

Contemporary Luddism: Lifestyle Politic vs Collective Movement

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Abstract

This paper discusses trends in technology resistance, and the prevalence of commercial and atomized expressions of Luddism. I map historical examples of technology refusal to contemporary efforts to resist participation in technological society. Historical expressions of Luddism can be understood as “collective bargaining via riot,” as Hobsbawm describes. Luddism as collective action predates its namesake to include examples of resistance to public security and control, including fence-breakers during the English enclosure movement, the destruction of railways during the Boxer rebellion, or other instances of resistance to technological imposition.

But resistance to technology incurs a high cost. “The grid” is increasingly difficult to escape. The cost of refusal can only be incurred by those with economic and social capital to make lifestyle decisions that satisfy a sense of personal security. Contemporary expressions of Luddism now include digital detox workshops, mindfulness seminars, families limiting screen-time restrictions, and patronizing spaces that discourage technology use (such as coffee shops and bars that proclaim they are “WiFi free”).

Delineating between historical and contemporary Luddism has the potential to help us understand Luddism as part of a commercialized identity formed from consumer choices, adaptation to infrastructure as it suits (or impinges) on our needs, and a negotiation with the increasing impossibility of refusal all together. These carry strong implications for the sense of (in)security associated with technology.

Introduction

In this paper I discuss two models for resistance to technology or “Luddism.” I contrast the historical roots of the idea with the contemporary individual “lifestyle politic.” These historical examples include collective, communitarian movements of direct machine breaking against specific technologies. While the most obvious example is Luddism in its original 19th century English context, I choose to focus on other instances such as the fence breakers of the English agricultural revolution, subaltern indigenous resistances and more recent examples in the Americas. Contemporary incarnations of Luddism in the developed world involve individualist and conspicuous performative activism, often expressed through commercialized examples like “Digital Detox” retreats, apps designed to curtail usage, and moves off-the-grid.

Overt and subtle notions of “machine breaking” emerge as we see it used in forms of disproportionate and irregular warfare, through the destruction of infrastructure during “scorched earth” actions and ecotage, to the use of apps that impose limits on how we use machines to “break” perceived addictions. These myriad examples point to Luddism as a multi-faceted set of

actions that deviate from each other depending on historical and social context, which affords the Luddite different measures of agency for resisting technology. I will begin by situating discussions of Luddism and describing my goals. Historical incarnations of Luddism are described, then the contemporary examples noted, which help to draw out the qualities of Luddism. I conclude by outlining the notion of "post-Luddism" and the question of what kinds of resistance to technology is possible.

Situating Luddism

The overall argument of this paper is that Luddism is part of a spectrum of moves related to technology and society. It operates in the same domain as disconnection, non-use, and non-participation. Luddism as a definitive type of thinking counters Jones's (2006) point that "historical Luddism is fundamentally different from more recent neo-Luddism, and that the two cannot simply be collapsed into the false continuity of a single "antitechnology" philosophy" (p. 51). There is certainly a mythologizing of the original Luddites in service of the 1990 neo-Luddite agenda, as which is employed and deconstructed by authors like Sale (1996), Noble (1995), Fox (2002), Linebaugh (2014). In spite of that, this paper is intended to demonstrate that there is a continuity of refusal practices which we can describe as "Luddite." I do this by conceptualizing the original Luddites as an example of small l luddism, and defining big L Luddism as a type of politics which emphasizes the friction between humans and things. Through all, the notion of "machine breaking" remains important, as humans actively seek to interrupt technosocial arrangements between people and things.

Defining Luddism and distinguishing historical and contemporary incarnations has us returning to its namesake. The 19th century English Luddites are no stranger to a scholar of resistance to technology – they are the archetypal model for how we characterize refusal and non-use, both as a frame of reference for scholarship and a stereotype in the popular press. I hope to someday historicize the non-use of technology in a way that transcends the Luddites as a model, but that is extremely difficult to do. Such a project is beyond the scope of this paper, and there are a number of reasons why we have trouble moving past "machine breaking" as a historically western European phenomena originating with the Industrial Revolution.

First of all is the attentiveness by historians to that place and context. The industrial revolution in England (and to a lesser extent France) is the subject of a good deal of scholarship,¹ as it is construed as essential to the rise of modernism, industrial and post-industrial society, and

1. See the work of Arnold Toynbee, David Landes, EP Thompson, Eric Hobsbawm, T. S. Ashton, and Sidney Pollard.

technified society. The work of mid 20th century historians is evident in the work of both philosophers of technology as well as more serious critics and less formal “cranks” who followed this scholarship to form their critiques of technology. Self-interested analyses led to Eurocentric perspectives on the history of technology (Cueto et al., 2014), a perspective that might be corrected if we view expand a critique of technology to include post-colonial and post-development perspectives.

The second reason for Luddism’s origin as an idea with the machine breakers of the 19th century are our definitions of technology and the ontic domains of “tool” versus “machine.” As with the historicization of machine breaking, this is not the place to go deep into those discussions. To briefly summarize, how we understand “technology” depends on the perspective we take. Historians and scholars who use cultural definitions see technological things as expressing the spirit of an age. Humanist perspectives that define those things as mere instruments or tools (Schatzberg, 2018). This is part of the issue with how differentiate between “machine” and “tool.” Gunkle (2018) provides an interesting brief overview of the concept in the context of robot rights. He resorts to Marx’s (1977) definition, where “the machine is a mechanism that, after being set in motion, performs with its tools the same operations as the worker formerly did with similar tools” (p. 495). Tools are associated with an instrumentalist view point, where there is no deeper social significance to the thing, yet machines have qualities that are explicitly social and cultural.

Luddism’s significance comes from a directed form of machine breaking that assumes a cultural perspective, where things stand for some social order or greater political and ideological significance. STS scholars are familiar with the perspective that technologies are “ways of building order in our world” (Winner, 1980). Material production helps to define the phenomenological sense of what kind of world we have made for ourselves (Winner, 2009). The post-phenomenological approaches of Ihde (2009) and Verbeek (2005) especially note this co-constructive relationship between people and things. Because of this, it is possible for us to imagine Luddism as transcending its original context without purely romanticizing it the way Jones (2006) describes. However we still are left with the common-sense notion that “technology” involves some sort of sophisticated devices that didn’t emerge until the industrial revolution. This humanist instrumentalist perspective is common, as it emerged with the rational modernist viewpoint of technology being the material practices of an industrial society (Schatzberg, 2018). But because of the explicitly social implications of the machine, we see even humanist instrumentalists acknowledging 19th century Luddism as a noteworthy phenomenon. My goal here is to illustrate that resistance to technological things transcends that context through the examples described below.

