Towards a Software of the Oppressed: A Freirean Approach to Surveillance Capitalism

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Abstract

In this chapter, I show how Paulo Freire's critical pedagogy provides a helpful framework for theorizing and resisting the oppressive digital technologies and practices of surveillance capitalism from the position of the classroom. I begin by providing an overview of how Freire's notion of oppression can help us identify the concrete cultural, legal, and technical ways that digital technology companies actively suppress democratic participation in the oversight and development of digital tools and platforms. I argue that the passive adoption of the tools of surveillance capitalism within the university represent a type of "hidden curriculum" in which students and the broader academic community learn to passively accept them as natural, neutral, and inevitable. I then sketch out a Freirean theory of digital liberation in and through the classroom and point to examples that show how students and educators might critically participate in the shaping of our digital world.

Key terms: critical pedagogy, surveillance capitalism, information technology, digital learning, digital activism, critical information literacy

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Introduction

Digital technology, to sum up Shoshana Zuboff's (2019) recent groundbreaking work, is being increasingly weaponized as an instrument of global surveillance and control for the benefit of an elite group of hyper-capitalists. In her book *The Age of Surveillance Capitalism: The Fight for A Human Future at the New Frontier of Power,* Zuboff describes this weaponization as indicative of a new economic stage of technological development that she calls "surveillance capitalism," where predicting and modifying human behavior via digital technologies are key strategies for producing revenue and market control.

While computational forms of surveillance and manipulation of human behavior are certainly not new phenomena, the architecture for carrying out these activities has never been so widespread, powerful, and ingrained in daily life, mediating nearly all of our activities through phones, appliances, shopping platforms, communication systems, search engines, and other everyday digital technologies. Many scholars have demonstrated how the business interests of digital companies often stand in direct opposition to the users or the public good (such as Tufekci (2017), Vaidhyanathan (2018), and Eubanks (2018)), but Zuboff takes this criticism one step further by showing how the broader economic logic of technological innovation itself represents

an overstepping of democracy in the surveillance capitalist's aspirations to mass engineer human society for the sake of profit.

Under such conditions, the prospects of liberation seem bleaker than ever before. Zuboff herself, while advocating for the overthrow of surveillance capitalism for the sake of democracy, offers very little concrete advice about how we, as citizens and technology users, might begin to do so. As it happens, however, the methods used to cultivate and sustain surveillance capitalism follow an almost textbook application of Freire's identified techniques of oppression, which, as I aim to show by the end of this chapter, shine a light on what specific steps we can take as educators to fight this form of digital oppression. As we recall, for Freire, oppression is a systematic suppression of a people's right (or their "ontological vocation") to critically understand and transform the world as a means of turning subjects into objects that can be manipulated and controlled by a dominant class (1997, p. 44-45). According to Freire, this suppression is carried out by "precluding any presentation of the world as a problem and showing it rather as a fixed entity, as something given—something to which people, as mere spectators, must adapt" (p. 120).

Freire famously demonstrated how traditional forms of education often play a key role in this dehumanizing process by leveraging what he called the "banking method of education," where students learn to passively accept the knowledge of their oppressors rather than to critically engage the world on their own terms. What I'd like to offer here is that digital technology, like Freire's conception of education, is never neutral, and likewise, despite its reputation for extending opportunities for intellectual development, can also work in discreet but powerful ways to foreclose critical thinking. In its current, surveillance capitalist form, many of our everyday digital technologies share features with the "banking method of education," in that they are designed to make users passively accept their exploitative influence in their lives as an unchangeable given.

Strategies of Digital Oppression

Broadly speaking, digital companies apply a variety of interlocking technical, cultural, and political strategies to suppress users from collectively understanding and transforming their digital world, many of which have been so thoroughly normalized that they can be difficult to identify by most digital technology users. That is, these companies benefit from making their domination through digital technology appear natural, neutral, and inevitable, obscuring other possible social configurations for developing and using software that put user understanding and control at the forefront.

Prohibiting Access to Source Code

At the level of code, many digital technology companies, despite their support and use of open source software in some areas, also implement closed source software code that prohibits users from collectively inspecting, modifying, and distributing code in ways that aligns with their own needs and interests.

While the closed nature of code is often taken for granted as a necessary means of protecting digital companies' intellectual property, important arguments have been made

regarding the political importance and economic viability of protecting users' rights to study and modify all software code that they encounter. The Free Software Foundation, for example, has been advocating for these rights and supporting software projects that abide by these principles since the 1980s ("What is Free Software?"). While the value of such rights may seem meaningless to those that don't personally have the technical skills to inspect and modify code, their denial prohibits user communities as a whole from collectively carrying out these activities in ways that would likely benefit non-coders. For example, access to code would enable user communities to better understand and govern the types of algorithms that mediate search results or social media news feeds, and work against filter bubbles (Pariser 2011), racism (Noble 2018), and other unjust or undesirable features of our algorithmic environments.

