies as free through influencing abolition. There is a recursive growth here, where the limit an Instagram user confronts (in this case slavery) becomes an occasion for transformation into a higher order figure of mediation. This transformation corresponds to accruing influence through successful cycles of self-mediation. Through Equiano's self-narrative, equiano.stories (2022b) writes, "the world could now see how renowned and influential Equiano had become." Importantly, this influence is tied to something resembling Instagram followers: people paid attention to Equiano, equiano.stories writes, because an impressive list of important people were listed in front of the book. In other words, his status and following rendered him an Influencer who could change the status of slavery. In this way, the book is refigured as a kind of proto-Instagram profile and Equiano as an Influencer-entrepreneur.

Depicting Equiano as an entrepreneur is not wrong; but this description glosses his own complicity in the slave trade and African colonialism. After buying his freedom, Equiano participates in press gangs and eventually works as a slave overseer in South America. Various scholars read this aspect of Equiano's book as resisting the easy categorization of his text as a liberatory project. Ross Pudaloff (2005) reads Equiano as a kind of free market evangelist; rather than indicting the capitalist system that produces slavery, Equiano sees a liberatory power in the mutability of the (human) commodity as a path to freedom. Debbie Lee and Louis Kirk McAuley (2015) and Ronald Paul (2009) also note Equiano's sympathy for capitalism and how it structures his attitude towards

slavery and colonialism, such that his call for abolition is mixed with a mission to civilize and commercialize Africa. In this way, Equiano offers "probably one of the earliest declarations of the 'White Man's Burden'" (R. Paul, 2009, p. 857). Paul (2009) is the most critical here, arguing that Equiano compromises his self-possession by uncritically conflating whiteness, freedom, and capital circulation. It is perhaps unfair to indict Equiano for his inability to transcend the information system in which he lives. Rather, I would read the *Interesting narrative*, as I have above, as depicting the contradictions of Black subjectivity within this information system: the more Equiano is able to mediate himself as free, the more he must transmit the logic of the system as a participant. More than justifying this compromise, Equiano's *Interesting narrative* depicts its intractability.

Regardless, the *Interesting narrative* depicts a fraught relationship between Equiano's entrepreneurial success, his capacity for self-narrativization, and his abolitionist politics. His book is not an easy narrative of a subject taking charge of mediation, thereby freeing himself and helping abolish slavery. Rather, it points forward to his own complicitly in the slave trade, and to a future colonization of Africa that will "fetter the natives more effectively as the wage slaves of a burgeoning imperial capitalism" (R. Paul, 2009, p. 857). The point is not so much that equiano.stories should have included this nuance or not; rather, it is that equiano.stories imagines these contradictions as resolved when Equiano's story is mediated through Instagram. Instagram Romanticizes Equiano's text, allowing him to seamlessly mediate his body through the story and Black freedom through his authorship. Digital Equiano transcends the information system that, in the *Interesting narrative,* keeps pulling Literary Equiano back into its circuits.

My reading suggests that equiano.stories is an example of the discourse network writing itself. Its "what if" scenario adapts a text according to the logic of Instagram. My method of reading this "what if" at face value provides a way of assessing how social media functions within this information system. As such, the major differences between the written book and the Instagram-based film adaptation offer a window into the logic of the digital discourse network. This is much less a story about Equiano, as about Instagram itself. The phantom smartphone in the Insta-film uses Equiano's story as a medium for its own self-narrativization. Using Equiano's text, Instagram writes its own

promotional story about its promise within this information system: it mediates itself as giving its user the mediative power that was not available to Equiano in the *Interesting narrative.* Instagram claims here to resolve the contradictions around mediation that are present in the source text. This is a Romantic fantasy of mediation, in which a user can seamlessly collapse life and narration, self and transformation, subjectivity and freedom.

Who is the main character?

The Equiano of equiano.stories begins as an Instagram-empowered figure able to mediate his life into a self-expressive narrative; he ends as the higher version of this figure: the Influencer. In the beginning, he can mediate his personal freedom through Instagram; by the end he can mediate collective freedom as "one of the biggest Influencers of his time," according to equiano.stories (2022b). By depicting Equiano's narrative as a journey from mediating the self to mediating the system, the Insta-film depicts a self-transformation towards a higher level of mediation. Through the logic of Instagram, Equiano's enslavement becomes an encounter that he can mediate back into his own self-transformation on his journey of development into being an Influencer. Notably, this does not reference the offline reality of Influencer life, which critics have shown involves immense precarity, psychological distress, and hustling for sponsorships that reinforces the neoliberal system of labour (Duffy et al., 2021; Hund, 2023; Marwick, 2013). Likewise, it does not reference the interactivity of social media, the need to accrue followers to become an Influencer, instead depicting Instagram as a pure mode of self-directed mediation. In equiano.stories, the Influencer is depicted as a transcendent figure, one who can rise above the system and alter its limits.

In this way, equiano.stories participates in the recursive logic I describe throughout this dissertation. As I defined it in Chapter 1, recursion is a return to the self after confronting contingency that generates change. In many ways, Instagram is based on such a recursive model of the self. Through the profile, there is a built-in, constant return to the self from experiences of the world. The world becomes a stage for recursive self-development, as each encounter can be remediated back into the self by posting it, concretizing transformation through the linear timeline of the profile. In Chapter 2, I explained this through a reading of Romanticism as a "subjective occasionalism," which

is a way of mediating the world as a stage for self-transformation (Schmitt, 1919/1991, p. 17). Equiano.stories suggests that this recursive model of self-growth ultimately transcends into a higher sphere of mediation: that of the Influencer.

As Crystal Abidin (2016) has shown, the Influencer is indeed an aspirational figure on Instagram, one that serves as a goal and model for users of the platform. While Abidin shows this ethnographically as a cultural phenomenon, I am interested in the medial basis for this social formation. equiano.stories provides a window into this medial basis: by declaring its changes to the source text based on a "what if" scenario around Instagram, equiano.stories declares itself as written according to the parameters of the discourse network. This demonstrates the importance of the Influencer to the system, acting as an aspirational figure who can purportedly transform self-mediation into world-mediation. Through an endlessly recursive self-referentiality, Instagram promises users the capacity to change self and world. The more users loop back to the self through Instagram's recursive structure, the more influence they can accrue through engagement and followers. Eventually, this repetitive self-mediation becomes so influential that a higher mediation takes place. The Influencer is the figure who, in mediating the self, mediates the world. This is a kind of meta-Romantic figure, through which self-novelization transforms into world-writing.

Throughout this dissertation, I argue that Silicon Valley's technologies don't really work as promised. The very technologies that promise Romantic mediation undermine this subject position, generating their own recursive cycle back to Silicon Valley's system as the horizon of possibility. The failure of a technology merely loops development back to the initial promise, generating a new technological fix or a superior mode of mediation. This recursive model of technological means that the system's failure reinforces its power. Equiano.stories, I've argued, is much more a staging of Instagram's own self-narrativization. The smartphone becomes the author of a text about its own liberating capacities, using Equiano's *Interesting narrative* as a medium for its own techno-Romantic novel. Instagram itself becomes the Romantic genius, using Equiano as its organ.

If equiano.stories is actually a text in which Instagram novelizes itself, then a higher figure of mediation than even the Influencer looms up: the shadowy surveillance company that bankrolled the production of the Insta-film. AGT International stands in for the generalized data harvesting and algorithmic curation that we all know is taking place when we use these allegedly self-empowering media. Even as viewers of the Insta-film can see ourselves as like Equiano, mediating our lives on a path to influencing the world, we can't help but notice the myriad companies harvesting our data and bombarding our attention online. The narrative of algorithmic manipulation is now so widespread as to undermine these promises of influence through self-mediation. Popularized by the film *The Social Dilemma* (Orlowski, 2020), the widespread cultural understanding that we are brainwashed and manipulated on social media undermines these promises of self-mediation. Our self-narrativization becomes data, which functions as the medium for the surveillance company's own transformative mediation of the world.

A data analytics company explicitly promoting the expressive freedoms of social media offers a symptomatic contradiction of Silicon Valley's discourse network. In the face of multi-billion dollar surveillance companies, media seem to flip back into the unreliable scraps of paper that literary Equiano describes in *The Interesting narrative.* Who is the main character, when algorithms are brainwashing me into becoming a fascist, or buying hair-loss products? Digital Romanticism functions through this contradiction constantly being resurfaced, rather than resolved. Silicon Valley power functions in the asking of the Romantic question that demands a (technological) answer, rather than ever definitively offering the Romantic power to mediate. In this way, a surveillance tech billionaire financing a weird adaptation of abolitionist narrative that suggests Instagram would have overcome slavery if it had been around in 1756 makes perfect (non-)sense within the parameters of the discourse network.

As the technological system undermines the very powers it promises to its users, the *owner* of the system appears as an all-powerful Romantic mediator. Rising above the Influencer is the tech billionaire, governing the technological system of surveillance and data analytics. Silicon Valley ideologically justifies this figure's outsized role in mediation through its long cultivation of another Romantic trope: the visionary genius. Heavily associated with Steve Jobs, the trope now circulates freely among the figures of

entrepreneurial tech innovation (Isaacson, 2011; Streeter, 2015). For example, Elizabeth Holmes, the disgraced CEO of now defunct company Theranos, explicitly cultivated references to Jobs, such as wearing the trademark black turtleneck in interviews and embellishing her own "garage" origin story. This helped her depict her fraudulent promises as transcendent visions, unbelievable because they came from a truly innovative mind (not because they were lies). Likewise, Elon Musk cultivates himself as an outsider genius, whose unprecedented power to shape reality is a reflection of his bold vision, not a political disaster (Daub, 2020). Even tech billionaires who do not explicitly cultivate this image, like Mati Kochavi, benefit from its ideological effects. Their outsized influence is dismissed as the cost of "innovation," doubling down on the figure of the individual mediator who transforms the world through the power of imagination. While tech billionaires monopolize the mediating power of technological systems, this is ideologically justified through their depiction as geniuses. They dream of visionary new worlds we cannot possibly imagine; through innovation, they allow us to inhabit them.

The geniuses designing and managing the systems through which we seek to actualize our freedom become the ultimate Romantic mediators. This power reaches ridiculous proportions today, when a tech bro going by the name of "Big Balls" assumes operational control of the technological systems governing the U.S. treasury. Through this position, Big Balls threatens to mediate the entire country into the image of Elon Musk's dark imagination. The theatre of the genius is no longer just circuit boards and lines of code; it has become a Hitlerian global theatre of remaking reality itself in the image of the visionary writer of reality. While Instagram promises the Influencer the power to transcend and recalibrate the limits of a system, tech bros lurk in the background, re-writing the very code that conditions the Influencer's power in the first place. Elon Musk bridges this gap as simultaneously Influencer on and owner of X: even as he uses media to mediate the world, he mediates media, transforming his very powers of mediation. What new upgrade can Silicon Valley offer to inoculate its users from itself? What genius can emerge to counter the excess of the billionaire tech bro, intent on remaking the world on the terms of his dark vision? In a system that believes that only a media-empowered subject can meaningfully change the world, the outcome is Romantic fascism.

Chapter 4.

Brain-machine interfaces: mediating the body

Introduction

Elon Musk's company Neuralink develops brain-computer interfaces for both medical and consumer applications. The hype around Neuralink is typical of Musk's business-savvy. He has a strange ability to take a technology that has been under careful development for a long time, and make it seem like he invented it and that its fast-paced innovation is about to change the world. Musk claims that Neuralink will soon not only "fix" quadriplegia, but also enable telepathic communication and full human integration with AI (PowerfulJRE, 2020, 19:45). In this chapter, I argue that, despite its futuristic trappings, Neuralink revives much older cultural fantasies about the possibility of individuals merging with media and using the imagination to actively mediate reality. These cultural fantasies take recourse, I argue, to the German Romantic poet Novalis' concept of *magical idealism,* or the belief in directly changing the world through thought. Like the other examples mapped throughout this dissertation, this is not a simple recursion to the past; instead, it is a constant loop that keeps its Romantic promise perpetually deferred. By figuring "ability" in the Romantic terms of an individual power to mediate reality, Musk threatens that we must keep up with media to keep this ability under our control. As such, Musk runs us repetitively through a recursive loop to Romanticism: we must keep upgrading to remain able.

Brain-machine interfaces (BMIs) or brain-computer interfaces (BCIs) have been around since the 1950s, and their digital iterations were being developed for people with disabilities (such as paralysis) for decades before Neuralink launched in 2016 (Salahuddin & Gao, 2021, p. 17). While Neuralink is praised in the field of BMI development, it is not for enacting Musk's promise of telepathic communication. Rather, what's groundbreaking about Neuralink is a banal hardware/materials innovation (Kirsch et al., 2019; Pisarchik et al., 2019; Salahuddin & Gao, 2021). Neuralink has developed wires with the difficult combination of being flexible, corrosion-resistant, and having a low electrical impedance (Pisarchik et al., 2019; Salahuddin & Gao, 2021, p. 11). This

contradiction between brute hardware and visionary promises is a good starting point for critically analyzing Neuralink as a Silicon Valley case study. In separating visions from hardware, it becomes possible to pick apart the cultural narratives Neuralink returns to, around disability, communication, and the way tech configures individuality.

