



Targeting Vulnerability with Electronic Location Monitoring: Paternalistic Surveillance and the Distortion of Risk as a Mode of Carceral Expansion

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Abstract

Surveillance practices, both state and non-state in origin, are deployed increasingly to solve social problems beyond the traditional domains of criminal justice and national security, including public health concerns. Although such “protective” forms of surveillance are proffered by the state as beneficial for those under surveillance, they nonetheless retain coercive dimensions in practice and require the labeling of a group as “risky” in order to justify their use. Following Shelley Bielefeld’s (2018) observations about protective state surveillance as a form of paternalism, and Jennifer Musto’s (2016) notion of “carceral protectionism,” this article uses a case study of the electronic monitoring of people with cognitive impairments to identify the carceral features of paternalistic surveillance and to explore how this practice is justified. I make the argument that, specifically through targeted vulnerability and distortions of risk, paternalistic surveillance practices can operate as a mode of carceral expansion.

Introduction

Research examining surveillance technology in the context of criminal justice identifies how these practices can be invasive, have a disproportionate impact on marginalized groups, and supplant individual autonomy with embodied conceptions of risk (Henne and Troshynski 2013; Turnbull and Hannah-Moffat 2009). While criminal justice surveillance is ubiquitous, state surveillance practices now reach well beyond the realm of justice and security to include “protective” forms of surveillance—that is, the surveillance of vulnerable populations, such as people who are poor or sick, purportedly for their own benefit. While there is some distinction between security-based and protective surveillance, recent scholarship has identified a “blurring” of the twenty-first-century state surveillance practices, highlighting the carceral features of protective surveillance practices and how they thus represent an expansion of the carceral state (e.g., Musto 2016).

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This article seeks to isolate a particular state surveillance practice that operates at the nexus of security-based and protective surveillance practice: electronic monitoring (EM) technology used by police to track people with cognitive impairments (e.g., dementia). EM is offered as a case study of the narratives that frame surveillance practices that conjoin protection with state control. I make the argument that the electronic monitoring of people with cognitive impairments constitutes an example of what Jennifer Musto (2016) refers to as “carceral protectionism” and I identify how, through the use of targeted vulnerability and risk distortion, this practice operates as a mode of carceral expansion.

Security-Based Surveillance and Risk Logics

The use of surveillance for control is a hallmark feature of the criminal justice system, dating back to the eighteenth century and to Jeremy Bentham’s (1995) panopticon prison design (see also Deleuze 1992; Foucault 1980). Technological innovation over the last few decades, though, has brought with it increasingly sophisticated and invasive security-based surveillance practices. To illustrate, consider the growth in the popularity of predictive policing tactics, such as “hot spots” policing, which makes use of real-time crime statistics to target police surveillance toward neighborhoods where crime levels appear high.¹

The expanding use of security-based surveillance technologies is driven largely by the state’s widespread adoption of a risk-management approach to crime control. This approach, employed initially in the insurance industry and now a marked feature of penal policy (Feeley and Simon 1992), makes use of statistical calculations based on aggregate population data to determine the probability of security-based risks (e.g., the probability that a person will engage in criminal activity) in order to deploy state resources strategically. In what Feeley and Simon (1992) call “the new penology,” risk logics are now used to target “high-risk” groups with extensive carceral surveillance.

Security-based surveillance predicated on risk may appear objective and neutral, but such practices are implicated in the reproduction and expansion of structural inequality. These practices disproportionately target marginalized communities—communities that already experience high levels of state oppression and violence (Brayne 2017; Owusu-Bempah 2017). To illustrate, consider again the predictive policing tactics commonly used by North American police (e.g., “hot spots” policing, targeted street checks). Black people in the United States (US) and Black and Indigenous peoples in Canada are disproportionately targeted, physically harmed, and criminalized by predictive policing practices (Brayne 2017; Ferguson 2017). Thus, while security-based surveillance tactics, like predictive policing, are proffered by authorities as objective and appropriate responses to crime, such practices constitute real and serious harm for the targets who are often members of marginalized groups that have long-standing histories of experiencing police misconduct and brutality. As Guthrie-Ferguson (2017: 132) notes, the data used in predictive policing tactics “reflect policing patterns, not necessarily the underlying crime patterns” and so predictive policing is implicated in the reification of patterns of systemic police racism and violence.