Traditional Luddism

In describing historical big L Luddism, I have chosen not to focus on the Luddite namesake, but instead three examples that illustrate qualities of Luddism as an idea beyond its original context. These include the fence breakers who helped to provide a context for 19th century English machine-breaking, the subaltern luddites of colonial resistance, and other examples. For a brief overview of the original English Luddites, one can refer to Jones's (2006) work which contrasts them with perspectives of neo-Luddism. Most importantly perhaps, we should note that

the historical Luddites were themselves technologists – that is, they were skilled machinists and masters of certain specialized technes (including the use of huge, heavy hand shears, complicated looms, or large, table-sized cropping or weaving machines), by which they made their living. That living and their right to their technology was what they fought to protect, not some Romantic idyll in an imagined pretechnological nature. (p. 9)

In setting the stage for thinking about Luddism as a specific sort of material politics of direct action, we must dispel the myth of Luddites and Luddism as backwards or ignorant. Such a position assumes the superiority of technology unequivocally and places faith in the inherent moral goodness of things regardless of what problematic social implications they might carry. Through several examples I will look at we will see how machine breaking as a direct action is not mindless smashing of things but deliberate strategy. Luddism then has three characteristics we will explore. First it is a directed focus on a specific thing or arrangement of things, which are expressly social, and perceived as negatively impacting livelihoods. Second, it is a response to perceived oppression of a technological hegemon. Last, it serves communitarian goals rather than individual gains. This is how we will define a traditional mode of Luddism.

Focus

The notion of Luddism originates with English machine breakers of the Industrial revolution (Horn, 2015). The “collective bargaining by riot” (Hobsbawm, 1952) was also seen in the “Swing riots” of 1830 (Hobsbawm & Rudé, 2001) and the “Rebecca riots” of the early 1840s (Williams, 1955). However, Luddism in England is specifically predated by the fence-breakers of the Enclosure movement, which dates back to the 11th century but was accelerated during the 14th and 15th centuries and the British agricultural revolution. During this time, small landownings were consolidated and privatized. What were commons became "enclosures" which allowed for private farms and ended a practice of communal grazing and growing. Fence-breakers were those who

destroyed the partitions, maintaining traditional practices in spite of legislation and enforcement of the new enclosures. (Neeson, 1993).

Fence-breaking was one tactic of resistance to enclosure. Others would make petitions and counter-petitions to enclosure committees and Parliament. However, reported grievances were few, since “they were expensive and needed a degree of familiarity with parliamentary procedures that most small commoners lacked” (Neeson, 1993, p.272). When legal recourse proved too frustrating, fence-breaking, sabotage, and riots were their recourse. If a tenant farmer’s practices were at odds with the goal of the enclosure, they could destructively use the land as a form of protest.

Pastoralists would allow animals to trespass property intended for use as arable land, and farmers who grew crops would join in mass ploughings, making a landowner’s property unsuitable for grazing (McDonagh, 2013).

There is a notable absence of records on illegal opposition. Scattered accounts of these practices are all that remains, rather than any report on collective or covert resistance. West Haddon commoners burned £1500 worth of posts and rails. 300 men and women from the Wilbarston commons tried to prevent fencing, Raunds commoners and villagers “pulled down fences, dismantled gates, and lit bonfires” (p.278). Raids could continue for years, as in the case of Hardingstone. Fence-breaking, tree barking, the destruction of enclosing trees, stiles, and gates continued through the 1780s. It is reasonable to argue that these acts of stealing wood from fencing and gates coincide with the villager’s need for fuel after the loss of their commons (p. 279), and this further illustrates the way the goals of enclosure were sometimes at odds with the lives of villagers. Resistance was not uniform, and in some areas social solidarity increased through new economic dependence on enclosure and those responsible. Some would still integrate to the new social arrangement, even if they had different or fewer options to make a living. Taylor (1975) also notes resistance to enclosure in 17th century, from small farms that could no longer be economically viable. But the new crops and methods were seen as “too valuable to ignore” (p.125) which lead poor families to move away from villages and settle on other unused land (p.128). These people would try to persist in the same lifestyle of previous generations, until enclosure caught up with them.

Here, an important question emerges. Is a fence a form of technology? If we take Winner’s (1980) definition of technologies as “ways of building order in our world,” then fences and walls are certainly technological – they are artificial, they have specific affordances, and they constrict the horizon of possibilities for our experience of the world. Billington (1975) address this problem directly, arguing structures are static, while machines are dynamic, but both are technological. They involve the mastery of nature, or what we can understand as engineering distinct social

possibilities. If we expand our notion of Luddism beyond machine breaking then we can interrogate a range of practices that predate the Luddites proper. But again, tracing this genealogy is outside the scope of this paper. Instead, I want to highlight what Hesselberth (2017) notes, that there is no off the grid without the grid. There is no resistance to technology without technology. Luddism then depends on a nonhuman other, distinctly social, which stands in place of humans. The fences of enclosure persisted in a way that had social implications. Breaking them was a form of resistance, not to technology for the sake of technology, but to specific technologies that constructed a specific social order. This is most clear in romanticized accounts of the Luddite's namesake machine breakers, but through the example of enclosure's fence-breakers, we begin to see how this can be generalized.

The first important characteristic of big L Luddism then is that the thing being resisted is expressly social and perceived as negatively impacting the livelihood of those effected. It is often a specific thing that is under violent scrutiny – fence-breakers, like those who broke threshing machines during the swing riots or spinning jennies and looms during Luddite actions, were not opposed to all technology, but rather specific things for specific reasons.

Subalternity

It is a truism to argue to say that humans (*homo faber*) have always been technological, and changes in technology and society are perennial (Ortega y Gasset, 1941). But we can also argue that resistance to these changes is also constant. For us to consider something an example of Luddism though, it must be a kind of disproportionate warfare – resistance to a technological hegemon, machine breaking that interrupts a process of perceived exploitation.

Smith (1917) outlines a manifesto for sabotage on behalf of the Industrial Workers of the World (IWW) during the early 20th century, in a pamphlet that would later be used as evidence against the IWW by the US government.

Sabotage is the destruction of profits to gain a definite, revolutionary, economic end. It has many forms... It may mean the displacement of parts of machinery or the disarrangement of a whole machine where that machine is the one upon which the other machines are dependent for material... Is the machine more than its makers? Sabotage says "No!" (Smith, 1917).