While the last chapter focused on Instagram as granting a Romantic power to novelize life, this chapter turns to Silicon Valley's visions of the body. I argue Neuralink imbues a disability aid with Romantic tropes in order to refigure it as an augmentation device for able bodies. Neuralink comes into special resonance with the German poet Novalis' concept of *magical idealism*, which theorizes ways to master direct control of both bodily organs and external stimuli. In promising this same kind of control, Neuralink refigures the threshold between ability and disability along cyborg lines. As computational technology progresses, according to Musk, human brains will become more and more insufficient by comparison, unable to keep up with the demands of the new, AI-powered world. In Musk's ableist description, Neuralink will "fix" disability (PowerfulJRE, 2020, 19:45); yet, he mixes this narrative of progress with a neo-decadent anxiety over decline, in which human "ability" recedes in relation to technology's progression. Even as Neuralink promises to overcome disability today, the very progress of the AI that powers Neuralink will render us all disabled, tomorrow. Neuralink 1 thus already anticipates the upgrade to 2.0, figured by Musk as a tertiary brain layer, powered by AI. As such, Neuralink is not a plain return to Romanticism, but a recursive loop: we run back towards Romanticism via Neuralink, only to realize on arrival that this very development has displaced us as Romantic subjects. We turn to Romanticism again and again, loops on a chain of future upgrades.

This narrative is based, I argue, on a certain rhetoric of disability. In Musk's account, disability shimmers between being an absolute quality of an insufficient body, to being a relational quality of our struggle against AI over mastery of the planet. Even as disability remains (for Musk) a problem with bodies, its inverse, "ability," is a moving target: it recedes before us as we are displaced by the very tech we use to attain it. "Ability" is constantly recursively overcoming itself, so our bodies must transcend themselves too. Through Neuralink, able-bodiedness becomes synonymous with both technological adoption and mastery over this very technology that threatens to get away.

Musk sets us up to be run back and forth between a technological recursion to Romanticism and a displacement of the Romantic subject by tech.

As I discuss below, I have a neurological impairment, but not one that requires the use of Neuralink. As such, my critique here is not of technical function – this only makes sense coming from those disabled people who need BMIs, and I firmly support their guiding functional changes to the technology according to their needs. The two people currently using Neuralink who have given interviews find it empowering (Fox, 2024; Mullin, 2024). I'm not here to dismiss their experience, or to police the development of this technology. Instead, I reveal a deeper, ableist problem in the way Neuralink is framed. The technology uplifts some bodies, but its ableist imaginary results in a quasi-eugenic theory in which bodies must race to improve themselves to avert a crisis of collective decline.

While there are some social scientific critiques of BMIs as treatments for disability, there is little research from critical disability studies, or other critical fields. What there is unfortunately reproduces Musk's own claims, without turning to technical or media theories that can question the premises (Lindia, 2022; Žižek, 2020). Here, I attempt to combine these fields into an interdisciplinary analysis to investigate Neuralink. No doubt, the technical aspects of research will swiftly be out of date, as Neuralink's first product "Telepathy" has begun its first clinical trials at the time of writing, and has been successfully installed in two test subjects (Cuthbertson, 2024; Guardian staff, 2024). However, this research will not be out of date in mapping tech bro techniques of visionary hype, the cultural investments of Silicon Valley technology, and the relationships between disability and capitalist media. Indeed, if it is out of date on these issues, hopefully its critiques are no longer required.

Neuralink's promise and BMI hardware

Neuralink launched in 2016, and became a topic of public fixation following a 2017 interview with Tim Urban for his blog "Wait But Why." A string of news articles in the mainstream press followed, gripped by Neuralink's futuristic promises of telepathic communication, and of immediate action in the world through brain power. To this day, each of Musk's tweets documenting the development of Neuralink generates a fresh wave

of news articles, despite little attention being given to other BMIs with better results, and less sensational goals (i.e. - Collinger et al., 2013; Lorach et al., 2023; Willett et al., 2021). Recent critical scholarship in the humanities has also reproduced and hyped Neuralink's futuristic promises (Lindia, 2022; Žižek, 2020), and even some of the neuroscientific literature repeats the idea that Neuralink will make possible "direct communication between people by their thoughts" (Pisarchik et al., 2019, p. 5).

In this section, I want to compare these promises of immediate communication with the technical operation of BMIs, as outlined in the neuroscience and neuro-engineering literature. This is not a simple debunking maneuver, but rather is a method to map out the structure of Neuralink's deeper investments. Which promises rely on the disappearance of all-too-present hardware functions, and what is the structure of this disappearance? What kind of media theory – or media fantasy – is built into it? Here, I'll argue that Neuralink generates an appearance of acting im-mediately, precisely by introducing new layers of mediation, and by disciplining users to align their intentions with the operations of the machine. In some ways this is nothing new. Media strive for immediacy, and tend to operate best when their layers of mediation disappear from their users' awareness (Bolter & Grusin, 1996; Krämer, 2008/2015). What's different about Neuralink is that the disappearance of mediation is not into the operative background, but into the self. Musk depicts mediated communication as inherently impaired. Neuralink promises to resolve this universal disability through the Romantic promise of a subject who directly mediates inner will into the world – this is what I describe as magical idealism in the following section.

What are BMIs, and how do they work? BMIs refer to any technology that seeks to process electrical signals from the brain into computer commands. The brain is constantly sending electrical signals, and a BMI tries to capture specific signals and translate them into machinic form. This can be to gather information about what's going on in the brain, as many mass-market consumer BMIs purport to do regarding relaxation, focus, or other metrics; or this processing of brain signals can be to perform actions in the world, such as instructing a computer to move a prosthetic limb. Neuralink's Telepathy implant uses brain signals to move a computer cursor, something much less complex than previous BMIs that have manipulated robotic limbs (i.e. - Collinger et al., 2013). While

various BMIs have *demonstrated* in clinical trials the capacity to transform brain signals into computer actions, it's important to note that these kinds of BMIs are not actually available to most disabled people in regular life (Sample et al., 2022; Schicktanz et al., 2015). They remain primarily research demonstrations of technological possibility, rather than disability aids in practice.[1]

A BMI consists of electrical sensors, circuitry of transmission, and processing units. A sensor detects an electrical signal from a neuron in the brain, amplifies it, filters it for noise, and records it; the BMI processes these analog signals into digital form, after which they are transmitted to an outside unit for serialization (i.e. – converted into bits); this data is then transmitted to a receiver, which processes it into a new signal (Luckiewicz, 2021; Musk & Neuralink, 2019; Salahuddin & Gao, 2021). This new signal, in the case of Neuralink, is decoded by a computer to move a mouse cursor. In other words, this is a fairly standard technology of signals processing. It becomes complicated not because of some telepathic powers, but because the brain does not emit isolated, clear, or amplified signals. BMIs like Neuralink try to overcome this difficulty by embedding its sensors under the skull, closer to the brain's signals – these are called *invasive* BMIs. But many *non-invasive* BMIs also exist, which are worn as a skullcap.

Neuralink, however, is not marketed as a technology of signals processing, but rather as a technology of telepathy and im-mediate communication. Indeed, it's first product, embedded in three users at time of writing, is called *Telepathy*. Musk's clearest statements on this come from interviews with Tim Urban and Joe Rogan. Both have a markedly different tone than the more sober, 2019 academic paper published under Musk's name in the Q1 *Journal of Medical Internet Research,* or the 2021 interview with Neuralink neuroengineer Joseph O'Doherty (Musk & Neuralink, 2019; Strickland, 2021). In his interview with Tim Urban, Musk describes the possibilities for communication that will be afforded by Neuralink:

[1] This problem found an echo in Neuralink's first clinical trial, when 85% of the device's electrodes retracted from the brain, making the implant cease functioning. Despite the trial participant, Noland Arbaugh, having found the technology life-changing, Neuralink refused to give him a new implant or repair his existing one. Fortunately for Arbaugh, engineers were able to redistribute the data sensors to adjust the software of the device to allow the remaining wires to compensate for the loss (A. Paul, 2024). However, it suggests that a future malfunction would leave Arbaugh without a disability aid.

> There are a bunch of concepts in your head that then your brain has to try to compress into this incredibly low data rate called speech or typing. That's what language is—your brain has executed a compression algorithm on thought, on concept transfer. And then it's got to listen as well, and decompress what's coming at it. And this is very lossy as well. So, then when you're doing the decompression on those, trying to understand, you're simultaneously trying to model the other person's mind state to understand where they're coming from, to recombine in your head what concepts they have in their head that they're trying to communicate to you. … If you have two brain interfaces, you could actually do an uncompressed direct conceptual communication with another person. (Musk, 2017)

While BMIs are often developed for people with locked-in syndrome, here Musk depicts all humans as locked in insufficient bodies. This negging of human capacities as inherently impaired is an important rhetorical move that I address in the sections on disability below. For now, what's interesting here is the rhetorical slippage between a quantitative problem and a qualitative change. Musk characterizes human capacities as inherently slow, having a "low data rate." Brain interfaces, we might assume, could speed this up; but Musk characterizes them as transcending data transfer altogether, becoming "direct," "uncompressed." What is suggested here is not a better processor, but a transcendence of processing.

This idea of direct communication through BMIs has been addressed critically by Slavoj Žižek (2020) and Matthew Lindia (2022), who analyze it through Hegel's and Gadamer's theories of intersubjectivity, respectively. They cover the hermeneutic interrogations of this problem well, and I recommend their work to readers interested in these. However, in taking Musk at face value, they contribute to his hype and miss vital details for a critique. Žižek (2020) explicitly depicts Neuralink's communication as removing all layers of mediation, compared to speech or telephony. Oddly, he seems to have directly pasted diagrams from Tim Urban's blog into his book, without noting their source, let alone the bias of Urban's piece. These diagrams serve as his only proof that such an im-mediate communication is possible. Lindia (2022) also suggests that Neuralink "is a negation of the necessity of mediation itself;" or at least, it will be, once "the current state of research" develops further (p. 4). Like Musk, these authors do not distinguish communication from transmission, and so do not back up their analysis with a

description of the process by which electrical brain signals are transformed into meaning. To analyze these claims, it's important to examine the technical function of BMIs, and develop a media theory of what they are doing.

Like Musk, these authors see this as a technology of im-mediacy, removing all layers of mediation. They do not acknowledge BMIs as technologies of signals processing and transmission – that is, as technologies that work by mediating electrical signals into new forms. In this sense, I would disagree with Lindia (2022) that this involves "hermeneutics under different technological conditions" (p. 2), and instead argue that the job of hermeneutic interpretation has turned into a coding and decoding of signals by machines at various stages of processing. This confusion of communication and transmission seems to be based on another confusion: that between im-mediacy and speed. As noted above, the two are explicitly conflated by Musk; and they are, in turn, conflated by Tim Urban (2017) in his lengthy and influential blog post. They put forward the idea that information flows more slowly through media like writing or speaking than it does through thinking in your brain; Neuralink could allow communication at the speed of thinking, which, according to Tim Urban (2017) via Elon Musk, "preserves all the meaning with none of the fuss." Here, *high-speed* is conflated with *high-fidelity*, yet, these are not the same thing.

This conflation, it would seem, stems from the dual meanings of the word "immediate" in English, as both "instantaneous" and "unmediated." Perhaps these are easy to conflate in the frictionless capitalism so central to Musk's empire. As Anna Tsing (2005) points out, late capitalism does indeed conflate the two, as the speed of capital circulation relies on eliminating the mediation of cultural difference from the supply chain, for a truly frictionless exchange. At the technical level, what a high-speed transmission could allow is the appearance of *instantaneous* action, action that directly follows thought. Transmissions always include some delay, but a transmission can *appear* instantaneous when the delay in a transmission is reduced below human perception rates. As Wolfgang Ernst (2016) explains "every electro-physical transmission is characterized by the finite nature of its speed – like light itself…in the case of light, however, human senses are incapable of distinguishing between the impression of promptness and a

minimal dilation" (p. 19). In other words, when the speed of transmission exceeds human perception, it appears instantaneous, without delay.