Access to code would also allow user communities to better determine the extent of data collection practices software imposed on users, such as whether or not smartphones are "listening" to users--a question that is frequently brought up by reporters and which is impossible to technically determine without ability to access code (Nichols, 2018). Prohibiting access to code also actively reinforces the cultural divide between "coders" and "non-coders" by making it impossible for non-coders to casually explore and experiment with code in their everyday settings.

Prescribing User Behavior via Code

The closed nature of code also offers surveillance capitalists a powerful mechanism for carrying out what Freire describes as "prescription." Freire (1997) writes, "Every prescription represents the imposition of one individual's choice upon another, transforming consciousness of the person prescribed to into one that conforms with the prescriber's consciousness" (p. 29). Secret and unmodifiable code enacts prescription by enabling and disabling different user behaviors that reflect the worldview and interests of the developer. Even when code is written to give choice in some aspects of the software's use, the choices themselves and the order in which they are presented represent a "choice architecture" that encourages certain types of user behavior. As Siva Vaidhyanathan (2012) argues, "the structure and order of the choices offered to us profoundly influence the decisions we make . . . If a system is designed to privilege a particular choice . . . people will tend to choose that option more than the alternatives, even though they have an entirely free choice" (p. 88).

Default privacy settings are one example of the way choice architecture has been used by companies like Facebook and Google to encourage users to be more permissive with what they share. However, software's prescriptive influence can be found wherever we use it, shaping even our intellectual and communicative behaviors. For example, Carolyn Handa (1990) argues that word processing software underscores an individualist idea of writing and intellectual processes, asserting, "We work with a concept of writing procedures arising from the programmer's view of the writing process and the way in which the particular programmer understands that we improve writing and gain knowledge" (p. 175). Prescription in our software, however, can be difficult to detect, given the power and immediacy in which it shapes our behavior and makes that behavior appear as if it was chosen freely by ourselves.

Secrecy of Data Use

Users are also prevented from critically understanding and transforming their digital world by being kept in the dark or outright lied to about the invasive and exploitative practices they are subjected to by surveillance capitalists. As already described, this secrecy is enabled at the level of code, but it is also characteristic of the broader business culture of surveillance capitalists. Zuboff (2019) recounts in her book that Google adopted a "hiding strategy" to keep users in the dark about the extent of their data collection practices. Surveillance capitalists like Google and Facebook deter user understanding of these activities in multiple ways: they write license agreements that are too long, obscure, and rapidly changing to be sufficiently comprehended by users, they make no genuine effort to educate users on the types, uses, and value of data extraction, and--as has often been discovered--they secretly carry out data collection and user manipulation practices that are in direct violation of the law. This secrecy contributes to what Zuboff (2019) calls an "asymmetry of knowledge," where surveillance capitalists are able to learn more about user populations (and how to manipulate them) while keeping that knowledge from the users themselves (p. 81).

False Generosity

Freire (1997) identifies "false generosity" as another tactic oppressors employ as a means to reinforce the dependence, loyalty, and self-perceived servility of the oppressed, thus inhibiting them from recognizing their oppression. In Freire's view, oppressors are only able to be generous because their oppression has enabled them to monopolize resources. Similarly, we may view surveillance capitalists enabling "free" access to their digital tools (such as email, search engines, and social media) as a technique of domination funded by wealth produced through the exploitation of user data. This form of false generosity is used to produce feelings of gratitude and dependence in the user as well as propel the illusion of free choice in the use of these tools. However, as many scholars and journalists have pointed out, the alleged "freeness" of these tools disguises their exploitative practices and imperialist ambitions, enabling surveillance capitalists to embed their tools and impose exploitative terms far and wide as part of what Dal Yong Jin (2015) calls "platform imperialism," or "the increasing role of U.S.-based platforms in capital accumulation and culture" in global Internet use (p. 153). Though these tools are rarely overtly forced on users, their adoption is hardly based on independent choice. As Bruce Schneier (2015) observes, "These are the tools of modern life. They're necessary to a career and a social life. Opting out just isn't a viable choice for most of us, most of the time; it violates what have become very real norms of contemporary life" (p. 60-61). For surveillance capitalists, false generosity is a powerful business strategy for capturing user populations.

The Reproduction of Digital Oppression Through Education

The strategies highlighted above are only some of the oppressive techniques that surveillance capitalists use to reproduce passive users, or users who neither expect nor are able to critically understand how digital technology mediates their everyday activities nor participate in shaping that mediation according to their own interests. What I'd like to argue here is that the

power of these strategies is doubly amplified by their normalization within institutions of schooling. By passively accepting digital tools that deny users the right to study and modify code, that exploit user data, and that impose surveillance and control on users, we are teaching students that these technological qualities are natural, neutral, and inevitable.

Our passive acceptance of these tools also forecloses important opportunities to redirect the investment of resources and technological practice of schools into forms of software use and development that prioritize the rights of users, such as powerfully modeled by the Free Software Foundation. This missed opportunity is hardly the fault of educators, who likely received similar technological conditioning in their own education, but rather reflects a longer history of private exploitation of schools for capturing and training consumer markets, particularly by the information technology sector.