¹ Predictive policing tactics tend to inflate crime statistics in the neighborhoods being targeted, creating somewhat of a self-fulfilling prophecy. As Andrew Guthrie Ferguson describes in *The Rise of Big Data Policing* (2017: 74): “Predict a hot spot. Send police to arrest people at the hot spot. Input the data memorializing that the area is hot. Use that data for your next prediction. Repeat.”

In addition to the harmful outcomes for marginalized communities, security-based surveillance predicated on risk logics also contributes to “net widening” (Cohen 1985; see also Brayne 2017; Haggerty and Ericson 2000)—a term used to describe the increasing pool of individuals and groups entering the criminal justice system. In a study of data-driven police surveillance in Los Angeles, California, Brayne (2017) notes that predictive policing practices not only deepen the surveillance of already over-policed populations, but also widen the dragnet of those who are surveilled. Importantly, though, while security-based surveillance both amplifies the oppression of marginalized communities and widens the net of who is captured by the criminal justice system, the presumption of objectivity imbued in risk logics allows the state to escape any culpability of wrongdoing—a process of obfuscation that simultaneously extends and hides the power of the state (Bennett et al. 2018).

Electronic Monitoring as a Penal Surveillance Practice

Another security-based state surveillance practice that has emerged from technological advancement and that operates through risk logics is the use of EM (Nellis 2014). Typically employed as an alternative to custody, EM is reserved for those who are considered “low risk” of (re)offending and usually takes the form of a location tracking device worn around the ankle and monitored remotely to ensure compliance with location-based sanctions (e.g., “house arrest”). Proponents of EM frame the practice as a cost-effective and less invasive alternative to incarceration (see Nellis 1991) and emphasize the potential for individuals monitored by the technology to retain a level of support and employment that is not possible with formal incarceration (see Laurie and Maglione 2019).

While EM is generally preferred over prison time by most individuals subjected to it (Nellis 2009), it does not come without adverse effects for the wearer. Negative public connotations of the technology, along with difficulties in concealing the monitoring device, can lead to feelings of embarrassment for the wearer which can, in turn, reduce that person’s willingness to attend public spaces—a notable finding considering that such withdrawal can have a negative impact on support and employment opportunities (Nellis 2009). Similarly, Shklovski and colleagues (2015) highlight everyday consequences of EM for people on parole, including stigmatization, a reduction in employment opportunities, and the propensity for technical failures (e.g., inaccurate location reporting) to induce unintended or unjustified parole violations.

Despite popular discourse framing it as a positive alternative to custody, EM is a considerably invasive penal surveillance practice. It requires the wearer to remain in contact with field monitoring officers who not only install the technology but visit the homes of monitored individuals regularly (often without prior notice) to ensure they are complying with their conditions. In this, EM transforms the home—typically, though not always, a place of comfort and solitude—into a “penal space, an area in which movement can be monitored and constrained by *unseen* state (or state-mandated) personnel” (Nellis 1991: 179 (emphasis in original)). Importantly, while EM does not necessarily result in a total loss of privacy, as the device makes transparent a person’s particular location and not what that person is doing while there, the experience of EM—including the speed with which one can be tracked—imposes a feeling of being watched directly and at all times (Nellis 2009; see also Henne and Troshynski 2013). In discussing Richardson’s (2002) personal account of the EM experience, Nellis (2009: 52) notes that “a loss of locational privacy can segue into something more comprehensively unsettling,” with individuals “eventually

articulating [their] experience of EM in terms of vivid ocular metaphors and the presumed exercise of ‘panoptic power.’”