BMIs currently experience a lot of delay, and have not yet reached the threshold of their operations evading human perception. The record data rate for language generation BMIs at the time of writing is 6.18 bits per second in human test subjects (Shenoy et al., 2023; Strickland, 2021; Willett et al., 2021), while most achieve a data rate of only 3 bits per second (Salahuddin & Gao, 2021, p. 2). For context, "a simple task such as human tap (i.e., intentional finger tap on a surface) requires 10 bits/s of throughput" (Salahuddin & Gao, 2021, p. 2), and the reproduction of a slow rate of speech requires 15 bits/s (Salahuddin & Gao, 2021, p. 16). Neuralink claims to have achieved a data rate of between 4.6 and 8.0 bits per second, but these findings have not been peer reviewed at the time of writing (Neuralink, 2024b). It is important to remember that Neuralink's *Telepathy* is only able to move a computer cursor, which requires about 4.9 bits/s of throughput (MacKenzie et al., 2001). This is a relatively simple task, which has already been achieved by other researchers (Gilja et al., 2015).

Neuralink is clearly struggling with the problem of delay. Despite Musk's promises of uncompressed transmission, Neuralink has launched a "compression challenge," inviting crowd-sourced solutions to BMIs' low data rate (Neuralink, 2024a). Engineers and programmers have described its goal of a 200x rate of data compression, "impossible" (Pearson, 2024). Yet, even if it did achieve a data rate that could reduce delay below the ability for a human to perceive it, this temporal "immediacy" would in no way erase the layers of signals processing that shape, predict, and constrain meaning. Neuralink's promises function by collapsing the two meanings of "immediate": in achieving a perception of temporal "immediacy," the layers of machinic mediation seem to vanish into air.

In fact, the opposite is the case: BMIs maximize transmission speed precisely by inserting additional layers of machinic mediation. These layers of mediation are necessary to deal with BMIs' major problem of the large amount of noise in the transmission channel. Even for invasive BMIs, which mitigate noise by placing sensors closer to neuronal activity, this is very difficult:

> Brain signals are generated within a highly noisy environment and APs [action potentials] of neurons of particular interest are always overlapped in space and time by other neurons firing at the same time within the same domain due to several different brain activities. Brain signals are inherently non-stationary and time dependent. (Salahuddin & Gao, 2021, p. 15)

In other words, it is extremely difficult to isolate neuronal activity for recording, because it is constant, ubiquitous, and multi-directional. Various technical solutions are currently in development to approximate this; but none pretend to capture a precise brain signal immediately (Salahuddin & Gao, 2021, p. 15). Rather, they involve first amplification of recorded signals, then scrubbing the recordings for noise, and finally sorting out the "spikes" in neuronal activity according to which neurons they correspond to. If you are, for instance, trying to move your hand, you'll want to sort out the spikes in neuronal activity that are related to other kinds of brain activity and exclude them. While some BMIs sort the recorded spikes after the fact, this delay prevents the real-time application – the feel of immediacy – that most seek to achieve.

To address this problem, Neuralink actually adds another layer of machinic mediation to this process, by using a predicative algorithm to map the neuronal spikes (Musk & Neuralink, 2019, p. 9). Rather than wait to interpret the user's brain, Neuralink predicts user intention in order to get ahead of the data transfer. This way, it does not have to isolate the correct neuronal spike each time. Instead, it has learned through trial and error that *x* set of brainwave shapes most likely intends *y* action, and *z* action is most likely to follow. Neuralink's chief engineer describes how its algorithm functions by learning the "statistical distribution of the voltages in the brain," or, what spikes are most likely in relation to other spikes (Strickland, 2021). It does not actually translate brain signals, but rather learns to correlate actions against a set of "shapes that look like the signals that neurons generate" (Strickland, 2021). Rather than isolate the correct neuronal spike each time, it has learned through trial and error that *x* set of shapes most likely intends *y* action. In other words, this algorithm uses the shapes of neuronal spikes like "operational images," functional images whose purpose is to allow machines "to 'do' things in the world" (Paglen, 2014). Neuralink's feel of immediacy is actually a prediction of what a user most likely wants, based on the shapes of past brain-waves

correlated through machine learning. This means that the set of "operations" a user can perform is constrained by the past operations the machine has learned. Like all machine learning, Neuralink repeats combinations of the past (Chun, 2021); all human intentions will be processed by the machine according to this data set of actions. Rather than directly transmit inner will, Neuralink instead mediates, predicts, and standardizes user intention.

Such techniques are the norm in BMIs. For example, thought-to-speech BMIs, developed primarily for people with locked-in syndrome, rely for their output on large language neural nets (Fourneret, 2020, p. 668). These do not actually transmit meaning from a brain into words: instead, they use AI to *predict* what users "would have spoken, but for their impairment" (Maslen & Rainey, 2021, p. 426). Whatever meaning arrives at the receiving end, has already been shaped, interpreted, and processed by numerous machines according to a standardized data set of language. I'll just flag here that making this technology predictive is explicitly ableist. In predicting what the user "would have spoken, but for their impairment," it standardizes disabled speech according to an imagined, able-bodied ideal. Sold as allowing disabled people to express their most inner selves, the voice of people with disabilities here is actually GPT using an able-bodied data set. Lurking behind the promise of direct communication is technology of processing, prediction, and transmission.

It's important to remember here that technologies of predicting desire are already in use, and are widely critiqued for their inherited bias (Benjamin, 2019; Chun, 2021; Noble, 2018; O'Neil, 2016). In this bias, technologies of prediction have hitherto worked to make users' bodies predictable *to others,* in order to enforce a power relation (Hong, 2023). This disciplinary mechanism of making bodies predictable is not a future anxiety, but is already at work in BMIs. It is well documented that researchers blame machinic failures on users who do not or cannot conform to their standards of use, or have ability expectations of users that exceed what they can do (Kögel & Wolbring, 2020; Salahuddin & Gao, 2021; M. C. Thompson, 2019). The disciplining of these unpredictable bodies interpellates a certain kind of user subject, whose body must be predictable for the machine.

Margaret Thompson (2019) has pointed this out in a thorough critique of the term "BCI/BMI illiteracy," widespread in the field. Researchers describe some users as "BCI illiterate" in an attempt to explain why a certain percentage of users don't achieve results when using BCIs/BMIs in lab testing. Newer research furthers Thompson's critique by investigating just how much of the problem of noise-reduction is still placed onto (disabled) users. Kögel and Wolbring (2020), for instance, study what kind of "ability expectations" are embedded in BMIs, by interviewing disabled users who are participating in lab studies. Most users, they found, were frustrated by the difficulty of using BMIs and by the functional limits of the hyped technology. Although Kögel's and Wolbring's (2020) study deals with the less sensitive, non-invasive (i.e. – externally worn) BMIs, other studies report similar concerns (Maslen & Rainey, 2021, p. 429; Sample et al., 2022, pp. 81–82). The reasons BMIs don't work for some users are numerous: since all brains are different in size and make-up, some brains physically do not conform to the machines as well as others; users must remain physically still, as movement can distort signals, meaning especially those with Parkinson's or epilepsy struggle with efficient use; training is grueling and long, which is difficult, especially for disabled people with chronic pain.[2] Perhaps most striking is that users must focus only on their intended goal with the BMI and shut out other thoughts and feelings that might complicate the signal (Kögel & Wolbring, 2020, p. 234). In other words, users are responsible for de-noising their own brains.

BMIs like Neuralink do not directly register the internal world of a user, but rather actively shape this world. Users must construct their internal worlds in a certain way in order for the BMI to register their intentions. In other words, it would seem that the fantasy that BMIs *should be im-mediate* is guiding the construction of a bad-user subject whose subjectivity is an obstacle to direct transmission through a clear channel. As we already know from other technologies of data capture, users are forced to contort their bodies to fit the sensing parameters of machines (Hong, 2020, p. 197). We should not let the mystification of Neuralink as "telepathic" or "immediate" make us forget what we

[2] Neuralink's extremely selective clinical trials perhaps speaks to this problem of bodily variation. Out of 1000 applicants, less than on tenth have been deemed qualified (A. Paul, 2024). In other words, the technology does not work (at least for now) for the vast majority of disabled people who might use it.

already know: data capture usually demands that we adapt to the technical parameters of machinic sensors.

What these examples of algorithmic mediation and user discipline point to is not a transcendent communication device, in which an inner will beams out into the world in a stream of pure communication. Instead, it looks much more like a cyborg transmission device, in which the role of the user is to facilitate accurate machinic encoding of brain signals for decoding by an external computer. Users are reimagined and subjectified such that they aid a successful transmission, rather than the other way around. While some of this may be softened by technological adjustments, the main point cannot. There is no BMI technology under development that erases the need for signals processing and transmission, which could dissolve the layers of mediation between inner and outer. Practical BMI use by people with disabilities seems possible: years before Neuralink's launch, studies had already demonstrated a person with tetraplegia controlling robotic limbs using a BMI (Collinger et al., 2013). However, this remains only possible in lab settings (Sample et al., 2022, pp. 81–82), save for a few individuals actively involved in studies (Lorach et al., 2023). In addition, an integrated approach that involves rehabilitation by nerve stimulation as well as BMI use seems more promising than a purely technological augmentation, something even Musk admits in his academic article (Lorach et al., 2023; Musk & Neuralink, 2019). The point is that, while these obstacles to concrete tasks might be overcome through technological adjustments, *mediation itself cannot be overcome*. It is not possible, or even in the works; and yet, this seems to be Neuralink's most culturally resonant feature.

This is an extremely interesting contradiction that begins to reveal the cultural fantasies surrounding Neuralink. To close this section, I want to analyze it through Sybille Krämer's (2008/2015) theorization of transmission in order to develop a media theory of Neuralink. Drawing on John Durham Peters' (1999) critique of the deep Western fantasy that communication creates a perfect union of minds, Krämer argues that communication is never direct. It is always a matter of transmission through a medium, which necessarily separates the participants in a communicative exchange. Krämer (2008/2015) articulates a "messenger model" of transmission, in which a middle third is always operative, whether a literal messenger, a technological apparatus, or language

itself (p. 75). Feelings of communicative immediacy arise during successful transmission, because transmission functions precisely when the medium/messenger invisibilizes itself, thereby making its message appear. Transmissions succeed when we ignore the messenger. As a way of making something *appear*, transmission is more about perception than communication. It allows the absent sender to appear as present, paradoxically reinforcing their absence. Part of Krämer's goal in this analysis is to maintain difference and opacity as fundamental. Rather than trying to overcome difference, Krämer (2008/2015) argues that it should be acknowledged and valued. Transmission is not about erasing difference, but working with it. It is "a way of dealing with difference" (p. 168).

Musk's promises for Neuralink, echoed even by some of the scientific literature, describe what I would call Absolute Transmission. Absolute Transmission is the idea that, through sufficient technological advance, a qualitative change takes place, in which transmission sublates itself into pure communication. In its act of transmission, Neuralink seems to transcend transmission. Something like the transporter in Star Trek ("beam me up, Scotty"), the transmission sends the sender himself, rather than the message. Notably, there is a longer trajectory of this kind of media fantasy. As Mara Mills (2012) shows, this longing for immediate transmission was also circulating in the early 20th century around the Vocoder and Voder, technologies that electrically simulate human speech. Another titan of American corporate technology, Vannevar Bush, hoped this technology could overcome the clumsy and time-consuming labor of writing, typing, and mailing. In an uncanny antecedent to Musk's negging of human capacities, Bush writes "we now push a pencil or tap a typewriter. Then comes the process of digestion and correction, followed by an intricate process of typesetting, printing and distribution. . . . Will the author of the future cease writing by hand or typewriter and talk directly to the record?" (Bush, as cited in Mills, 2012, p. 109). While not as absolute as Musk's vision, Bush fantasizes here about eliminating the mediating work of writing, understanding, printing, and distributing in favour of something more "direct" – immediate recording and transmission.

As Mills (2012) shows, the vocoder was also based on a disability aid – the artificial larynx. In designing the artificial larynx, engineers isolated speech to the elementary components of its vocal resonances. This allowed an understanding of speech

as signals processing, electrifying language into the kind of speed-of-light transmission Vannevar Bush fantasized about. Musk's fantasy, however, also inverts Bush's. Whereas Bush celebrated the immediacy of electrical signal over the body, the appeal of Neuralink actually seems to be the way that it re-fuses the separation between signal, body, and self. Instead, it purports to directly channel inner meaning, rather than fragment that meaning from the body, as the vocoder does.

In his study of the cultural history of brain waves, Cornelius Borck (2018) argues that how we understand the brain tends to reflect the culture and techniques we use to record it. In the era of the first electroencephalographs (EEGs), Borck shows that scientists understood the brain to be writing in its own script or language. This meant that the science of electroencephalography was one that attempted to decipher this language, a kind of hermeneutics of "brain script" (Borck, 2018, p. 12). Neuralink disavows the idea that it is recording and interpreting brain signals. By black-boxing and algorithmically automating this process, Neuralink invisibilizes the wave patterns that the brain is emitting, making it seem as if the device has merged fully with the brain. Brain, self, and medium converge. Whereas the vocoder relied on an assistive technology to re-imagine the body as electrical signal, Neuralink uses an assistive technology to obscure the signal emitted by the body. It is as if the splicing of the body into electrical signals was a fundamentally disabling event that Neuralink stands to correct.