The usage of sabotage by labor movements like the IWW is now expressly disavowed, if not condemned. According to an article on the IWW website,

In 1993, some members of the IWW published a pamphlet titled *How to Fire Your Boss, a Workers' Guide to Direct Action*, whose author(s) – either ignorant or dismissive of the 1918 resolution on sabotage – carelessly and naïvely included a section titled "monkeywrenching" (utilizing the term commonly used by Earth First! for "sabotage" – or "ecotage" as they sometimes call it). The aforementioned pamphlet, while popular among radical activists, *has since been judged an irresponsible and ill thought out publication at best by most members of the IWW and should under no circumstances be considered official IWW literature or even something remotely endorsed by the IWW or any of its branches.* [sic] (X344543, 2011)

Here we see references to other modern incarnations associated with collective Luddism, including the destruction of machinery associated with environmental exploitation (Shevory, 1996). But why the emphasis on sabotage (as machine breaking) as being “irresponsible and ill thought out”? I argue that this is because machine breaking is the subaltern voice against a technological hegemony. This hegemony, or “everyday philosophy” of common-sense (Lears, 1985) is sensibility of the technified which Luddism expressly opposes. Big L Luddism is critical of technology, seeing it not as an intrinsic good but as something which embodies the politics of its owners and operators, a kind of material ideology. This position, while familiar to STS scholars, is uncomfortable for the majority of people who are satisfied with the status quo and might think of political things as a kind of animism.

To return to our historical examples, I point to the destruction of Russian railways during the Boxer rebellion. The destruction of railways again returns us to the question of structures vs machines. A railroad track is just as static as a fence. In 1900, following the first Sino-Japanese War, the Russian Empire invaded Manchuria. The Chinese Eastern Railway (CER), constructed by Imperial Russia, was a target of the Yihequan and Boxer Rebellion forces. If we can conveniently construct the Russian forces as western (the way the Yihequan saw them), their static structures made it possible for machines (train engines) to operate, moving troops and people across vast distances. Through the Boxer rebellion, engineers and railway stations were targeted by the Yihequan (Boxers), as well as telegraph lines and the railroad itself (Preston, 2000).

While we might initially imagine Yihequan attacks on the railroad coming from its strategic significance, these attacks had a historical precedent in the destruction of the Woosung railway in 1877 during the Taiping Rebellion. Pong (1973) describes the opposition to a short, narrow gauge railroad in terms of what he calls “Confucian patriotism”:

first, a strong reaction against foreign encroachment on Chinese territorial and administrative integrity; second: a strong distaste for the corrupting elements, both at the official and the popular levels, brought about by the introduction and the presence of the railway; third, a genuine concern for the well-being of the

poorer sections of the Chinese society; and lastly, a concern for the development and independence of Chinese economic interest. (p. 675)

While the Woodsung railway was dismantled by officials who expressed this kind of patriotism, the Yihequan sabotage of the Russian's CER over twenty years later could be seen in similar terms, as the Boxer ideology was anti-Western and anti-modernist (Esherick, 1988; Liu, 1989). But here, we can note a relationship between the Yihequan, fence breakers, and English luddites. All are peasant movements, action "from below," espousing and performing a kind of direct action against material things which the IWW abandoned during the 20th century. Take for example a verse from a Boxer propaganda poster:

Rip up the railroad tracks!
Pull down the telegraph lines!
Quickly! Hurry up! Smash them—
The boats and the steamship combines.

The mighty nation of France
Quivers in abject fear.
While from England, America, Russia
And from Germany nought do we hear. (Esherick, 1988, p. 300)

The destruction of railways by Yihequan are different than acts of wartime sabotage, such as the use of railway ploughs, "rail-rooters" or "*Schienuwolf*" during the world wars in Italy (Atkinson, 2013, p. 235) and in by the Nazis in Eastern Europe (Forczyk, 2016, p. 5-6). In the 20th century European context, infrastructure is destroyed as part of a scorched-earth or total warfare praxis, intended to slow the enemy's pursuit. Axis and Allied powers *used* technology towards their own ends. During the modernization (and westernization) of late 19th century China, railways came to represent the outside forces affecting change on a resistant society. Pong's (1973) observation that "western historians have found it difficult to accept Chinese objections to railway development at their face-value" speaks to the insensibility of objection to high technology. In the Chinese context, the railroad embodies a hegemonic, ideological force which threatens a way of living or being in the world.

This leads to our second observation about Luddism. Luddism is a response to perceived disproportionate opposition, either as "soft power" or as the material ideology of a technological hegemon. Luddism is only anti-modern in the sense that we perceive technology as "modernizing" after its adoption, once it becomes infrastructural, ubiquitous and common place (Peters, 2016).

The insensibility of Luddism rests on cultural perceptions of technology and machines as embodying an intrinsic good.

As a final note on Chinese railroad saboteurs, the Boxer rebellion has been mythologized (Cohen, 1992) in much the same way as the Luddites were. Interestingly, Wasserstrom (1987) compares the two movements, arguing that Luddism's "rich afterlife" is due to the fact that "the foe of technological determinism is still more likely to be dismissed as a fanatic than the critic of imperialism." Each however endure as "touchstones of a sort, historical events whose interpretation is always relevant for critics and defenders of cherished conceptions of "modernity" (p. 698).

Collectivity

What are other examples of traditional Luddism and what can we glean from them? Here I argue that Luddite groups historically represent a social or collective interest, and that the machine breaking is not in service of individual gains but communitarian goals. This is much in line with descriptions of the original Luddites, whose oath-based secrecy obscured the individual entirely in favor of communal action. These include both acts of "ecotage" and resistance based on interests of a small community.

A series of examples then could be categorized as historically Luddite. Argersinger & Argersinger (1984) describe the machine breaking of the rural Midwestern United States during the 1870s. Here again, technology threatened the economic livelihood of a lower class of people. Bringing in the machinery of the time, including reaping machines and self-rakers "reduced the necessity for skilled labor and consequently diminished the farmworker's social status." Because of changes in labor demands, "traditional relationships between farmers and farmworkers changed importantly, weakening the security, social status, and opportunities of the latter" (p. 396). It is important to note that farmworkers were not displaced entirely, however less non-harvest time work became necessary thanks to these machines. Out of work farmworkers became "tramps" and resentment set in. Farmers began to receive threats to do away with their machines or suffer consequences. And these consequences turned out to be real in some cases:

In Fayette County, for example, a wealthy farmer responded to a farmworker strike by announcing his intention to use his new self-binding reaper to "do the work that formerly took a dozen men to do." That night the reaper was destroyed by fire, an action attributed to resident "desperadoes" in the neighborhood. In the Miami Valley, many farmers had their reapers and mowers burned at night, and one farmer, who had been repeatedly warned not to use his self-binder, even had his machine destroyed in the midst of harvest

during the break for dinner. He ruefully confessed he had not expected anyone to strike "at midday." In Union County three reapers were destroyed as a warning and notices were posted on other machines promising their destruction if the owners attempted to use them rather than hire men to cut their grain. In Fairfield, Muskingum Coshocton, Knox, and other counties too, numerous reapers, mowers, and threshers were destroyed, usually by fire. (p. 403).