As mentioned above, EM, as a form of state-sanctioned penal surveillance, carries a number of adverse effects for the wearer. In addition, although EM is similar to other twenty-first-century security-based surveillance (e.g., predictive policing) in that it entails increasingly sophisticated technology and is predicated on risk logics, scholars make note of the ways EM constitutes a unique practice with further discursive implications for the wearer. In a study of individuals convicted of sex offenses who were subjected to parole, Henne and Troshynski (2013) found that, not only did individuals on parole experience negative *effects* from electronic location monitoring, but that EM also *affected* their perception of self; the surveillance technology became a constitutive part of the people wearing the devices, who came to perceive themselves as inherently “risky subjects.” EM can thus be understood as a co-constitutive surveillance process in that wearers experience “regulation [that] feels constant and pressing, a tension that becomes part of who they are” (Henne and Troshynski 2013: 108). This observation aligns with Nellis’ (2009) conceptualization of EM as a *socio-technical* practice because its impact is heavily reliant on human agency—both from the individual being monitored, who is expected to exercise a high degree of self-control, and by the monitoring officers, who make decisions regarding how to respond to the location data being generated (see also Paterson 2007). As Nellis (2009: 57, 60) explains, EM “has regulatory effects above and beyond mere confinement, and is not sensed, subjectively, to be confinement alone” and that “as a form of offender supervision [EM] creates a new modality of penal experience, different in kind from all previous forms.” Similarly, Henne and Troshynski (2013) conclude that, through embodied conceptions of risk and a reduced capacity to question techniques of state control, EM can act as a form of discipline that undermines democratic modes of governance (Henne and Troshynski 2013).

Protective Surveillance and Targeted Vulnerability

While logics of risk and, relatedly, security-based surveillance are proliferating throughout the criminal justice system, creating new and complex arrangements of punishment and control, surveillance technologies are also deployed increasingly to address myriad social problems beyond the scope of justice and security. While Feeley and Simon (1992) have described penal surveillance practices premised on risk logics as “the new penology,” scholars have also explored the expansion of these practices—still premised on risk—into multiple facets of social life as contributing to a “surveillance society” (see, e.g., Marx 2016). Indeed, the ideology backing state surveillance has shifted from a view that the technology is an effective response to crime to the view that it is a logical response to social concerns in general—concerns that, while not necessarily realistic, are propagated as serious threats to the public (Bennett et al. 2018).² These “protective surveillance” practices

² There is extensive literature describing the rise of the “risk society” as it relates to the ways in which constructions of threat can be mobilized to justify surveillance and other practices of control (see, e.g., Ericson and Haggerty 1997). Notably, Ericson and Doyle (2004a: 138) describe how “scientific data on risk are variously absent, inadequate, controversial, contradictory, and ignored” though “insurers impose meaning on uncertainty through non-scientific forms of knowledge that are intuitive, emotional, aesthetic, moral, and speculative.”

are proffered as benefiting those being surveilled, and they are deployed increasingly in various public sectors, such as education, public health, and social assistance or welfare.

Public Health Surveillance

Surveillance scholars have begun to track the rise of surveillance in public health (see McClelland et al. 2020; Puumeister 2014).³ For instance, public health authorities now routinely collect molecular data from individuals with the human immunodeficiency virus (HIV) in order to identify others “at risk” of contracting the virus and in order to target them with treatment interventions (see McClelland et al. 2020). The end-goal of this molecular-level HIV surveillance is to stop the transmission of HIV among high-risk groups and, eventually, to eradicate the spread of HIV in society altogether, thus providing both individual- and societal-level HIV protection.

Although protective surveillance is proffered by the state as beneficial for those experiencing it, in practice, it retains coercive dimensions. Molecular HIV surveillance, for instance, raises serious ethical concerns, as data from routine blood tests are mobilized by public health authorities without the patient’s knowledge or consent (McClelland et al. 2020). This practice also targets marginalized, “hard to access” groups (e.g., intravenous drug users, sex workers) who are designated by authorities as particularly vulnerable to the risk of contracting HIV. In other words, while the practice is justified as being for their *protection*, it can contribute to their *criminalization* because these molecular data—though scientifically unable to prove HIV transmission directionality—are used as “circumstantial evidence” in HIV transmission cases (McClelland et al. 2020). McClelland and colleagues (2020: 3) note this is particularly concerning considering that “molecular HIV surveillance disproportionately targets marginalized people who already experience over-policing and criminalization.”

More broadly, Puumeister (2014) highlights how health care providers’ routine monitoring of people with brain disorders, while undertaken for the purported intention of maintaining the individual’s well-being, constitutes a particularly invasive form of surveillance that can lead to altered self-subjectivities. Here, the example of attention-deficit/hyperactivity disorder (ADHD) is used to illustrate how societal norms imposed on people diagnosed with ADHD, and the medications prescribed to modify their behavior in accordance with such norms “put the individuals in a constant risk of deviancy and in a position of self-surveillance with regard to their conduct and action, their self-production” (Puumeister 2014: 315). Similar to Henne and Troshynski’s (2013) findings regarding the embodiment of risk among wearers of EM, Puumeister (2014: 315) concludes that ADHD medical intervention, and the protective surveillance that accompanies it (i.e., monitored treatment compliance and expectations of self-regulation), ultimately “alters the relationship the individual has with [himself/herself/themself].”