As Friedrich Kittler (1986/1999) argues, the technical media of the early 20th century, like vocoders, EEGs, and phonographs, rip apart a prior conception of wholistic self by reducing the body to a signaling machine. Absolute Transmission promises to restore the version of the self that was riven apart by the technical media of the early 20th century. In Kittler's (1986/1999) description, this is the Romantic subject, one whose interiority channels itself into direct expressions of selfhood in the world. Following Krämer's (2008/2015) theory, Neuralink doesn't simply disappear as medium during a successful transmission, it disappears *into the sender.* As Musk prophecies, his AI-powered tertiary brain layer will be "not some thing that you offload to, *it's you*" (Musk, 2017, my emphasis). Likewise, Tim Urban (2017) parrots Musk in arguing that Neuralink functions by "making our brains the device." There is no longer a perceivable gap between body and signal. By ostensibly being fully aligned with the cognitive will of a

user, Neuralink seems to erase the distinction between user and medium, body and signal. This goes beyond a yearning for pure communicative dialogue, and is a fantasy of controlling mediation. In the potent metaphor of wires penetrating the brain, user and medium become indistinguishable. In this fantasy, Neuralink disappears as medium *by becoming part of the subject/sender.* The subject/sender becomes media.

As I showed above, this merging with media is a fantasy, that is in no way borne out by the technical specifications of BMIs. However, Absolute Transmission is not just a misleading description of media; I argue below that it grounds a troubling politics of technology in an arms race with itself, and an impossible ideal of user control that sets up all bodies as already impaired. Musk associates mediated signal with disability – with the inherent lag of human speech and writing – and promises to overcome this signal in an immediacy that sets a new standard of what it means to be able-bodied. Merging with media through Neuralink, humans can overcome the disability of mediated signal.

The fantasy of merging with media seems to animate cultural interest in Neuralink. I develop this point in the next section, by arguing that Neuralink marks a return to what the German Romantic poet Novalis called *magical idealism*, or the ability of an individual self to intervene in the mediation of the world, thereby changing it. What is Romantic here is not simply a merging with media, but the capacity to directly mediate the world through thought. If, as Musk argues, mediated communication is itself an impairment, then to be able-bodied we must become magical idealists, who can directly channel thought into activity. In the sections that follow, I show how this establishes a recursive logic of disability. By defining ability as a kind of magical idealism, Musk uses his promise that Neuralink can "fix" the disabilities of today, to set up ability itself as always receding in a direct ratio to our advancement towards it through technology. We must keep upgrading in order to remain able.

Poetics of the nervous system

While the other examples in this dissertation refer to extant technologies, Neuralink is much more speculative. While it has been implanted into three test subjects at the time of writing, its promise of future generalized use is speculative. As such, it seems to function more as an ideological force than a technical one, using its speculative

future to rhetorically articulate a relationship between the body, ability, technology, and the world. I argue that what starts as Romantic empowerment ends as a dystopian race to remain able. This repetition should not only make us skeptical of buying into Silicon Valley's futuristic promises (which turn out to actually be recursive loops into the past); it should also disturb inherited cultural history, as it indicates that we are stuck trying to achieve empowerment via the same failed channels. This calls into question Silicon Valley's ideology of progress: this is not so much an advance into a bold new future, as a recursion to fulfill old fantasies with new methods. This feedback loop is more dangerous than the others discussed in this dissertation, and not only because they are being mobilized by Elon Musk, who I depicted in the last chapter as a Romantic fascist. Neuralink uses Romantic promises to frame the human body as not good enough, setting up a dark future in which technological transcendence of the body becomes compulsory to remain productive.

Magical idealism can be understood as an effort to use the Romantic powers of mediation to effect material change in the body and in the world. As discussed in Chapter 1, Leif Weatherby (2014) offers a comprehensive analysis of this German Romantic desire "to mediate as such, to participate in mediation" (p. 63). He does this by examining Romantic writers' strange fixation on organs, particularly the invention of new ones. At the time in which these poets wrote, "organ" had not yet etymologically solidified its biological meaning, but had much broader connotations. It meant something more like "tool" or "function-bearer," encompassing biological organs, senses, concepts, and even media (in the sense of "a medium") (Weatherby, 2016b, p. 5). Weatherby (2016b) centers German Romanticism around the desire to create *new* organs, new ways of mediating the world that could "address the pressure point of input and output, of perception and action, even of self and society" (p. 348). As a middle third between two concepts, this "pressure point" recalls Krämer's analysis of the messenger, outlined above. Read with Krämer, the organ could be understood to operate in the position of the messenger, which enables something to appear for a receiver.

However, the Romantics are not content to let the messenger remain a separate third party, in the middle. Instead, they attempt to merge with the middle third, the organ, and thereby to control it: as Novalis (1798–1799/1993) writes, "an organ is… partly

unmediated [*unmittelbar*] in connection with its stimulus, and partly mediated [*mittelbar*] through the product" (p. 332, §453).[3] In other words, the organ is in a mediating relationship with the world, but an immediate relationship with its user (similar to Neuralink's promises, outlined above).

One way to understand this concept is to think about sensory organs. Sight, for example, is both an organ a subject makes use of, and a constitutive part of that subject, which renders a phenomenal world for that subject. If a sense is a kind of medium, then it is a medium that merges with the self. For Novalis, if an organ is part of a self, it can also become an agent of that self's will; its mastery becomes a way for the self to determine the "construction of the very rules that constitute the phenomenal" (Weatherby, 2016b, p. 236).

By controlling, modifying and intensifying its sight, a new phenomenal world comes into being for a self. This doesn't even need to go as far as involving instruments like microscopes and telescopes, which Novalis frequently if somewhat cryptically references. Novalis (1965–1968/1997) makes the point by turning to visual art: "the painter sees visible objects with quite different eyes from those of the common person…here seeing is quite active – entirely a formative activity…the artist has vivified the germ of self-formative life in his sense organs…to use them as tools for such modifications of the real world *as he will*" (pp. 71-72). Here, control over the organs takes the form of *techne*, in this case an artistic training that yields a new way of seeing and reveals a different phenomenal world. This is not really solipsism, but rather a technical training to see differently. In addition, this new vision can be objectified into an artwork, thereby revealing this world to others, and changing it for them, too.

Sight serves as an illustrative example, but organs in the 18th century are explicitly not limited to faculties of the body; rather, they allow what Weatherby (2016b) calls "a 'technological metaphysics,'" or a metaphysics that is open to direct interventions via the creation of new instruments or capacities (p. 124). When Novalis refers to "technology" (*Technik*), he is thinking broadly of techniques, or the "technical elements of a discipline"

[3] "Ein Organ ist, seinem Begriff nach, in Bewegung und mithin in Verbindung mit seinem Reitz theils unmittelbar, theils mittelbar durch das Produkt."

(Weatherby, 2016b, p. 210), such as those he used in his training and work as a mining engineer. These might include technical instruments, but also arts, ways of thinking and seeing, *techne*. These constitute an *a priori* of possibility, but as contingent practices they also allow the *a priori* to be changed. Think of the way a science not only describes the world, but changes its possibilities through its very research: viewing the world through "the organ" of physics, for instance, opens the possibility of building technical "organs" that can lift great weights, build great structures, and thereby change the world we inhabit.

For Novalis, these powers are organs that can and should be learned and harnessed, brought into service of the human. He gives the example of ship-building (Novalis, 1965–1968/1997, p. 39). The designer of the ship, armed with the correct tools and disciplinary techniques, brings a world into being by creating the ship out of his internal vision.[4] In other words, he uses organs to project thought into the world as an object. The human here harnesses the enormous organs of engineering to bring forth the ship from his minds eye and thereby transform the phenomenal world, i.e. – through trade, warfare, exploration, colonization, etc. Honing the biological organs through technical training is the precursor to creating and harnessing technical organs for enacting phenomenal change in the world. The imagination is what allows the self to direct this change.

Novalis (1798–1799/2007) cautions here against the power of this organology and the destructiveness of "blatant egotism" (p. 127, §688). He celebrates the importance of working, thinking, and creating together. The possibility of acting in the world is based on a mutual interaction, in which "we and it [the world] are integral halves"(Novalis, 1965–1968/1997, p. 61). In Chapter 1, however, I showed the ways Novalis' project moves in the direction of megalomania and misogyny, despite professing a desire for harmony. As such, I would push back against a reading like John Sellars' (1999), who compares German Romanticism to Deleuze and Guattari's self-dissolving theory of the body without organs. While Novalis claims a mutual interaction with nature, pointing to a potential dissolution of the self, he also asserts the opposite. While Deleuze and Guattari

[4] I use "he" pronouns here because Novalis indicates this as a male occupation.

are interested in eliminating the structuring force of organs, Novalis seeks to harness this force. As discussed in Chapter 1, this becomes at times an extreme project:

> In the same way as we move our mental organ at will…we must also move the inner organs of our bodies, constrain them, combine and separate them, *learn* them. Our whole body is fully capable of being moved by the spirit at will…then for the first time the human being will be truly independent of nature, perhaps even in a position to restore lost limbs…He will compel his senses to *produce* for him the shape he demands – and he will be able to live in *his* world in the truest sense. (Novalis, 1965–1968/1997, p. 75)

Novalis believes that by controlling our bodies, we can control the senses, and by controlling our perception of the world, we can remake that world as we see fit. This is not so much the fragmented body of the cyborg, but the transhumanist body that reaches out for a new holism. By crafting both biological and technical organs through the power of the imagination, the magical idealist gains control over the body, and ultimately can use this control to enact actual change in the world.

This idea of invisible forces having the power to control bodies mirrors another discovery of Novalis' time – the presence of electricity in living bodies by Luigi Galvani in 1780. Johann Wilhelm Ritter, Novalis' fellow member of the Romantic circle in Jena, published his own treatise on "animal electricity" in 1798, which attempted to account for how electricity could be both internal to an organism, and generated through external contact (Holland, 2009, p. 114). At the same time, other scientists were applying Galvani's discovery to medicine, specifically to the theories of the physiologist John Brown, who understood illness to emerge out of an imbalance of internal and external stimulation (Holland, 2009, p. 79). As Friedrich Beiser (2002) relates, this theory of balancing excitation within the body was central to Novalis' understanding of magical idealism. Following Brown, Novalis understood magical idealism not simply to be a task of increasing internal control indefinitely, but of balancing the charge between body and world: "the point behind magical idealism was to give longer life to the organism by countering the overwhelming stimuli of the external world with a stronger source of stimulation from within" (Beiser, 2002, p. 425). If the magical idealist goes too far in this potentiating of the body, it leads to illness, delusion, and death. According to Jocelyn Holland (2009), for Novalis "body and soul become chemical conductors through which

currents flow" (p. 83). As such, magical idealism is preoccupied with managing the charge in the body as it interacts with the outside world. Harmony becomes the goal because, following Brownian physiology, this balance brings potential immortality: as Novalis (1798–1799/2007) indicates, "if our intelligence and our world harmonize – we are *on par with God*" (p. 12, §78). I would describe this as a poetics of the nervous system, a technique of managing the stimulation of the world by controlling the body's internal charge, and ultimately directing this charge in world shaping directions.

The ability to translate imagination into direct, material manifestations in the world and in the body, to harness the nervous system as an expression of will – is this not the strange promise of Neuralink? Scientists depict Neuralink as giving a user the power to "control external devices and interact with the entire environment, eg, by integrating into new fast developed [sic] technologies, such as Smart Home and Internet of Things" (Pisarchik et al., 2019, p. 1). This seems to fulfill the fantasies of the magical idealist, who "will compel his senses to *produce* for him the shape he demands – and he will be able to live in *his* world in the truest sense" (Novalis, 1965–1968/1997, p. 75). While it may not allow users to "restore lost limbs" through sheer willpower, it does promise to allow the imagination to control prostheses (Novalis, 1965–1968/1997, p. 75). Affective BMIs, which purport to monitor and alter user's emotions, grant an unprecedented organological control, allowing users to feel whatever affect they desire in any given moment, to learn and control their bodily states (Steinert & Friedrich, 2020). BMIs promise users the ability to manage the nervous system, such that, for example, pain is completely eliminated (Luckiewicz, 2021, p. 236). Lastly, Elon Musk quite literally promises the fabrication of a new organ – a tertiary brain-layer powered by AI. Tim Urban (2017) dubs this, "a wizard hat for the brain." Like the "future organs" promised by Novalis, this will allow new, magical worlds to emerge in the processing power and boundless thought it allows the human mind.