Harsh legislation emerged against tramps and the social underclass, and attacks continued until farmworkers eventually adapted or migrated elsewhere.

Nearly fifty years later, we see another example of machine breaking emerge during the California Water Wars of the early 20th century. Conflicts over the use of water throughout the Owens Valley of Eastern California led to violence between ranchers and the municipal Los Angeles water planners. Kahrl (2000) provides a review of the events that lead ranchers in the Owens Valley to sabotage the Los Angeles Aqueduct. On May 21, 1924, "a band of forty men planted three boxes of dynamite along the aqueduct and blew a hole in the city's concrete ditch" (p. 260). Later that year, the ranchers took control of the Alabama Gates (controlling the flow of water into the aqueduct). "In open rebellion, they shut the gates and sent the water spilling back into the river bed. For four days the ranchers held the gates, supported by the cheers of hundreds of valley residents" (p. 261). The ranchers had been in conflict with the city's water planners over the diversion of water from their crops. Kahrl notes that "the ranchers were not seeking to stop the project but only to assure that their access to the Owens River stream- flows would be protected. Unable to affect development of the aqueduct, however, the ranchers watched helplessly as Los Angeles gained virtually complete control over future settlement in the Owens Valley. (p. 255)."

This contestation over the use of water and land is seen in dam breaking. Two more examples here are of note. About thirty years after the California Water Wars, the city of Liverpool in the UK was also looking for municipal water sources and proposed the "Tryweryn scheme" - a plan to dam the Tryweryn river in north Wales. This would create a 800 acre reservoir, which would also flood the village of Capel Celyn and displace 48 people. As Atkins (2018) notes, resistance to the scheme was about more than the homes of those people. This conflict came to symbolize Welsh nationalism, "simultaneously representing the commitment of a generation of nationalists to protect the Welsh culture and language and the complexity of the relationship between Wales and the United Kingdom" (p. 458). As part of the resistance to the project, direct action was undertaken by a number of groups which attacked infrastructure and committed "acts of vandalism" against the construction site. An electricity transformer was destroyed at the

construction site on 22 September 1962. That same year, a workshop was damaged when the site was attacked again. On Sunday 10th February 1963, the primary transformer was seriously damaged in an explosion, further delaying work on the dam. Attacks on infrastructure across Wales were related to this festering resentment, illustrating the complexity of Anglo-Welsh relations. In 1983, the Free Wales Army (FWA) committed “dozens of bomb and arson attacks occurred across Wales, with popular targets including water pipelines and dams. In 1966, Clywedog dam was bombed, and this period also saw attacks of Pembrey air force base in Carmarthenshire and offices in Cardiff.” (p. 463). The legacy of Tryweryn and Capel Celyn would resonate in UK politics whenever the issue of appropriating land is discussed, particularly when the interests of a local community are “overruled by the interests of the Westminster government” (p. 464).

In each case, communal interests are served by these direct actions. Individual gains are not really at stake here, but the well-being of communities and their continued existence.

Traditional Luddism as Terrorism?

My brief genealogy of historical Luddism now reveals a serious conflict as it becomes reframed as terrorism. Were the original Luddites terrorists? Were the Boxers terrorists? Certainly the Welsh nationalist groups cited above were considered terrorist organizations by the United Kingdom and Westminster, as well as historians that compare them with the Irish Republican Army (Brooke, 2018), even if their targets were never people. Likewise, acts of “ecotage” I have not discussed here are often framed as versions of terrorism, even if the targets of such acts of violence are things and not people, they are often considered as acts of terrorism, particularly in a post-9/11 worldview (Vanderheiden, 2005). For example, see how Cassidy (2005) discusses al-Qaeda as “21st century Luddites since they reject technological change and globalization for similar reasons” as the original 19th century Luddites (p. 335). There are a number of objections we could make here, but the simplest is the collapsing of violence against things as equivalent to violence against people. With the exception of the Boxers, none of the groups mentioned in these examples directly attacked people as primary targets.

There is also a class component to historical Luddism as a collective movement. As a revolution from below, the English machine and fence breakers and the Chinese railroad saboteurs partook in direct action on behalf of poor or dispossessed peoples. Here we can ask if Luddism is restricted to “machine breaking.” Remember in the first two examples, what was broken was not a machine but structures which facilitated a technical social arrangement, between people, environment, labor and culture.

I revealed three characteristics of traditional Luddism that lead us to this point. First, not all technology is being resisted, rather there is a focus to what is being rejected. It is often specific things, perceived expressly social and perceived as negatively impacting the livelihood of those effected. Second, Luddism is a response to perceived oppression of subordinate groups by a technological hegemon. If our final characteristic of historical Luddism is that machine breaking serves collective goals rather than individual gains, we see how easy it is to construct Luddite action as acts of terrorism. Jones (2006) notes as well, in the context of “cyber-terrorism,” which can also be framed as civil disobedience (Himma, 2008). But in the context of a never ending global war on terrorism, hacktivism is considered an act of terrorism (Dominguez, 2008). Likewise, direct action by environmental activists is considered environmental terrorism (Wagner, 2008). In a contemporary context them, for acts of Luddism to meet with public or popular approval, they must avoid this terroristic frame. We will now explore how this happens.

Contemporary Luddism

We also have a common-sense understanding of Luddism which has changed over time (Clancy, 2017), where the people in question are resisting or refusing technology. Is machine breaking the only way to resist things from below? In contemporary contexts, in order to avoid the frame of terrorism, I argue that Luddite action involves characteristics that are directly opposed to those of traditional Luddism. First, it is not specific things, rather a generalized attitude towards “technology” which is employed in Luddite discourse. Second, Luddism as a mode of resistance is not employed by subaltern groups against a technological hegemon, rather it is employed by the privileged as a means of developing additional social capital. Lastly, it is an atomistic response that removes people from community and isolates them, rather than building on collective or communitarian interests.

Generalized Fears

Whereas the fence breakers looked to permanently disrupt the order of things, digital sabbath and detox calls for a momentary interruption, a reengagement or a reformation of relationships with things. It is also a reaction against a general sense of “technology” rather than anything specific. Take for example, the language used by digitaldetox.org, which organizes retreats and getaways for the heavy laden technophile. Their manifesto reads as follows.