Protective surveillance, like the examples of public health surveillance described above, can be harmful to those it targets. Notably, the elements of control that accompany protective surveillance put this practice in direct contrast with advocates’ claims that facilitating autonomy for marginalized or “at risk” individuals is the most appropriate response to

³ This article was largely written prior to the onset of the COVID-19 global pandemic; there have been a plethora of public health surveillance practices emerging from the pandemic and, without a doubt, there will be corresponding research investigating these practices as well.

any threat they may face (e.g., Alzheimer’s Association 2018). Indeed, feminist scholars suggest that state-facilitated autonomy is of utmost importance when caring for someone deemed vulnerable (Dodds 2014; Mackenzie 2014; Mullin 2014). By contrast, protective surveillance practices work to remove individual choice from those it targets (Bielefeld 2018). To illustrate, molecular data have been collected during routine health appointments and repurposed for broad public health interventions without the permission of the patients from whom they are collected, and the individuals targeted for health interventions as a result must accept the intervention or potentially face criminalization (McClelland et al. 2020).⁴ This example shows how protective health surveillance not only removes individual autonomy—in this case, it frustrates the individual’s ability to make decisions about his/her/their HIV treatment—but also works to compound vulnerabilities, as is the case when, for example, the intravenous drug user targeted with molecular HIV surveillance faces potential criminalization (whether for alleged transmission nondisclosure or for treatment noncompliance). As Mackenzie (2014: 33) explains, “many forms of vulnerability are caused or exacerbated by social and political structures” and thus “duties of protection to mitigate vulnerability must be informed by the overall background aim of fostering autonomy whenever possible.”

In the above examples of public health surveillance, the state designation of the individual as “vulnerable” to particular threats is a key feature in rationalizing targeted protective surveillance practices. Without such designation, it would be difficult for the state to justify using invasive surveillance practices on people who otherwise constitute no real threat to society. In this way, vulnerability becomes “a concept capable of being strategically deployed to enact measures that undermine autonomy, rights, and respect for those defined as ‘vulnerable’” (Bielefeld 2018: 3; see also Mackenzie 2014). Therefore, protective surveillance that relies on targeted vulnerability operates as a form of paternalism—that is, coercive state intervention justified as being for an individual’s “own good” (Bielefeld 2018; Mackenzie 2014).

Carceral Expansion and “Carceral Protectionism”

While surveillance for security is often thought of as the domain of national security and criminal justice, and protective surveillance is targeted toward those who the state has deemed to be vulnerable, both forms of surveillance are predicated on risk and can be linked to state control. In other words, both forms of surveillance—though invasive—are justified by the state as *objective* responses to various social problems, thus revealing a “blurring” of state surveillance strategies (Bennett et al. 2018). As Bennet and colleagues (2018: 42, 19) note, contemporary surveillance technology “can be used for care or for control,” but that this blurring of intent is largely hidden by the normalization of surveillance

⁴ Both Canada and the US have public health programs that contribute the criminalization of people with HIV. As McLelland and colleagues (2019: 6) explain, such programs:

have helped to enact public health orders against people to legally mandate treatment adherence. In Canada, we know that such public health orders have been used to amplify criminal charges. When certain “risky” people have... been identified as not adherent to their [HIV] medications, public health agents may come knocking. In some US states, if the person in question does not answer their door, public health may return with the police.

For more on HIV criminalization, see also Novak (2021) in this issue.

in everyday life, and that “we are at a historic turning point” in terms of the expansion and normalization of state surveillance.