The first section of this chapter showed that Neuralink relies on fantasies of merging with media, whereby sender and messenger become one. Merging with media forms the basis for becoming a Romantic mediator, or magical idealist. Neuralink promises to offer its user strange powers that can transform the world literally by simply thinking. This section has shown that this cultural fantasy is not so much a leap into a

bold new future, but a recursion to past ideas in Romanticism. What I hope to show in the following sections is that Neuralink in no way resolves this cultural yearning, but instead sets it up as an anxious loop around the instability of the organ. British Romanticism, in its confrontation with early industrialization, is more anxious about mediation than Novalis' celebration of world shaping powers (Goodman, 2004). For the Germans, this anxiety comes later – through Marx. As Weatherby (Weatherby, 2016b) shows, Marx reverses the Romantic organological relationship in the factory, where humans become the organs of machines: "machines use humans as functional parts of their own production process" (p. 340).

As I show throughout this dissertation, this reversal structures Silicon Valley Romanticism. It is constantly trying to set up technology as human organs, but always anxious about this relationship being reversed. As I'll show below, it is precisely the anxiety that technology could flip that turns Neuralink's fantasies into an unending recursive loop. By casting ability as the power to intervene in the mediation of the world, Neuralink enters into a tricky relationship with media. Media must remain under human control, must remain Romantic organs, in order for humans to remain able-bodied, according to Neuralink's own definition. As the same media that brings humans unprecedented power to mediate threatens to usurp this very power, the recursive loop to Romanticism must begin anew. What begins with problematically ableist promises of "fixing" disability, becomes a general devaluing of all human bodies as insufficient – unless they upgrade.

Romantic ableism

In the grandiose talk of telepathic communication and super-powered AI-brain hybrids, it's easy to forget that the explicit goal of BMIs– including Neuralink – is actually to help people with disabilities. Unfortunately, there is a widespread problem in the BMI industry of not actually designing BMIs that correspond to disabled people's real needs (Kögel & Wolbring, 2020; Sample et al., 2022; Schicktanz et al., 2015). Instead, there has been "only partial overlap between the potential users' and the experts' assessments of BCI-technology" (Schicktanz et al., 2015, p. 1). Sample et al. (2022) unpack this disappointing situation, noting how un-included disabled people have been in

the design of BMIs, and how research seems fixated on scientific progress rather than helping people. In the neuroengineering literature, assisting disabled people often comes off as a "coveted" prize to be won, rather than a socially-engaged effort to empower marginalized people: "the most coveted application of BMIs to this date centers on developing assistive products for disabled people" (Salahuddin & Gao, 2021, p. 2). No developments confront the larger problem, too, of access, which would require public funding for disabled people to afford such expensive assistive devices (Rosenbaum, 2024). This perhaps explains why, despite massive amounts of *research* spending for decades, there is almost no practical use of thought-action BMIs, worldwide, beyond isolated individuals involved in clinical trials (Schicktanz et al., 2015).

It is disheartening that several academic articles would even need to make the point that BMIs should be designed to assist people with disabilities *based on their actual needs,* rather than on ableist imaginaries of what is good for disabled people. And yet, as critiques from disability studies point out, "designing for disabled people rather than with or by disabled people" is unfortunately all too common in technoscientific fields (Hamraie & Fritsch, 2019, p. 4). This is absolutely not to dismiss the instances in which disabled people find BMI technology helpful, or to police the development of this technology for people whose needs overlap with current design. Instead, I am calling into question, from a disability studies perspective, how BMIs frame the relationship between media and (dis)ability. Specifically, I want to look at how Neuralink connects disability to fantasies of merging with media.

Including disabled people in the design of BMIs, as critics encourage, is a basic condition of them being helpful. However, this may not be enough: there seems to be a deeper, ableist problem at work in the way BMIs are framed. Many researchers use explicitly ableist language, describing disability as something to "solve" (Salahuddin & Gao, 2021, p. 2) or "fix," (PowerfulJRE, 2020, 19:20), while disability is at times even cast as a "threat" to able bodies (Luckiewicz, 2021, p. 236). Likewise, this reflects a trend in media studies itself that treats disability as a trope for driving technological progress (Mills & Sterne, 2017; Wiechern, 2025). This kind of framing is soundly criticized in disability studies for many reasons: it medicalizes problems that need social solutions; it implies disabled bodies are somehow broken, denying disabled people the possibility of

living fulfilling lives; it denies social contributions disabled people can and do make; it sets up a false ideal of able bodies being somehow perfect and whole; etc. As Kögel & Wolbring (2020) highlight, this rhetoric also reproduces a division between able-bodied and disabled users of BMIs: able bodies are described as being "enhanced" by BMIs, while disabled bodies can only ever be "assisted." In this ableist frame, "it seems…likely that the gulf between disabled and non-disabled users will be perpetuated if not even furthered" by BMIs (Kögel & Wolbring, 2020, p. 236).

This ableist frame is not likely to be overcome simply by enlightening the designers. It also seems structurally determined by the need for BMIs to simultaneously function as assistive and consumer technologies. As Éric Fourneret points out, the need to generate investment requires that BMIs have non-disability (i.e. – mass marketable) applications (Fourneret, 2020, p. 669). This sets up a contradiction: if these technologies were actually designed to meet the highly specific needs of people with disabilities, what use would they be in the mass market? How to develop technologies for disabled people that simultaneously can be sold profitably across markets? As Alison Kafer (2013) notes, one way to make sure the investment pays off is to develop technologies that are simultaneously weapons for the military, as well as being disability aids, such as the eLEGS exoskeleton designed by Berkeley Bionics.

Neuralink has taken the more traditional Silicon Valley route, which dates back to the first conception of the personal computer in the early 1960s. In a moment when computers were only useful to large institutions, Douglas Engelbart hit on the notion of "human augmentation" as a way of marketing these devices to individual consumers (Engelbart, 1962; M. Harris, 2023, p. 283). People would buy computers because it would enhance their bodies and minds. In this spirit, the way to make BMIs appealing to able bodied people is through promoting the quasi-eugenic idea that, no matter what kind of body you have, this technology will make it better. It is not so much about helping bodies, but improving bodies. The standardization of disabled bodies via a rhetoric of repair follows from this framing that technology is there to make bodies 'better.' Neuralink, as I'll show in this section, takes this rhetorical strategy, but runs with it much further, such that all bodies will need Neuralink in order to remain able. It suggests a

profoundly ableist anxiety that sets up consumers to loop back again and again to Silicon Valley solutions.

In his comments on Neuralink, Musk sets up a strange tension: disability appears as absolute, whereas ability is relative. His comments explicitly standardize disabled bodies against a norm, depicting them as broken and in need of repair. For example, in his interview with Joe Rogan, he says "it could in principle fix almost anything that is wrong with the brain…you could then create a, sort of a neural shunt that restores somebody who's a quadriplegic to full functionality, like they can walk around, be normal…*maybe slightly better*" (Musk, 2020, emphasis added). Even as disability is standardized, *ability* becomes something that changes in relation to media:

> we already have a digital tertiary layer in a sense, in that you have your computer or your phone or your applications. You can ask a question via Google and get an answer instantly. You can access any book or any music. With a spreadsheet, you can do incredible calculations…These are incredible superpowers that the President of the United States didn't have twenty years ago. (Musk, 2017)

In Musk's narrative, these technological applications are not separate from the self, or even extensions of the self, as in McLuhan's framing; they are the self. This merging is so complete that to be apart from this technology is itself disabling: "if you leave your phone behind, it's like missing limb syndrome" (Musk, 2017). In other words, media become a user's abilities.

Disability theory insists that disability is relational, thereby politicizing the category as a site of social struggle (Kafer, 2013, p. 8). Jonathan Sterne and Mara Mills (2017) take this analysis to technology, arguing that "media and disability are co-constituted" (p. 365). Musk inverts this sentiment: media and *ability* are co-constituted. Not only does this inversion cast technology as always enabling, an idea Mills and Sterne criticize, it also sets up an expectation that bodies merge seamlessly with media. As the most seamless merger with technology, Neuralink becomes a necessary way to access medial abilities. As we merge with media that empower us, losing access to this media is disabling. Neuralink becomes a way of upgrading the subject into a *magical idealist*: its users are promised the power to actively mediate reality through thought.

At first, this shifting, relational concept of ability seems opposed to Musk's statements that standardize disability as something to be "fixed." However, this contradiction is resolved when we think of digital media as being Romantic organs. In Musk's description, we merge with media, such that these media become parts of the body; these new medial organs allow the body new powers to mediate world and self. Following this narrative, technology is literally a way of upgrading the body, meaning that it changes the very concept of "able-bodied." *Wired Magazine* chose to focus the headline of its interview with Noland Arbaugh, the first person implanted with a Neuralink device, on his new ability to be "constantly multitasking," as if to herald the productivity-enhancing applications that all bodies might soon enjoy (Mullin, 2024). Adding technological organs to the body turns this set of enhanced abilities into the new "normal" of functionality. With each new mass marketed invention, the goalpost of the able body is kicked further down the field. Neuralink is, in its own advertising, "redefining the boundaries of human capability" (Neuralink [@neuralink], 2023, 0:48-0:50). The way this rhetoric interfaces with social expectation is itself disabling: those who do not have BMI enhancement will become disabled by comparison.

The view of media as ability is not new. Its most explicit contemporary expression comes from the transhumanist movement, whose manifesto was originally published in 1988 by philosophers Nick Bostrom and David Pearce (World Transhumanist Association, 2005). Transhumanism is concerned with improving the human through technological augmentation and eugenics. The goal is to make a post-human cyborg through technology and selective breeding, whose capacities vastly exceed present humans' abilities and who no longer experiences pain or disability. The movement has been criticized by disability activists and scholars for its antiquated medical model of disability, and for its view of disability as something to eliminate rather than accept and support (Hall, 2017; Lakshmanan, 2018; Shew, 2023). At the same time, some disabled critics, such as the deaf, cochlear implant user Enno Park (2014), have embraced a kind of bio-hacking transhumanism as a way to disrupt the idea of the normal body, yet cautions this needs the barrier of disability justice in order to function.

In its magical idealism, however, Neuralink slightly shifts the transhumanist emphasis. Defining ability as the power to mediate creates problems with

media, through which Musk threatens a Wagnerian decline. If human ability is the power to mediate, then the danger emerges of media that separate themselves from human bodies. This is the threat of artificial intelligence, which "is definitely going to vastly surpass human abilities". Musk states that once this happens "we're going to have the choice of either being left behind and being effectively useless or like a pet—you know, like a house cat or something—or eventually figuring out some way to be symbiotic and merge with AI." (Musk, 2017). The logic runs like this: media constitute ability, setting the standard for the "normal" body; if media then separate from humans, the result is a kind of universal disability, a "missing limb syndrome" of drastic proportions (Musk, 2017). According to Musk's fears, an independent AI will establish new thresholds of capacity, meaning that humans will become disabled in comparison. Ironically, some work in disability studies promotes the idea of generalized impairment as empowering, arguing that all bodies have differences in ability, and none need to live up to a false ideal of wholistic perfection (Mills & Sterne, 2017, p. 365; Sterne, 2021, p. 194). However, in the ableist understanding of Musk, for whom disability signals something dysfunctional and in need of repair, this kind of universal impairment is a crisis of decadent decline.

At times, Musk implies that this universal impairment is already with us. As discussed above, he describes human communicative capacities as inherently impaired: the transmission of thought into speech has an "incredibly low data rate," is "lossy," and in need of an upgrade (Urban, 2017). This is the problem with human speech, writing, and typing, according to Musk: there are too many layers of mediation and processing that compress information into inherently flawed formats. Neuralink overcomes this by promising its user the Romantic position of direct power over mediation. Neuralink promises to become a kind of organ, an im-mediate part of the self that allows a mediation of the world in new and startling ways. If having to mediate inner will through speech and writing is an inherent impairment, then Neuralink promises to fix this universal disability through making us all magical idealists: we will directly mediate the world through imagination.

Yet, as soon as we've healed the universal impairment of slow humans, the threat of AI puts us back into the same position. "We should be," Musk says, "less concerned about like relative capabilities between people and more like, having AI be vastly beyond

us and decoupled from human will" (PowerfulJRE, 2020, 48:21-48:39). It is here that Neuralink gets stuck in its recursive loop to Romanticism. Its initial promise is to be a Romantic organ, merging seamlessly with the self and thereby turning the self into a magical idealist, who can remediate world and body through thought. AI threatens this ability in two ways. First it will reconfigure the parameters of "ability" itself to make Neuralink 1.0 insufficient; and second, it will displace the human as the subject doing the mediation. If Romanticism promises to make its subject a mediator, AI threatens to displace this position. The same algorithmic technology that powers Neuralink threatens to depart from this cyborgian merger, and treat the human more as its organ than the other way around. As such, we return to our starting point, requiring new Romantic organs to reclaim our control over the mediation of self, body, and world, and to keep up with the standard of medially-set abilities: "if you want to be along for the ride then you need to do some kind of symbiosis" (PowerfulJRE, 2020, 49:19-49:28). Tim Urban (2017) summarizes Musk's position: "in a future world made up of AI and everyone else, [Musk] thinks we have only one good option: / To be AI."