...We believe that technologies should serve as tools to connect us to these tenants as we celebrate life, truly improving our unique existence, instead of distracting, disturbing or disrupting us. And we believe that these technologies should be created mindfully and ethically, for the benefit of and not at the cost of consumers and users. In fact, the

relationship that grows between the creator and consumer should be truly symbiotic and honest... We value smiles, DIY, nature and the great outdoors, long hugs, laughter, tears, good eye-contact and IRL (in real life) community experiences. Life is about about sharing moments with the people sitting around us on a bus ride to work, across from us at the dinner table, or walking by us on the street. It's about creating a new code of ethics and etiquette where people and nature come first, amongst everything else.

[\(http://digitaldetox.org/manifesto/\)](http://digitaldetox.org/manifesto/)

There is a vague premise that certain types of technology (mostly related to digital media and computers) are the issue here, and that we need to learn how to do without the constant connectivity and attention they demand. Camp Grounded (<http://campgrounded.org>) is more explicit about the focus on digital technology. In their FAQ, when people ask what kinds of technology they can bring into camp, the premise is that “technology” involves high tech digital devices, but exceptions exist:

No digital technology allowed. Cellphones, gameboys, computers, digital cameras, camcorders, watches, iPods, iPads, eBooks, Kindles, wearables, and other mobile devices are not allowed. For the safety and security of your devices (and to keep you accountable so you don't sneak off to check Facebook or climb a tree seeking cell service), we'll be checking all devices that you bring into our secure offices for the duration of the camp. CPAP machines, insulin pumps and other life supporting digital devices are 100% allowed. You'll have the opportunity to inform us after you've registered.

[\(https://campgrounded.org/faq/\)](https://campgrounded.org/faq/)

Digital Detox is now a term used by people for taking a temporary reprieve from certain forms of digital connectivity. It doesn't have to be done by going away to camp, but in the home as people take temporary breaks from the technology they see themselves as dependent on. The lack of specificity persists though. digitalsabbath.io asks people “Do you think you could go one day a week for three months without digital technology?” It describes itself as a movement, and invites users to go without their cell phones, computers, laptops, gaming devies, televisions, and tablets for one day a week for three months. Likewise, sabbathmanifesto.org calls for people to take a weekly timeout, extending beyond the original scope of the National Day of Unplugging (<http://nationaldayofunplugging.com>) (also described as a movement). Digital detox poses itself as a reaction to the “addictive” qualities of digital media, while at the same time maintaining the view

that we can never totally unplug completely. This kind of conspicuous non-participation, including the discourse of “addiction” is noted in the work of non-use scholars, including Woodstock (2014), Portwood-Stacer (2012), and Hesselberth, (2017).²

In the cases of the digital detox and sabbath, the sociality of the thing is front and center, but the “thing” is fuzzy and difficult to describe. Generally speaking, people take digital detoxes from their phones, but sometimes by using a secondary “dumb phone” (Sawyers, 2018). Sometimes, they may use apps or built-in-features to do this (Hawkins, 2018) (leading to our next set of observations). People may take breaks from their email, their computers, or from television. Generally speaking here, there is an ambivalence about what technology is exactly harmful, how much of it we cannot do without, and how we can go about resisting it. Contemporary Luddism is unconcerned with actually breaking machines in that it cannot find which machine to break. It also presumes that breaking the device is an over-reaction – instead we need to manage our relationship with things in order to ensure a “balance” – language which is repeated in establishments that deliberately do not offer wifi, and places which emphasize interpersonal interactions as part of their marketing strategies (kibbitznest.com).

Hegemony

The notion of subaltern Luddism has been supplanted by negotiating with hegemony. Absolute non-participation is not the goal here, instead technology resistance is about how to manage our techno-social relationships on a personal, individual level, so that we can stay engaged on our own terms. The way to this form of Luddism is a higher degree of media literacy and engagement in or with hegemony so that we have not a sense of false consciousness but a complicity with hegemony. This is how “subordinate groups may participate in maintaining a symbolic universe, even if it serves to legitimize their domination.” The involvement in hegemony allows those groups to “share a kind of half-complicity in their own victimization” (Lears 1985, p. 573). This is not to suggest that the users of technology are victimized, but they do continue to use and operate technology according to the logic of its creators and producers.

Apps then exist for helping to manage the use of devices. Apple users can now rely on the built-in “Screen Time” feature to help manage how much time one spends on a mobile device. Moment (inthemoment.io) is another application which helps users monitor and self-police cellphone usage.

2. I owe much of my perspective on this paper to these scholars and others studying media and technology abstention.

In so many ways, your phone makes your life better and easier. It connects you with people you love, helps you work on the go, and even order dinner. But more and more, your phone works against you. It pulls you away from your family, friends and even yourself. Simply put, your phone steals your time. Moment gives you back that time. Through short, daily exercises provided through Moment Coach, we help you use your phone in a healthy way so that you can be present for the parts of life that matter most.

Again we see the notion of a “balance” - something that people are increasingly trying to strike as they see technology (in vague, ambiguous terms) as a ubiquitous, irresistible force in the world. Consider how Snow (2012) coins the notion of “reform Luddism” -

“It’s not nearly as radical or knee-jerk as the original industrial Luddites from the 19th century, who I refer as the original gangsters of anti-technology. In fact, to be a reform Luddite, all you have to do is recognize the many benefits of personal technology, but do so with an untrusting eye. Then only accept the ones that are relevant to your life and manageable... Reform Luddites prefer a low-caloric digital diet and are picky about what they consume. They still appreciate the conveniences of the information age. But they favor analog, offline experiences more. They distinguish simulated from authentic life, and recognize the importance of both, while striving for the latter.”

Contemporary Luddism abandons its position of defending the subaltern in favor of working with hegemony, bowing to a technocratic ideology where people accept the ruling or dominant ideas. We see this in the way that technology is seen as inevitable - contemporary uses of the term “Luddite” play into assumptions like Rodgers (1983) work on diffusion of innovations. There are no “never users,” instead there are only laggards. As Rodgers notes, “it is a mistake to imply that laggards are somehow at fault for being relatively late to adopt; this is an illustration of individual-blame, where system-blame may more accurately describe much of the reality of the laggards' situation” (p. 250-251). Here the problem is not the non-user, but the technological or digital divide. Post-development literature also critiques this perspective of development and industrialization as always an intrinsic good or positive (Rahnema & Bawtree, 1997). The nearly unanimous support for “development” in popular discourse is very similar to the sense of support for “technology.” Development and technology are seen as part of the inevitable arc of human history.