The merging of security-based and protective state surveillance practices aligns with what has been understood more broadly as the expansion of the carceral state. As Gottschalk (2015: 31, 31, 32) explains, the carceral state—which includes a “vast archipelago of jails and prisons, but also the far-reaching and growing range of penal punishments and controls”—has now “extend[ed] its reach far beyond the prison gate” and has “altered how key governing institutions and public services and benefits operate.” In addition, scholars have traced this carceral expansion through the growing use of protective surveillance practices that have clear carceral undertones (e.g., Bennett et al. 2018; Brayne 2017; Monahan 2017). In her poignant description of the implications of contemporary surveillance in terms of carceral expansion, Jennifer Musto’s (2016) study of state efforts to “protect” domestic sex trafficking “victims” isolates and unpacks an example of paternalism that conjoins protection with punishment and control. Musto describes how such practices manifest in punitive interventions for victims, such as when law enforcement arrests an individual in order to get that person help. Musto’s (2016) insights on this “carceral protectionism” highlight the power imbued in state surveillance, even when such practices are assisted by non-state actors and promoted as for the well-being of the targeted vulnerable groups.

Overall, protective state surveillance practices—while perhaps offering some benefit to individuals or society—often retain coercive elements and may ultimately contribute to a strengthening of state power through processes of carceral expansion. The current study seeks to extend Musto’s (2016) notion of “carceral protectionism” by exploring further the link between protective surveillance and the carceral state. Specifically, this article uses the example of a state surveillance practice that operates at the nexus of protection and security—police-led location monitoring of people with cognitive impairments (e.g., dementia) framed as for their own benefit—to show that narratives of vulnerability and risk can be mobilized strategically to justify and conceal carceral protection, thus contributing to the process of carceral expansion.

Surveillance at the Nexus of Security and Protection: Project Lifesaver

Surveillance technologies have emerged recently as a response to “wandering”—when individuals with cognitive impairments (e.g., individuals with Alzheimer’s disease or on the autism spectrum) stray from their expected location, potentially becoming lost and endangered (Baptiste et al. 2006). Project Lifesaver (PL) is a US-based organization that designs and markets this type of surveillance technology to police organizations across Canada and the US. Police organizations can lease PL’s wearable location-tracking technology to caregivers of people with cognitive impairments, who then put PL’s radio frequency (RF) transmitter bracelets on family members or dependents they believe are at risk of wandering. Caregivers can then contact police in the event of a potential wandering incident, and police (or other first responders) will use portable receivers to track the RF signals emitting from the transmitter bracelet in order to locate the person who wandered. In addition to providing wearable RF technology, PL offers ongoing training and support to partnered organizations who are involved in search and rescue operations.

Originally formed in 1999 in Chesapeake, Virginia, PL now operates across the US and in six Canadian provinces. The organization's founder and Chief Executive Officer (CEO), Gene Saunders, is a retired Captain from the Special Operations Department of the Chesapeake Police Department and, as described in Saunders' biography, used the Specialized Weapons and Tactics (SWAT) strategies he acquired while working in law enforcement to develop PL (Firestone 2019). PL, as described by its website, is a "non-profit organization that provides law enforcement, fire/rescue, and caregivers with a program designed to protect and, when necessary, quickly locate individuals with cognitive disorders who are prone to the life threatening behaviour of wandering," reducing search times for partnered agencies "from hours, potentially days, down to minutes" (<https://projectlifesaver.org/about-us>).

PL technology is unique in that, while it can be classified as protective surveillance, it is deployed through police organizations—a central arm of the criminal justice system. In other words, the technology does not mark a transformation from security-based surveillance to protective surveillance; it operates at the nexus of the two. Therefore, it constitutes an ideal study site for the examination of paternalistic surveillance practices as a mode of carceral expansion. Specifically, the current study examines how PL technology is framed and operates in order to understand how it is similar to, and distinct from, other, more well-researched, state surveillance practices.

Methods

This research is part of a larger, multi-phased qualitative study examining the perceptions of, and experiences with, PL technology from the perspectives of some of the groups who engage with it (e.g., caregivers, first responders). The initial phase of data collection and analysis—and the focus of this article—aims to glean an understanding of how PL operates in a general sense, and how it is framed as a surveillance practice by those who deploy it (i.e., PL as an organization and partnered police organizations). The second phase of the study seeks to explore how PL is experienced in everyday life through interviews with various individuals who engage with PL technology. An iterative process of data collection and analysis has been used throughout the study in order to cultivate novel theoretical insights regarding surveillance operating at the nexus of protection and security.