By framing Neuralink as a kind of Romantic organ Musk sets it up as reconfiguring the very definition of ability. In other words, a technology that purports to help people with disabilities, ultimately serves to make the standard of "ability" even harder to achieve. Musk sets us up to loop back over and over again to the promise of embodying a kind of Romantic-mediator subject; its fulfillment is deferred by the development of the very AI-powered technology that is supposed to grant it in the first place. In the final section, I offer a disability studies of critique of Neuralink, as analyzed so far, in order to offer an alternative to Musk's approach to technology and ability.

Crip critiques of Romantic organs

Over a decade ago I had a traumatic brain injury that never really got better. I've been to lots of doctors and had all sorts of diagnoses over the years. These range from "take an aspirin, you're fine," to "just wait you'll get better," to various medical terms: post-concussive syndrome, chronic fatigue syndrome, major depressive disorder, etc. The framework that's been best for me to help deal is chronic fatigue syndrome, because the treatments I'm prescribed for that one help me the most. It's also the one that, sadly, has

the most friction with neoliberalism, because essentially the treatment is to pace yourself, to not push yourself to get things done. Above all you have to try to keep your nervous system from getting run down, or over-agitated. So, listen to your body, limit screens, take breaks, don't work when you're in a crash, etc. If I don't do these things, I go into a crash that sometimes lasts weeks; I struggle to get out of bed and do stuff and I feel like I'm in a fog. If I have the space to pace myself, then my impairment is much less disabling. In other words, my impairment is one of those ones that becomes more and more disabling as standards of ability and productivity increase.

Because of my impairment, I'm a potential candidate for other consumer BMIs. These aren't Neuralink, but they share a similar ethos. These externally-worn BMIs all tend to be about increasing something called "mental fitness," unlocking brain potentials, etc. In short, it's the Silicon Valley promise of "augmentation" that dates back to the personal computer. These consumer BMIs read your brain waves, and interface with a screen on your phone or computer to show you a representation of what's going on in there. Part of this is framed in terms of wellness, giving you techniques that allow you to meditate, relax, and clear your mind. Neuralink is the BMI with the most grandiose promises, but even these more simple consumer BMIs suggest a similar ethos of bodily improvement and self-fashioning. They take a technology originally developed to assist disabled bodies and turn it into a technology for improving all bodies.

I borrowed three of these BMIs from a lab at my university, but the only one I could get to work was called Mindwave Mobile. The others couldn't seem to sync with my devices, which are old and slow. I used the BMI to do these meditation exercises; essentially, they gamify meditation and relaxation by reading your brain signals to determine…something…ostensibly, they are measuring how relaxed you are. It gives this a quantitative score. Using the BMI I was struck by a strange tautology: every time my relaxation score improved, my eyes darted over to this part of the screen, my attention lapsed, and I lost the game! I took some notes during the experience: "*The machine has become the arbiter of how relaxed I am, even if my subjective experience is opposed. I become anxious. Apparently the machine works better once you get sweaty, which I am.*" The BMI seemed to undermine its own promise, by intervening in the very thing it was measuring. It was not so much measuring relaxation itself, but relaxation while using the

interface: how well can you relax while looking at a screen and being recorded? Through generating these Hawthorne effects, it seemed to be augmenting or training my body towards screen-labour, not relaxation as such. The machine made me uneasy and triggered my symptoms that get worse when dealing with shifty, information-dense screens. It was trying to normalize for me exactly the thing that triggers my impairment most. Augmentation is not a neutral concept, but is always mediated through institutionally-determined requirements and imaginaries.

In my experience, institutions love the technological approach to disability, because it implies that they don't have to change their systems. When I registered at my university's accessibility office as a grad student with a disability, they had all kinds of technological fixes for me. They gave me software that would read my pdfs out loud to me in an Australian accented robot voice, and another one that would let me speak to my computer to generate text. I found the better solution for me was to take frequent breaks from the screen, and to mix it with reading and writing on paper. But the idea with these technologies was that they would allow me to be just as productive as my peers, when what I really needed was more time – time to take breaks, less time spent working jobs to pay for my tuition, no 4 hour Zoom sessions, etc. An adjustment of the system, rather than an augmentation of my body. As far as I'm concerned, I'm just the canary in the coal mine of an exploitative situation that's totally unreasonable for everyone's body. But the solution – more funding, more time, better wages and reduced work hours – isn't forthcoming. So, technology it is! One view might be that we just need to adjust these productivity technologies to work better for bodies like mine, but I wonder if my disability would be better eased not through more technological interventions, but less. Instead of maximizing the effects of my relaxation, I kind of just need more time to relax.

Recent work in disability studies politicizes disability towards this kind of systemic critique. Nirmalla Erevelles, (2011) for instance, argues that material conditions are themselves unevenly disabling, distributing disability unequally across intersections of race, class, gender, and sexuality. Instead of asking how we might incorporate differential bodies into the demands of capital, we might ask how the difference of those bodies can challenge those demands. Scholars apply this analysis to technology as well. As Aimi Hamraie (2017) details, mobility aids are not a pure technological fix, but rather

invite a political struggle over how environments are built and how society thinks of access. Cait McKinney and Dylan Mulvin (2023) show how the mediation of disabled bodies can move to the extreme of containment, disabling these bodies further by imposing extreme limits on them. A social mediation of disabled bodies as sites of fear feeds into technical systems for mediating disabled bodies through physical barriers, creating a feedback loop which further mediates those bodies as sites of anxiety. Similarly, Alison Kafer (2013) argues that disabled people are uniquely positioned to polititicize technologies to contest how they frame bodies and social systems, while Jonathan Sterne and Mara Mills (2017) invite such struggle through their claim that "impairments scale to disabilities unevenly within particular media systems" (p. 365). These "dismedia" critiques offer a view of mediation not so much as something a technologically-augmented subject wields to reconfigure world and body, but rather a negotiated space in which bodies struggle together for a different world, even as they recalibrate themselves to meet its changing circumstances. Assistive technologies, then, are not so much things that merge seamlessly with the body and augment its abilities. Rather, technology opens mediation as a space of contestation, experimentation, and analysis, but not of control. Mediation becomes a site to struggle over the conditions of disability itself, rather than a way to transcend disability.

Alison Kafer (2013) develops this politicized relationship of disabled bodies to technology, through her critique of Donna Haraway's (2001) "Cyborg Manifesto." Kafer points out that, while Harraway's cyborg figure is all about boundary crossing, the example of the disabled cyborg sets up disability as a decontextualized and hegemonic category. Haraway calls disabled people exemplary cyborgs, because they allegedly are fully integrated with their assistive technologies. Kafer critiques this idea, and the monolithic concept of disability it relies on. As Tobin Siebers (2001) points out, the idea that disabled people merge im-mediately with technology is a fantasy: prostheses can be painful and strange, even producing their own impairments as they wear on the body. Kafer (2013) seeks to show how disabled people might be Harawayan cyborgs because of their *political* investments. They are not cyborgs simply because they use technology; they are cyborgs, in Haraway's conception of the term, because they are politicizing assistive technologies to contest how these technologies frame bodies and social systems.

Assistive technologies, then, are not so much things that merge seamlessly with the body and augment its abilities. Instead, they are ways of negotiating this mediated space, which is also politically contested. "Cripborg," "transmobile," scholars Mallory Kay Nelson, Ashley Shew, and Bethany Stevens (2019) view their disabilities as opening possibility and difference into this space of mediation. They define transmobility as "the idea that disabled bodies actually have a greater array of options for mobility and movement, providing an impetus for creativity and imagination" (M. K. Nelson et al., 2019, p. 2). As they each move between an array of mobility devices to adjust between situations, they suggest that "each technology is a different negotiation of space, social expectation, and requirements of body" (M. K. Nelson et al., 2019, p. 3). This work emphasizes a medial relation between disability, technology, and environment: it is not about a user, but a negotiated relationship. Each of these elements brings something to the relation that is then worked on, together. Mediation here is a space of contestation, play, and analysis – not one that calls for an individual mediator to direct the relation.

We should approach Neuralink through this kind of cripborg analysis. We should not stop at the demand that it be developed to meet the actual needs of disabled people; in the spirit of Kafer's disabled cyborg, we should also challenge the power structure it sets up through its figuring of ability/disability, technology, and subjectivity. Musk and Neuralink configure a *magical idealist* or Romantic view of disability and media. In occupying the space of mediation between body and world, it suggests that we might eliminate disability altogether. Novalis (1965–1968/1997) makes this explicit, suggesting that magical idealism might give us the ability to "restore lost limbs" through sheer willpower (p. 75). Urban (2017) paraphrases Musk in a similar manner: "disabilities that hinder millions today will start to drop like flies." The promise of Neuralink and other BMIs is that we can each mediate the world and the body that we want; and this power to mediate becomes the new definition of ability.

Yet, in his discussion of AI, Musk goes further. As new organs grant these world-mediating powers, the inability to master them becomes itself a potential disability. This establishes a feedback loop with Romanticism. The very technology we might use to become *magical idealists* gets away from us, so we need new technology to restore this initial promise. As I argue throughout this dissertation, this endless loop back towards

Romantic promises is typical of Silicon Valley technology. However, Elon Musk is ahead of the usual Valley game, in anticipating the recursive upgrade before his technology has even failed. While Humane (discussed in Chapter 1) had to wait for the failure of the iPhone to re-make the iPhone's promise through new technology, Musk is already predicting a future recursion to Romanticism, before Neuralink even exists, let alone fails. The loop seems to run ahead into a dismal future; yet it only runs back to itself.

This dissertation tries to get out of this Silicon Valley recursive loop to Romanticism. One way I've theorized doing this is to return to an alternate Romanticism that I see embodied in its neglected writers, such as Sophie Tieck. Her writing surfaces the identities that must be repressed in order for Romantic fantasies of directing mediation to function. She shows the space of mediation as having its own agency, not as under control, thereby emphasizing difference as fundamental. Rather than subsume contingency into a recursive progress, Tieck's writing asserts the importance of contingency remaining contingent. Surfacing the ways disabled scholars and activists think about technology can mount a similar critique of Neuralink. In Musk's vision, disability becomes a constantly reconstituted contingency that powers the development of technology. Neuralink purports to help people with disabilities, but this framing of disability and media creates an ableist future in which no one's body is good enough: we are not going fast enough today, and we will need to be even more productive tomorrow.

I would describe this as a politics of accelerationist austerity. Many of us with disabled bodies already can't manage, and today even able bodies struggle to keep up with the demands of rising costs, low wages, and general austerity. The standards of ability are already being pushed further down the road, not through a fantastical super-powered AI, but through economic pressure. When people are routinely forced to work multiple jobs to survive, regularly pushing to 80 or more hours per week (Antle, 2023), and when capital is intent on overcoming rest as a barrier to profit-making (Crary, 2013), these conditions are themselves disabling. As hitherto able bodies are mediated by new, more taxing conditions, they come to register as disabled in their struggle to keep up with excessive demands: burn out, repetitive stress injuries, depression, anxiety, alcoholism, and suicide are produced by these economic conditions (Zeira, 2022). When Musk talks about a future AI demanding that our abilities increase, he seems merely to be covering

over the present neoliberalism that is already putting these disabling demands on able and disabled bodies alike. We should refuse these disabling conditions, rather than adjust bodies to meet them.

Offering a disabled critique of Neuralink also throws it back on itself in decidedly un-Romantic terms that break us out of its Romantic veneer. Crushingly ableist productivity mandates are far from the promise of a "wizard hat for the brain" that allows a magical world to emerge in the shape of the imagination of its wearer (Urban, 2017). Novalis sought to use new organs to Romanticize the world, to shape it in wondrous ways that opened imaginative possibilities. My critique of this idea is that it suggests a relationship to technology as manageable, as augmentation, as under control, which seems to play into Silicon Valley's power today. However, I am supportive of the idea of imagining and opening a wondrous, new world: the problem is the idea that this wondrous world will be mediated into existence by the right set of techniques, or by the bold "visionary" who imagines it. Instead, such a vision might be precisely one in which difference is allowed remain contingent, rather than be appropriated into systemic development. This kind of vision is achieved not by finally arriving at it, but by actualizing it in practice: it means an ongoing negotiation of relations, rather than an arrival at the right relation. Disability theory and activism invites this collective participation in mediation that we experiment in, rather than wield. We negotiate and struggle in the realm of mediation, together, understanding it as relation rather than organ. Together, we might push for a world that mediates fewer disabling demands on our bodies, rather than design exceptional bodies which can accelerate to meet these demands.