This position accepts media as infrastructural in a way that the fences, railways and dams of past examples never were. While we can make Mumford-esque claims that a fence is a social technology, it is easier for us to see the media which facilitate and mediate our human interactions more clearly as having a social role. These media have become ubiquitous and we are expected to participate with them to be sensible members of society. In this way they are infrastructural as Peters (2015) describes. They recede into the background so that they seem unremarkable, even while modernity is the “proliferation of infrastructures” (p. 40). We cannot refuse them any more than we can refuse a road. While the traditional Luddite had no qualms about trying to destroy technological infrastructure, here hegemony has taken over, so that these systems are part of Gramscian hegemony: every-day common sense which leaves “some room for antagonistic cultural expressions to develop.” (Adamson, 1983, p. 174). Luddism is now in the position of expressing these ineffectual “antagonistic cultural expressions” of anti-technology sentiment. This is why people’s descriptions of their resistance through time management or screen limiting are qualified by statements such as “I’m not a luddite, but” or having to negotiate the relationship with (neo)Luddism, which is seen as too extreme.

This view is perhaps best expressed by Feenberg (1992), who declares this technological hegemony is natural and pervasive to the point that it is materialized in the design of these systems. “Technological rationality is not merely a belief, an ideology, but is effectively incorporated into the structure of machines. Machine design mirrors back the social factors operative in the prevailing rationality.” (p. 310). While Feenberg argues for a “subversive rationalization” which can lead to socio-technical change, the point here is that there is no escaping the hegemony of technology, and traditional Luddism would be insensible to most modern actors since they operate outside the ideology of technology. Precisely defining technological hegemony or machine ideology is the subject of a much longer work than what can be accomplished here. It is enough to say that people’s expressions of resistance are not direct or violent, instead they operate in the sort of half-complicity described by Lears and other cultural theorists.

Individualism

What escape is there then from technological hegemony or these pervasive concerns over media and society? Moves off the grid are the most extreme. A grid can be understood as a metaphor for what ties together our western, educated, industrialized, rich and democratic (WEIRD) society. The grid is not one discrete thing. It includes electrical lines, roads, sewage and sanitation, the mail system, institutions like schools, banks and social security offices, and more recently, invisible waves of coverage that ensures we have constant connectivity to one another through mobile media. Cellphone towers and WiFi signals help us to stay connected, they keep us

online and connected to the grid. When we talk about getting “off-the-grid” we mean one of two things – escaping the confines of those infrastructures and resisting modernity. Both of these are monumental undertakings because it means getting outside of something that encompasses most of our experience. It requires special knowledge, the willingness to sacrifice the security that the grid provides, and most importantly, the sensibility it produces.

Sensibility is the understandings we have about what is good or appropriate in our society. Like hegemony, it calls into question propriety – the acceptability of certain actions. As such, sensibilities strongly delineate deviant behaviors from acceptable behaviors. In a technical society, there are certain expectations for people to participate in a way that is sensible. We do not walk in the street – we are strongly socialized to treat roads as the domain of the automobile. We see and are seen within the confines of those arrangements, so that a driver senses other cars on the road, but the sight of someone hiking on the side of the highway is outlandish. Likewise, someone without social media cannot be sensed through the typical expectations of a society where social media penetration is very high. Someone without a cellphone, who can only be reached via landline, is quite insensible when we expect others to have a personal number. The Luddite, who rejects or resists the hegemony of technology, is quite insensible. Consequentially, resistance or rejection is atomized, individualized, and occurs in the language and logic of the libertarian individual trying to assert themselves in opposition to a domineering world.

Boyle’s (2019) account shows the author began a project of living without certain forms of industrial technology and acknowledges the difficulties of such an endeavor. Having previously tried living without money, the stakes are much different when it comes to technology:

Unlike money, it’s not easy to draw a clear line in the sand in relation to what constitutes technology and what doesn’t. Language, fire, a smartphone, an axe – even the pencil I write these words with – could all be described as technology, though I shy away from using such a rough brush to paint life. Where I would draw the line – the Stone Age? The Iron Age? The eighteenth century? – became an impossible question when the words themselves could be considered technology... At the heart of how I live is the burning desire to discover what it might feel like to become a part of one’s landscape, using only tools and technologies (if I must call them that) which, like the Old Order Amish people of North America, do not make me beholden to institutions and forces that have no regard for the principles and values on which I wish to live my life. (p. xvii-xviii)

Here we have the same generalized fears about technology, combined with a critique of hegemony (“institutions and forces”) at odds with the author’s values. This is a common theme in movements off-the-grid – an attempt to disentangle oneself from what essentially constitutes society itself.

Vannini and Taggart (2014) discuss the “hermit” myth of off-gridders, people who make an effort to disconnect from electrical and infrastructural grids. As they note, “being off-grid did not preclude someone from being online or having a phone, radio, or television” - these are not hermits, but people who are living independently yet connected to others (p. 190). The “off-gridder” constitutes a particular kind of non-user, one who avoids “centrally generated and distantly managed electricity and natural gas” (p. 195). In their ethnographic study, many of those they met had internet and some had televisions, but “in a society dominated by the logic of light, speed, power, instantaneous information, and the virtual mobility afforded by connectivity” being “unplugged” in a way that avoids the use of phones is “revolutionary” in the author’s terms (p. 196). Drawing the line at where we disentangle ourselves with technology is difficult when those technologies constitute what it is to be modern, and therefore sensible or rational to other people. As it is, the move off-the-grid is performed by individuals, not communities.

Additional accounts by Rosen (2010) and Brende (2004) also describe the difficulties of going off the grid, and how those making these moves are compelled by self-sufficiency. The importance of community is especially important in Brende’s experience, who notes these communities can be “fragile,” depending on “the right blend of many ingredients, including personal outlooks. It presumes a certain level of psychological stability. If any ingredient is missing the whole thing can quickly cave in” (p. 221). Moves off-the-grid are facilitated by existing communities like homesteaders and “earthship” groups. At best, one can find a collective to join when they make the move off the grid. But largely, the decision to resist or reject infrastructural and technological hegemony is a solitary one.

Conclusion: Post-Luddism and Insecurity

To conclude, traditional Luddism has three qualities, a focus on specific technologies, the representation of subaltern groups, and collective interests over individual gains. Contemporary discourse of Luddism focus on how the individual reconciles generalized fear over technology’s impact in one’s life, while being complicit with technological hegemony.

Are there any contemporary examples of traditional Luddism in 2019? The definition of Luddism has shifted so dramatically that the thematic qualities I identified previously no longer hold. When we ask what Luddism means for the present, we can consider a Pew study in which 58% of participants agreed that

Some Luddites/refuseniks will commit terror acts... there will be people who will remain unconnected to the network because of their economic circumstances and others who think a class of technology refuseniks will emerge by 2020. They will form their own cultural group that lives apart from “modern” society and some will commit acts of violence in protest to technology. But many respondents argue that violence arising from conflicts over religion, economics, and politics, will be more prevalent. (Anderson & Rainie, 2006)

Certainly, this might refer to ISIS and other groups, though we would then have to equate globalization, imperialism and Western hegemony with “technology.” But respondent’s answers mark the incredulous nature of this prediction while acknowledging a type of technological logic that speaks to the notion of “sensibility” -

Tech Luddites are like the survivalists of our current times. They have withdrawn and therefore don't matter in the grand scheme of things. Al-Qaeda are definitely NOT Luddites!...There will be incidents, but I don't think they'll be widespread or particularly effective. After all, the nouveau-Luddites won't have the benefit of technology for planning and organizing, will they?...[With] technology, the "Luddites" won't be able to congeal enough to cause significant impact.