Today, the importance of the educational market for digital technology companies remains strong as ever including for new companies such as Google and Amazon, and new products like e-textbooks, email services, and cloud storage. As Google enterprise specialist Jeff Keltner (2007) states, "We think students are going to take these tools out to their personal lives, their professional lives" (para. 12). Tech writer Brian Heater (2017) observes that digital technology companies' intense interest in education "isn't entirely altruistic"(para. 54). He further writes, "Fostering an entire generation of first-time computer users with your software and device ecosystem could mean developing lifelong loyalties, which is precisely why all this knock-down, drag-out fight won't be drawing to a close any time soon" (para. 54). Surveillance capitalists know that the tools we adopt in education will have strong influence on the tools we adopt as a society.

Dialogic Approaches to Surveillance Capitalism in Education

What then is to be done? As journalists Daniel Oberhaus (2018) and Kashmir Hill (2019) independently demonstrated, it is nearly impossible to avoid big tech companies like Amazon, Facebook, Google, Microsoft, and Apple, even if you make it your fulltime job as part of a paid reporting experiment. Rejecting these technologies outright from within institutions of education, which already struggle with so many other challenges, would be even more difficult. However, I'd like to suggest that we might fruitfully adopt Freire's emancipatory method of dialogue to develop a "software of the oppressed," or a mode of critiquing and transforming software and its role in our lives from the site of education.

For Freire (1997), dialogue is an activity foundational to freedom in that it represents a human being's active striving towards becoming a self-directed subject rather than a passive object. It consists of a dialectical and unending process of action and reflection as it conceives of humans and the reality they make as in the "process of becoming" rather than static and fixed. Freire asserts, "To exist, humanly, is to name the world, to change it. Once named, the world in its turn reappears to the namers as a problem that requires of them a new naming" (p. 65, 69). This process of naming, as part of the activity of reflection, plays an important role in making aspects of the world available for transformation. It allows individuals to see what seemed to exist before "objectively" as now "assuming the character of a problem and therefore of challenge" (p. 64).

To that end, this practice of dialogue can be fruitfully put to use in resisting the oppressive impositions of software in the classroom. As many have pointed out, one of the biggest challenges of responding to the vast power wrought by our digital companies is our inability to effectively describe their presence in our lives, leaving us vulnerable to inheriting the uncritical language of surveillance capitalist boosters. Ellen P. Goodman and Julia Powles (2016) observe, "We call them platforms, networks or gatekeepers. But these labels hardly fit. The appropriate metaphor eludes us; even if we describe them as vast empires, they are unlike any we've ever known" (para. 2) Developing new concepts that challenge the uncritical representation of digital technologies from the point of view of users is an important first step towards transforming these technologies in ways that better suit the needs and values of users.

While schools have long considered the adoption of new technologies as a type of challenge requiring experts and research, they have rarely extended this challenge to students. Instead, technological adoption is typically considered a problem to be solved by IT specialists whose solutions are imposed on students without their understanding or participation. This de-politicization of digital technology in learning environments conditions students to passively accept digital technology in their broader lives. What we need to do instead is provide students and the broader academic community opportunities to see their digital environment as a problem available for transformation rather than as objective and fixed reality.

Although pedagogies focused on critical information literacy would be of profound importance to this venture, I am arguing here for their extension into genuine opportunities for mass student participation in shaping, governing, and critiquing the very digital technology that is sponsored or endorsed by their institutions of education in order to prepare them to carry the same critical digital consciousness out into their everyday lives. Institutions could do this by incentivizing student advisory committees on academic technology (as I have done with UC San Diego's digital commons KNIT), hosting town halls to discuss academic technology contracts and privacy agreements, and supporting more forms of libre software that protects user rights and academic digital tools and services with strong ethical values, such as the Modern Language Humanities Commons, Commons in a Box, and Domain of One's Own.

Such largescale efforts, however, as I have found in my own initiatives, often require an alignment of will, interest, and resources among institutional actors that can take a great deal of time to develop. Though these goals are still worth working towards, there are also a variety of smaller steps we can take to help cultivate dialogic technical consciousness in students that need not rely on massive forms of institutional support or collaboration. For example, educators can experiment with replacing surveillance capitalist technologies with alternatives that more forcefully protect user privacy and freedom (Glass, 2018). Nathan Schneider, an assistant professor of Media Studies at the University of Colorado Boulder, and myself are currently working on an Ethical Edtech wiki project that aims to help educators find these alternatives and use them in meaningful ways in their classroom. Educators can also develop ways to bring up the non-neutrality of tools in their teaching, such as by providing notices on syllabi about the potentially surveillant and exploitative nature of digital tools used for learning or developing assignments that interrogate oppressive features of digital technology like user terms and conditions agreements.

In the end, however, educators should work towards developing their own methods for lifting digital technology out of "background awareness" of their classrooms and into the realm of dialogue and transformation that work best with their students, curriculum, and institutional

environments. As our world becomes ever more prescribed by the conventions of surveillance capitalism, educators should consider how Freire's dialogical method may be our most promising tool for liberating ourselves from it.

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