Conclusion

Romantic promises today are stretched thin. Throughout this dissertation, I've shown the ways the repetitive failure of these promises is structural to Silicon Valley's model of technological progress, through a recursive cycle whose output is the upgrade, the new tech, or an aspirational figure of media empowerment. The circuit runs like this: a technology promises to automatically figure its user as a Romantic, media-empowered subject; when it fails to do so, the recursive cycle uses this failure to loop back to the Romantic promise and develop a new technology, or a new figure of empowerment. I've argued that this loop goes back to the explicit Romanticism of the Apple 1, and back even further, two centuries to literary Romanticism when these promises were first articulated. Each new technology activates this history, calling up Romanticism into the present.

I've defined Romanticism in two main ways. One is the structure of this recursive system itself, the assumption that returning to the self after confronting obstacles yields progress. The other is the idea of Romantic organs, as developed by Leif Weatherby (2014, 2016b), which are techniques for directing the mediation of self and world with the goal of changing them. These definitions are entangled, as the recursive system or subject needs to mediate obstacles or failures into sites of self-transformation. Throughout, I've critiqued the idea that mediation is something we wield as subjects, or something that can be harnessed to usher in the right social form. However, I've also shown how digital media sets up its users to experience the world in this way, such that we subjects of the digital discourse network aren't really outside of these assumptions. This explains why many critiques of digital technology are somewhat stuck inside these parameters. In the conclusion, I'll address some of the ways we seem to turn to Silicon Valley's own framing of media as the condition of our liberation, and what we might do differently.

In the 2010s, it seemed more difficult to critique technopower; one had to assert that there were both good and bad uses, not so much inherently bad tech. Ed Finn (2017) provides a demonstrative example of this approach. In *What algorithms want*, he writes "for every nefarious black box and oppressive platform I unearth in this dig, there are bright spots: instances of astounding creativity and insight that would never have been

possible without the collaboration of human and machine" (Finn, 2017, p. 55). A Romantic relation to tech glimmers through Finn's critique. In his account, a potential for human creativity and experimentation seems to rise above any medial conditions. The author is careful to fend off potential charges of Luddism and to depict technology as, at worst, ambiguous. This is the kind of language that we still hear coming from the decision-maker class, whether university provosts, corporate PR types, or centrist politicians. Over the 2010s, academic research turned towards a more critical view. Scholars began to state explicitly that even the digital technology that seems empowering embodies a crystalized politics in service of Big Tech (Benjamin, 2019; Chun, 2021; Crawford, 2021; Hong, 2022; Noble, 2018). This politicized approach to technology has moved criticism in the direction of *design.*

Between an incrementalist approach and a rejection of tech, three modes of this critique of design are commonly articulated: 1. improve the technology, 2. take over technology, or 3. step outside the technological relation/get rid of the technology.

Ranjodh Dhaliwal (2023) offers a programmatic account of the first modality, in his review essay "What do we critique when we critique technology?" Taking up the idea that 'unmasking' critiques have, in Bruno Latour's words, "run out of steam," he argues that a "technology critique 2.0" needs to be about improving tech, asking "what kinds of designs do we envision?" (p. 318). This follows a number of works that critique bias or discrimination in technology, and advocate for a change to the technology itself (Chun, 2021; Noble, 2018; O'Neil, 2016). The whole field of AI safety and ethics offers a vulgar modality of this critique, appropriated by the tech industry to assuage critics (Sadowski, 2025). For instance, major tech companies' response to the revelation that their facial recognition algorithms had a racial bias was to make surface changes, but ultimately take over the legislative bodies governing facial recognition technology, and find loopholes that allowed them to continue to sell the technology to the police (Raji, 2024, p. 509). In other words, though these companies made their datasets more diverse, they did not end the technology's use in discriminatory practices; rather, they further entrenched their power to avoid litigation. Likewise, Apple is committed to net zero environmental impact through its Apple 2030 program (Apple, 2023). If critique is structured in terms of harms, Silicon Valley's response is "we can fix that." When the political tides changed with

Donald Trump's second election victory in 2024, Silicon Valley companies simply undid many politicized design changes that Trump associated with "DEI." As Aheba Birhane (2021) argues, "it is an illusion to expect technology giants to develop AI that centres on the interests of the marginalized" (p. 57).

The second mode addresses the political economy of tech, calling for different forms of ownership, or alternative networks. Ramesh Srinivasan (2019) argues that we can all become innovators and should create our own alternative networks that can replace oppressive ones. More Marxist versions of this mode of critique call for taking over technological infrastructure to turn it towards more fulfilling ends (Larson, 2019; Morozov, 2015; Sadowski, 2020; Sadowski et al., 2021; Verdegem, 2024). Lastly, there are works that advocate removing ourselves from the technological relation, either through a personal detox (Chayka, 2024; Lanier, 2018), or by getting rid of specific technologies (Crawford, 2021; Merchant, 2023; Sadowski, 2020). Kate Crawford (2021, p. 226), for instance, argues that artificial intelligence is inherently so environmentally destructive and authoritarian, that we need to refuse its development.

The move from emphasizing responsible use to debating the political effects of technological design is a step in the right direction. However, I wonder if the tendency in all these works to say "here's how we can reshape technology towards a better future," isn't a strange mirror of Silicon Valley's own project. These works seem intent on a version of "solutionism" (Morozov, 2013). Who's in charge, the machines or us? We subjects of the digital discourse network can't seem to stop answering the question. Academics are interpellated into offering solutions, when it's the very thinking that history is a problem to solve that we need to resist. Silicon Valley creates ever new problems that spur the recursion back to the Romantic premise of media empowerment.

To offer a more existential challenge to Silicon Valley power, critique needs to provide a different relation to technology itself – one that rejects "improvement" as a guiding principle. We need to articulate problems in such a way that they resist being recursively absorbed by "solutions." The difficulty of doing so points to the limits of the discourse network I call Digital Romanticism. It suggests the ways we critics are still its subjects, believing in media empowerment; at the same time, it shows the ways we are

struggling to think beyond it, knowing that media is a power relation. Aheba Birhane (2021) exemplifies this tension, arguing both for liberatory AI design and acknowledging that such AI cannot emerge within digital capitalism's constraints. This contradiction permeates critical discourse—we're interpellated into seeking technological redesign even as we recognize technology is not so much a technical object as a crystallized power structure. Jathan Sadowski (2025) has split these two poles of analysis into two figures, the mechanic and the Luddite: the mechanic knows how tech works, the Luddite knows why power is deploying it. Sadowski shows the importance of actualizing and entangling both kinds of analysis. These metaphors are promising in the way they analyze the recursion between technology and political power.

As 19th century tropes, however, the mechanic and the Luddite have the problem of imagining technologies as discrete, mechanical objects that humans can tinker with or smash. This is not really the situation we find ourselves in today, or, I would argue, even in the 19th century. This is why I think it is more productive to think about tech in the terms of discourse networks, rather than analyzing each technology as a discrete object. Elsewhere, Sadowski writes that "technology is, after all, the result of decisions and actions made by humans, and it is then used by humans with motivations and goals… Behind every technology is a bunch of human choices" (Sadowski, 2020, p. 5). This clean separation of humans and technology, as if there is a pre-medial human, has been critiqued by post-humanist scholarship from a variety of angles (Haraway, 2001; Kittler, 1986/1999; Siegert, 2015). Throughout this dissertation, I've pushed back against the idea that humans are wielders of media, and that if we just got media right, we could mediate the world we want. Too often, the shape of critique mirrors the Romantic figures of Silicon Valley. Turning again and again to this promise, which has been articulated over two centuries, seems to reinforce Silicon Valley's ideology.

The method I've used here deliberately differs from critiques structured in terms of "harms," because of the ease of their reappropriation by Silicon Valley. And it also differs from a Marxist or dialectical model, because I see Silicon Valley as responding to dialectics via recursion. Each time the system produces a contradiction that would be the site of dialectal struggle, the response is a recursion to Romanticism, using the contradiction to fuel the development of the system. For instance Mackenzie Wark

(2019), tries to introduce a dialectical contradiction into Silicon Valley tech by articulating a new class antagonism: there are owners of data centers vs. technology users, ambiently producing data online. As I've shown throughout this dissertation, though, the revelation of this power imbalance has tended to trigger less a class struggle, and more a recursion to Romanticism as a response. To assuage the contradiction, a return to the Romantic promise of technology through new modalities of digital privacy, new trackers that promise to empower users via their data, or new "AI tools" whose productivity bonuses outweigh the discomfort of surveillance. Romanticism keeps coming back as the answer to whatever question we ask of this system.

Digital technology seems to render history more recursive than dialectical. As we know, an epistemology of data correlation tends to repeat the past, rather than imagine a different future (Chun, 2021). A cyclical history is transmitted through digital technologies, endlessly recycling past promises into new versions of the same. To activate a contradiction to Silicon Valley means finding a way to stop its recursive reappropriation of difference, its repetitive recourse to past fantasies. This is why I use a method of negative recursivity throughout: the system endlessly produces contradictions; the task is to maintain them, rather than let them become fuel for recursive development. Negative recursivity is an alternative Romanticism that tries to short-circuit Silicon Valley's Romantic recursion, and hold open the space of contingency. The main contradiction I've tried to maintain throughout is the one in our very relationship to technology. I resist the idea that if we just do *x*, *y*, or *z* with tech, we can mediate the social system we desire. This impulse characterizes precisely the Romantic subject of the digital discourse network that believes it can wield mediation to bring forth a world in the shape of its projected vision.

While Silicon Valley's promise is Romantic, it ultimately seems to close down possibility: Mark Fisher's (2009) capitalist realism becomes a kind of technological realism, in which technology has managed to frame itself as the only condition under which it is possible to conceive of (its) improvement. My critique is less saying "here's how we can make tech better," and more calling into question this sentiment itself. This is not a resignation that we can't do anything, but an attempt to break the cycle of repetitive upgrading that seems to dominate thinking about technology. I'm not suggesting that

these impulses are bad, but rather encouraging a different view of technology and mediation than one that designs tech towards projected social outcomes.

Against this view, I would propose the idea that we are always already in a medial situation that contains a power relation. Technology is something we struggle with and over, and is not simply a set of discrete tools that humans control. This struggle must occur within our medial situation, not through a medial overcoming with the right technologies. We need to find the ways to struggle within our medial situation, rather than the roadmap to solving it. I'd suggest that mediation is a relation that must be continually contested and negotiated through historical time, not actualized by a master mediator.

Part of the pressure for this kind of media-solutionism is that digital media is so totalizing. Because digital media seems to organize all social relations, it can seem like we must redesign digital media in order to change social relations. A situation of technological totalitarianism forces solutionism. Part of what I've tried to show through the method of recursion is how this totalization functions as a circuit. In a constant return to its own premises, even when they fail, this system of Digital Romanticism becomes a cyclical totality. As I showed in Chapter 2, this cyclical totality is supported by a discourse network that codes absolutely everything in its own terms, eating up any exterior to Silicon Valley media. It is equal parts blanketing and repetition. No wonder a politics fixated on adjusting this media arises, when there doesn't seem to be anything else!

In contrast to redesigning the totality, I would highlight the importance of opening space outside it. We may need to abandon the idea that technology can or should be "empowering" in itself, but this doesn't mean resigning ourselves to disempowerment. Instead of zooming out to the cognitive map and trying to change the technological system, we could try for a system in which a certain kind of technology did not structure the totality of social relations. As such, a vital task today is to create exteriors to this system of meaning and to hold them open. Instead of trying to figure out how digital technology could become a liberating organ, we could move towards a situation where it doesn't penetrate through all possibilities of life. Mobilizations against smart cities, such

as Toronto citizens successfully halting Sidewalk Labs/Google's Toronto Waterfront project, show that there is a political desire for this kind of limit (McPhail, 2020). My point here is that this doesn't have to be a politics of mitigating harm or getting it right: it can be a politics of saying that Silicon Valley's technologies should not penetrate absolutely everything. There is a desire for a space outside the media totality of Silicon Valley tech.