(<http://www.elon.edu/e-web/predictions/expertsurveys/2006survey/ludditesoffthegrid.xhtml>)

An anonymous respondent provides an even more helpful perspective:

This is an utterly unhistorical understanding of the Luddite movement, which was about ownership textile frames, rather than about rejection of technology per se. I do expect there to be continued struggle over the ownership of technology and that some of that may result in refusal to use technology that cannot be owned or controlled by those who are impacted by it. If that technology is being used to exploit individuals (certainly true for textile frames in the era of the Luddites), then some violent reaction is likely. (<http://www.elon.edu/e-web/predictions/expertsurveys/2006survey/ludditesoffthegridanon.xhtml>)

Here we come to the real connection between traditional Luddism and the contemporary misnomers. Luddism (in both contemporary and traditional forms) is about reactions to control and power. When these are in conflict over technologies as infrastructure, traditionally violent machine breaking was the result. In contemporary times, Luddism has come to mean the lifestyle politics of people with generalized anxieties about technologies. But Granovsky-Larsen (2018) notes an interesting example of “liberating rivers.” Farmers in Guatemala have recently destroyed dams, wells and irrigation motors along the Ixpátz River. The use of industrial sabotage has reclaimed the communal source of drinking, cleaning and subsistence crop irrigation, which was formerly rerouted to large sugarcane and palm plantations through unauthorized constructions. Destroying these targets makes the case for how traditional Luddism might re-emerge in an otherwise “Post-Luddite” world. Food and resource insecurity in the Anthropocene can lead to acts of machine breaking, by subaltern groups for collective interests, in ways that run closer to the spirit of traditional Luddism than the lifestyle politics demonstrated in contemporary examples.

There are several limitations to this work. A clear definition of technological hegemony or the ideology of machines is not present. I have also not considered perspectives of ecotage and monkeyweneching, which Kirkpatrick Sale’s precisely identifies as in the spirit of Luddism (Kupfer, 2001). This is because I believe that such direct acts do not serve a collective interest outside the aims of environmental activists, who represent others but whose politics run beyond the scope of this paper. An ecological component would be the subject of a much longer work.

References

- Adamson, W. L. (1983). *Hegemony and revolution: A study of Antonio Gramsci's political and cultural theory*. Univ of California Press.
- Anderson, J. Q., & Rainie, H. (2006). *The future of the Internet II*. Washington, DC: Pew Internet & American Life Project. Retrieved from <https://www.pewinternet.org/2006/09/24/the-future-of-the-internet-ii/>
- Argersinger, P., & Jo Ann E. Argersinger. (1984). The Machine Breakers: Farmworkers and Social Change in the Rural Midwest of the 1870s. *Agricultural History*, 58(3), 393-410. Retrieved from <http://www.jstor.org.proxy.cc.uic.edu/stable/3743087>
- Atkins, E. (2018). Building a dam, constructing a nation: The 'drowning' of Capel Celyn. *Journal of Historical Sociology*, 31(4), 455-468.
- Atkinson, R. (2013). *The Day Of Battle: The War in Sicily and Italy 1943-44*. Hachette UK.
- Billington, D. P. (1974). STRUCTURES AND MACHINES: The Two Sides of Technology. *Soundings an Interdisciplinary Journal*, 275-288.
- Brende, E. (2004). *Better off: Flipping the switch on technology* (p. 623). New York: HarperCollins.
- Brooke, N. (2018). The 'Tartan Army'? Nationalist Terrorism in Scotland. In *Terrorism and Nationalism in the United Kingdom* (pp. 17-44). Palgrave Macmillan, Cham.
- Boyle (2019). *The Way Home*. Oneworld Publications.
- Esherick, J. W. (1988). *The origins of the Boxer Uprising*. Univ of California Press.
- Forczyk, R. (2016). *The Dnepr 1943: Hitler's eastern rampart crumbles*. Bloomsbury Publishing.
- Cassidy, R. M. (2005). Feeding Bread to the Luddites: The Radical Fundamentalist Islamic Revolution in Guerrilla Warfare. *Small Wars & Insurgencies*, 16(3), 334-359.
- Cardwell, D. S. L. (2001). *Wheels, clocks, and rockets: A history of technology*. WW Norton & Company.
- Clancy, B. (2017). Rebel or rioter? luddites then and now. *Society*, 54(5), 392-398. doi:10.1007/s12115-017-0161-6
- Cohen, P. (1992). The Contested Past: The Boxers as History and Myth. *The Journal of Asian Studies*, 51(1), 82-113. doi:10.2307/2058348
- Cueto, M., Cukierman, H., Fressoli, M., Dias, R., Thomas, H., Bustos, T. P., ... & Alonso, P. (2014). *Beyond imported magic: essays on science, technology, and society in Latin America*. MIT Press.

Dominguez, R. (2008). Electronic Civil Disobedience Post-9/11: Forget Cyber-Terrorism and Swarm the Future Now!. *Third Text*, 22(5), 661-670.

Feenberg, A. (1992). Subversive rationalization: Technology, power, and democracy. *Inquiry*, 35(3-4), 301-322.

Granovsky-Larsen, S. (2018, September 5). Farmers in Guatemala are destroying dams to fight 'dirty' renewable energy". *The Conversation*. Retrieved from <https://theconversation.com/farmers-in-guatemala-are-destroying-dams-to-fight-dirty-renewable-energy-100789>

Gunkel, David J. "The Other Question: Can and Should Robots Have Rights?." *Ethics and Information Technology* 20, no. 2 (June 5, 2018): 87-99. doi:10.1007/s10676-017-9442-4.

Hawkins, Andrew J. (2018, November 29). How to detox from your smartphone with these apps and gadgets. *The Verge*. Retrieved from <https://www.theverge.com/2018/11/29/18116952/how-to-stop-looking-at-your-smartphone-apps-detox-grayscale>

Hessayon, A. (2007). Incendiary texts: book burning in England, c. 1640-c. 1660. *Cromohs-Cyber Review of Modern Historiography*, 12, 1-25.

Hesselberth, Pepita. "Discourses on Disconnectivity and the Right to Disconnect." *New Media & Society* 20, no. 5 (June 27, 2017): 1994-2010. doi:10.1177/1461444817711449.

Himma, K. E. (2008). Ethical Issues Involving Computer Security: Hacking, Hacktivism, and Counterhacking. Himma, K. E., & Tavani, H. T. (Eds.) *The Handbook of Information and Computer Ethics*. John Wiley & Sons.

Hobsbawm, E. (1952). *The Machine Breakers. Past and Present*, (1), 57-70.

Hobsbawm, E., & Rudé, G. (2001). *Captain Swing*. London: Phoenix Press.

Horn, J. (2015) Machine-Breaking and the 'Threat from Below' in Great Britain and France during the Early Industrial Revolution. In Davis, M. T. (Ed). *Crowd Actions in Britain and France from the Middle Ages to the Modern World*. Palgrave MacMillan.

Ihde, Don. "What Is Postphenomenology?." In *Postphenomenology and Technoscience*, 2009.

Jones, Steven E. *Against Technology*, New York: Routledge, 2006.

Kahrl, W. L. (2000). Part II: The Politics of California Water: Owens Valley and the Los Angeles Aqueduct, 1900-1927. *Hastings Environmental Law Journal*, 6(2), 255.

Kupfer, D. (2001). Luddism in the new millennium: An interview with Kirkpatrick Sale. *Earth First!*, 21 (3).

Latour, Bruno. "What Are the Missing Masses? the Sociology of a Few Mundane Artifacts." In *Shaping Technology Building Society*, edited by Wiebe E Bijker, 225-57, Cambridge, MA, 1992.

Lears, T. J. (1985). The concept of cultural hegemony: Problems and possibilities. *The American Historical Review*, 567-593.

Linebaugh, P. (2014). *Stop, Thief! The Commons, Enclosures, and Resistance*. Oakland: PM Press.

Liu, K. (1989). Imperialism and the Chinese Peasants: The Background of the Boxer Uprising. *Modern China*, 15(1), 102-116. Retrieved from <http://www.jstor.org/stable/189133>

McDonagh, B. (2013). Making and Breaking Property: Negotiating Enclosure and Common Rights in Sixteenth-Century England. *History Workshop Journal*, 76(1), 32-56. <http://doi.org/10.1093/hwj/dbs054>

Neeson, J. M. (1993). *Commoners: common right, enclosure and social change in England, 1700-1820*. Cambridge University Press.

Noble, D. F. (1995). Progress without people: New technology, unemployment, and the message of resistance. *Between the Lines*.

Ortega y Gasset, J. (1941). "Man the technician." In *Towards a Philosophy of History*.

Peters, J. D. (2015). Infrastructuralism: Media as Traffic between Nature and Culture. In *Traffic: Media as Infrastructures and Cultural Practices*, 29-49.

Portwood-Stacer, L. (2013). Media refusal and conspicuous non-consumption: The performative and political dimensions of Facebook abstention. *New Media & Society*, 15(7), 1041-1057. <https://doi.org/10.1177/1461444812465139>

Preston, D. (2000). *The Boxer Rebellion: The Dramatic story of China's war on foreigners that shook the world in the summer of 1900*. Bloomsbury Publishing USA.

Portwood-Stacer, L. (2012). Media refusal and conspicuous non-consumption: The performative and political dimensions of Facebook abstention. *New Media & Society*, 15(7), 1461444812465139-1057. <http://doi.org/10.1177/1461444812465139>

Pong, D. (1973). Confucian Patriotism and the Destruction of the Woosung Railway, 1877. *Modern Asian Studies*, 7(4), 647-676. Retrieved from <http://www.jstor.org.proxy.cc.uic.edu/stable/311679>

Rahnema, M., & Bawtree, V. (1997). *The post-development reader*. Zed Books.

Rogers, E. M. (1983). *Diffusion of Innovations* (3rd ed.). New York: Simon and Schuster.

Rosen, N. (2010). *Off the Grid: Inside the Movement for More Space, Less Government, and True Independence in Modern America*. Penguin. Chicago

- Sale, K. (1996). *Rebels against the future: the Luddites and their war on the Industrial Revolution: lessons for the computer age*. Basic Books.
- Sawyers, P. (2018, October 19). "Digital detox: The rise of the stripped-down secondary phone" *Venture Beat*. Retrieved from <https://venturebeat.com/2018/10/19/digital-detox-the-rise-of-the-stripped-down-secondary-phone/>
- Schatzberg, Eric. *Technology: Critical History of a Concept*, Chicago: University of Chicago Press, 2018.
- Shevory, T. C. (1996). Monkeywrenching: Practice in search of a theory. *Environmental crime and criminality: Theoretical and practical issues*, 15, 183.
- Smith, A. J. (1999). *Privatized infrastructure: the role of government*. Thomas Telford.
- Smith, W. C. (1913). *Sabotage, Its History, Philosophy & Function*. Black Swan Press. Retrieved from <https://www.iww.org/history/library/WCSmith/sabotage>
- Snow, B. (2012, December 23). *The Anti-Technologist: Become a Luddite and Ditch Your Smartphone*. KSL.com. Retrieved <https://www.ksl.com/article/23241639>
- Taylor, C. (1975). *Fields in the English Landscape*. London: JM Dent.
- Marx, K. (1977). *Capital: A critique of political economy* (B. Fowkes, Trans.). New York: Vintage Books.
- Vanderheiden, S. (2005). Eco-terrorism or justified resistance? *Radical environmentalism and the "war on terror"*. *Politics & society*, 33(3), 425-447.
- Vannini, P., & Taggart, J. (2014). *Off the grid: re-assembling domestic life*. Routledge.
- Verbeek, Peter-Paul. *What Things Do: Philosophical Reflections on Technology, Agency and Design*, University Park, PA: Pennsylvania State University Press, 2005.
- Wagner, T. (2008). Reframing ecotage as ecoterrorism: News and the discourse of fear. *Environmental Communication*, 2(1), 25-39.
- Wasserstrom, J. (1987). "Civilization" and its discontents. *Theory and Society*, 16, 675-707.
- Williams, D. (1955). *The Rebecca Riots: a study in agrarian discontent*. University of Wales Press.
- Winner, Langdon. "Do Artifacts Have Politics?." *Daedalus* 109, no. 1 (1980): 121-36. doi:10.2307/20024652.
- Winner, Langdon. "Technologies as Forms of Life." Edited by David Kaplan. *Readings in the Philosophy of Technology*, Rowman & Littlefield Publishers, 2009.
- Woodstock, L. (2014). Media Resistance: Opportunities for Practice Theory and New Media Research. *International Journal of Communication*, 8, 1983-2001.