Opening such external, media space is what Cait McKinney (2020) calls "information activism." In their history of queer media technologies, McKinney highlights how lesbian groups in the 20th century began from a place of enmity towards dominant modes of information organization, and from there organized alternative modes of recording, processing, and storage. In other words, they experimented with creating counter discourse networks in antagonistic opposition to the hegemonic one. Importantly, the ethos of these groups was *not* to create a new media system that would liberate everyone! Rather, it was to work with and negotiate the way information was mediated to serve their communities and political investments, often using a "'good-enough' approach," based on the knowledge and resources available (McKinney, 2020, p. 6). These groups weren't looking to wield mediation as a strange power that could re-constitute the self and its social relations; rather, they found ways to mediate things in ways that would work for their communities, creating media against the norm as they went. Often, they had to work counter to the affordances of media, trying to make things work for them. This is a practice of negotiating mediation over time that has the result of opening an exterior to hegemonic modes of mediation. These two things – a relational view of mediation and a counter to totality – are necessary to address Silicon Valley's totalitarian digital discourse network.

In this sense, I'm promoting Yuk Hui's (2019) concept of technodiversity, discussed in Chapter 1, but arguing that this makes more sense when freed from narratives of transcendence. Hui theorizes technodiversity at the macro scale, as a shift in global epistemology via a transcendence wrought by the confrontation of American with Chinese technics. In its massive Hegelianism, this seems to reinscribe some of the totalizing thinking Hui is trying to resist. Technodiversity could look more like David Graeber and David Wengrow's (2021) theory, which argues against a stadial-progressive

narrative of technological and historical change, and suggests more a grab-bag of technologies that are used, dropped, used again, moving back and forth. This approach, however, needs space for this negotiation, outside of a totalizing technical system that only allows alternatives in the form of the upgrade. Graeber and Wengrow argue that we live in an anomalously constrained moment in history, fixated on single solutions, rather than constantly trying out different things. The problem is not that we don't have the right solution, but that we think there is a right solution. A non-totalizing diversity means leaving the recursive-progressive logic of a stadial history. Rather than try to articulate a massive contradiction to the technological system to reboot the progressive potential of recursion, as Hui does, I would advocate a politics of negative recursivity. This awaits exits latent in the system, such as glitches, errors, disappointments, and the recognition of infinite loops.

This suggests a paradoxical form of politics. It means a suspicion of the idea that this or that form of mediation will finally set us free. At the same time, it does not give up on experimenting with new forms. Promises or plans that new techniques of mediation will produce *x* kind of liberated subject, or *y* kind of harmonious social relation should be met with skepticism. Although the invention and experimentation with new techniques of mediation is important here, we can't predict where these will go. It's this kind of stubborn space of mediation I showed in Chapter 1, through my reading of Sophie Tieck's (1800/2015) story "The old man in the cave." Thinking of mediation as this contradictory, unpredictable space points instead to a continual struggle over how our social relations are mediated: instead of harmony and empowerment via media, contradiction and struggle in the space of mediation.

Throughout this dissertation I've tried to show the ways media move in their own strange realm, beyond our intentions. Technology is itself alien and alienating; the struggle to render it a Romantic organ is set up to fail, churning us through an endless loop back to old promises. It slices reality in strange ways. Maybe the task is not to wield media to cut the right slice, but to find our political possibilities within the current cut. Shintaro Miyazaki (2023) argues that digital technologies "exhibit an obstinacy, a wilfulness, an agency and a logic of their own that is diametrically opposed to the original intentions of their developers" (p. 36). Glitches show the moments that

technology exhibits its own agency, which allows us to discover alternate uses of technical systems. Glitches in systems of technopower are not just for discovering alternate uses, but are opportunities to challenge totality. Holding these glitches open means questioning the recursive development of the system and asserting the political value of contested mediation. The failure of a technological system to achieve its promise is then not an automatic site of recursive upgrading, but rather a moment to question the reproduction of the system itself. In Chapter 2, I proposed one such opportunity, perhaps somewhat heretically, in AI-generated slop. These breaks in the frenzied circuit of power are moments when humans are let go from the recursive whiplash of reaching for the phone, of constant tracking, of the need to progress. These open a space for something different.

Recursive systems escalate these glitches into crashes through a repetitive self-transformation based on an error (Miyazaki, 2023). Importantly, the concept of glitch or error only has this status from the perspective of the system; politicizing them means seeing them as opportunities for something else. Crashes happen regularly. Part of the task of counter-politics is to be ready to fill the next crash with a different idea than the upgrade. Kittler (2003/2021, 1991/2022) gets half-way here in his theorization of revolutionary feedback, or the way a system's own processes can be turned back on themselves to produce system-toppling feedback (Winthrop-Young, 2022). In Kittler's technophilic summation, however, this is a kind of automated politics, in which feedback is revolutionary in itself: "if 'control'… is the key to power in this century, then fighting that power requires positive feedback" (Kittler, 1986/1999, p. 110). As I'll discuss in the examples below, these glitches can generate *openings*, but unless the openings are filled with a political alternative, they merely act as situations of the system's recursive self-reconstitution. Kittler's call to produce feedback, in other words, doesn't quite go far enough. Sean Cubitt (2017) has a more careful approach: glitches reveal the boundaries of the system, but are not utopian in themselves. Recursive systems contain regular glitches – the political task is to be ready to fill these openings with an alternative that halts the recursion.

Both the Covid-19 pandemic and the CrowdStrike computer crash are examples of this kind of politicizable glitch-opening that can serve to illustrate the point as I

conclude.[1] One of the best descriptions of the radical political contingency opened by Covid-19 takes recourse to Romanticism to explain it. Quinn Slobodian (2020) turns to Heinrich von Kleist's 1807 story "The earthquake in Chile" to point out the danger of the system recursively absorbing the rupture of the pandemic back into its functionality. Writing in 2020, Slobodian argued that Covid had rattled the political order, much like the natural disaster described in Kleist's story. Overnight, the harsh austerity governments of late capitalism rolled out universal basic income, cancelled rent, told you not to go to work, and feverishly funded public health care. Cruise ships, factories, and airplanes stopped running, dropping global carbon emissions dramatically more than any government policies have been able to (Ronaghi & Scorsone, 2023). Analogously, the protagonists of Kleist's story find themselves suddenly freed from prison, basking in a pastoral communalism outside the city walls. The horror of the disease was real, but it contained an opening to different social relations.

Writing in 2020, Slobodian had yet to see the violent recuperation of this contingency, embodied in the creepy slogan "the return to normal." He predicted it, however, through Kleist's recursively-structured story: when the system reconstitutes itself, it will be a crueler, more violent world than before, using this moment of contingency as an opportunity to develop itself. The protagonists of "The earthquake in Chile" are ultimately clubbed to death. Likewise, rents rose higher than ever, food became unaffordable, the cruise ships set sail again, and overwhelmed medical systems were left in freefall. The political task is to be ready for such contingencies, and fight to keep them open. Unfortunately, it was Silicon Valley that was most ready to fill the opening of this glitch; Amazon, Zoom, and Microsoft Teams became the imaginable 'progress' that could respond to the systemic crash.

The global CrowdStrike computer crash was another glitch-opening, in which the recursive operations of the system undermined its own function. CrowdStrike is multi-billion-dollar American cybersecurity company, providing services across the world. On July 19, 2024, an update to its security software caused the crash of roughly 8.5 million

[1] Covid became a pandemic (i.e. – global) because it was able to transmit itself quickly through the cybernetic channels of the planetary transportation system. In this way, the recursive operations of the system facilitated its own crash.

Microsoft Windows operating systems. Because the glitch had to be resolved manually, on each computer, the crash lasted several days. Some of the crashes affected vital services, such as hospitals and emergency response. Stock exchanges, banks, airlines, gas stations, and other businesses were also affected. The immediate response was recursive – update the program to restore the system back to itself with new knowledge (i.e. – a patch). Yet, the crash itself could have opened antagonistic political questions addressed to the system itself: should we keep parts of the system switched off? Does the stock market really need to trade unabated at "the theoretical speed of light"? (Mackintosh, 2019). Do we need to fly absolutely anywhere we want to whenever we want to? Is the ability to get gas really the definition of freedom? In short, the delays caused by CrowdStrike could instead be interpreted as a signal that the system's demand for constant productivity and exchange is excessive. This would be an opportunity to exit such excessive demands towards a different social value. Negative recursivity looks to such glitches as opportunities to maintain the contingency of the short-circuit.

Such openings also take place everyday through individualized affects of frustration with technological disfunction, depression over technological dependency, or hilarity at technological stupidity. Think of the moment you need to sign into your Zoom meeting and your computer automatically starts downloading a system update and promises an imminent reboot. Or you're feverishly trying to eat a bowl of soup, dipping your sandwich in it, while scrolling the news with one of your knuckles; endless articles on war on misery get splashed with liquid tomato, and you think, *what am I doing with my life*? Or when Google maps tells you your bus is arriving now as you wait and wait, and it never comes. In these moments, it's vital to resist the individualizing analysis of this tech, which seeks to recalibrate a personal relation with it. Resist the idea that Google maps needs an update! Resist the idea that I am responsible for my lunch time screen abjection! Resist the idea that more efficient tech would make my life less frustrating! What's frustrating is the requirement that we use this tech for everything, the system that sets us up to doom scroll, the way tech can never be a surrogate for well-funded public transit.

By reading Digital Romanticism as a discourse network, I've tried to show that its individualized relationship to media is actually imposed systemically. This is what allows

us to see our technological discontent as either a technical or a personal problem. Technological behaviours that seem like individual choices or problems of design are actually systemic injunctions. Doom scrolling is required of us. Critiques of an addictive information sphere recreate the system's own interpellation that this is an individual problem (Chayka, 2024; Seymour, 2019). Instead, it's important to see this situation of technological frustration as part of the system, and redirect feelings of anger, despair, or ridicule at the system itself. Understanding media-use as a systemically-imposed requirement opens the possibility of a collective right not to have the entirety of life mediated through these systems.

Beyond better tech design, abolishing certain technologies, or transferring data centres to state ownership, what seems vital is the creation of a collective subject that can demand rights in relation to technology and its power. Whatever liberation is possible here is found in this resistance, not in the new tech; the resistance itself actualizes its content. When I was organizing with Occupy San Francisco in 2011, I remember a particular friend making us all put our phones in his freezer when we were working at his house, to avoid surveillance. Thinking back on it, it's interesting that the very act of plotting the downfall of the system also involved opening a space outside its technological power. We shouldn't be awaiting the change in the algorithm that will liberate our subjectivity, but finding our resistant subjectivity in our demand that tech be less totalizing. Each time a technological system fails, disappoints, or feels bad is an opportunity to discover this demand. These breaks in the frenzied circuit of power are moments when humans are let go from the recursive whiplash of reaching for the phone, of constant tracking, of the need to progress. The glitch becomes an occasion not to think of the right techniques, but to open an antagonism to the way technical objects masquerade as the horizon of possibility.

In the recursion to Romanticism, I've argued, it is difficult to see outside the system; therefore, openings for resistance need to be found within this recursive loop. That's why, throughout this dissertation, I've drawn out moments of technological abjection or failure, as well as affects of ridicule or disappointment – the slurred confusion of AI generated slop, the weirdness of recording your every bodily emission, the schadenfreude of tech that fails, the horror of influencer culture merging with fascism,

the collapse of the body revved up to inhuman speeds by eugenic technology. I come to these affects through the alternative Romanticism of negative recursivity, a method for short circuiting Silicon Valley's Romantic recursion. This method lingers with affects of abjection and disappointment, seeing them as constitutive of digital technology, rather than problems to overcome. In contrast, Silicon Valley's Romantic recursion functions by producing differences that it can then appropriate into its own development. Silicon Valley does this each time its tech fails, or each time a social problem arises as a result of its overwhelming power – these contradictions become fuel for its further recursive development. Breaking things is an explicit part of the Valley model of progress, that can then fuel more tech to fix those things and break more. If these moments of failure are held open as moments to build new relationships to technology and each other, they can be politicized as spaces of resistance to the Valley's recursive development. As slop overtakes the internet, for instance, affects of ridicule and schadenfreude at the failed promises of media empowerment could develop into a collective animosity towards the entity making these promises. Rather than new technology that could absolve these hostile affects, cultivate them into ongoing, collective antagonism.

There needs to be an exterior to Silicon Valley technology totalitarianism, and this exterior can take the form of an antagonistic politics towards Silicon Valley and its tech. This politics doesn't ask for better technology, but demands that Silicon Valley cease to be a totality. The most hopeful thing about the dreadful year in which I'm writing, 2025, is that suddenly this kind of politics seems to be emerging. As tech billionaire and world's richest man, Elon Musk, takes over the operations of the U.S. government, delivers Nazi salutes to his fans, and argues to reverse South Africa back to an apartheid state, he has morphed from a quirky figure of extravagant innovation into a public enemy. As Silicon Valley totalitarianism takes the more recognizable form of political dictatorship, people demand a limit to technopower and a liberation beyond the tired figures offered by technological empowerment. This movement goes beyond criticizing the failures of tech and, through its very resistance, can actualize an alternative to Silicon Valley power. Can we maintain the opening provided by this collective animosity?

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