Data informing the current article have been obtained primarily from content analyses performed on multiple forms of publicly available textual data, including: a biography released in 2019 that describes the story of how PL was conceptualized and implemented by the organization's founder and CEO Gene Saunders; PL's website and various social media platforms (e.g., the "Chief's Blog"); copies of correspondence, official agreements, and internal training documents and policies that pertain to PL obtained via Freedom of Information requests (FOIs) sent to all Ontario police services that have PL partnerships; and documents obtained from attending the Project Lifesaver Basic Operator Course and Project Lifesaver's 20th Anniversary Conference, held concurrently over a one-week period in 2019 in Orlando, Florida. Findings from the content analysis are supplemented by observations made during the PL conference and basic training course.

Findings

The following section discusses features of the state-facilitated EM of people with cognitive impairments, and the narratives employed to justify this practice. Comparisons are made between PL technology and other, more traditional forms of EM. Importantly, while I identify carceral features of PL, the monitoring of people with cognitive impairments remains unequivocal to the invasive and often violent surveillance experienced by individuals directly engaging the justice system—especially Black, Brown, and Indigenous communities. In addition, these findings are not meant to suggest that people with cognitive impairments do not face considerable challenges, nor are they meant to detract from the hardships endured by those tasked with their care.

Project Lifesaver as an Electronic Monitoring Practice

Results from both the content analyses of PL documents and observations from the PL conference and basic training course reveal the myriad ways in which PL is both similar to and distinct from EM as it is used in a traditional sense. Perhaps, the most obvious of similarities is the form of the technology itself: a device worn around the wrist or ankle that is used to track the location of the wearer. Though efforts have been made to make the PL device as inconspicuous as possible, it has the propensity to—like other EM devices—function as a stigmatizing mark on the wearer, as is acknowledged by this passage from the biography of PL's founder and CEO, Gene Saunders (quoted in Firestone 2019):

parents worry about stigma. They don't want their children to be singled out or identified by others as "different," Saunders explained. He reminds these parents ... which is the utmost concern: suiting [a child prone to wandering] with a device that might save his life, or the chance that someone irrelevant might remark about it?

While the particular stigma acquired by wearing the PL tracking device may be different from the stigmatization of traditional EM, which tends to signify offender status (although it is possible that this association is made in some instances with PL), the effects may be similar in terms of negative social impact (e.g., an avoidance of public spaces and a subsequent reduction in access to support or resources). As noted in the above statement, however, the stakes differ in terms of enduring the stigma. The decision made by a caregiver to outfit someone prone to wandering with the device, despite a potential for stigma is, arguably, not the same as the decision to outfit someone with EM in lieu of formal incarceration. Nevertheless, the stigma associated with PL technology may carry negative connotations for the wearer.

While PL is similar to EM in form, a comparison of how the technologies operate in practice is less straightforward. Both practices track and restrict the movement of the wearer by way of state monitoring. Traditional EM is intended to restrict the wearer to his/her/their home based on state-mandated sanctions; PL is intended to prevent the wearer from wandering too far from where that person's caregiver assumes them to be. In either case, authorities are alerted in the event the wearer is not where someone else (whether state or caregiver) expects them to be. As with traditional EM, then, PL technology transforms the home into a "penal space" (Nellis 2009): the wearer is deprived of the liberty to come and go as he/she/they please.

The two forms of surveillance also differ in terms of the technology they rely on and the omnipresence of the monitoring practice. Traditional EM uses GPS technology which allows those monitoring the tracking data to check the whereabouts of the wearer at any point in time and, indeed, sends an alert if there is breach of a location-based sanction.⁵ In theory, PL's RF technology gives the state the ability to track the wearer's location at any time, though in practice, this tracking is initiated only if a caregiver alerts them of a potential wandering incident. Once alerted, state agents (typically police, though sometimes other first responders, such as trained search and rescue volunteers) begin the technology-assisted search process in order to locate the wearer.⁶

While traditional forms of EM come with the expectation that the wearer will exercise "self-restraint" (Nellis 2009), this restraint is not expected of wearers of PL technology. In fact, the technology operates on the assumption that the wearers cannot or will not engage in self-restraint. Thus, PL technology differs from traditional EM in that the state transfers a certain amount of control to caregivers: those living with and caring for people with cognitive impairments are responsible for initiating the search process. In fact, caregivers must sign a contract with police indicating that they will contact police immediately if the wearer's location becomes unknown. Notably, though, traditional EM also operates through a diffusion of control: the restrictive elements of the technology are, in some ways, dependent on the wearers' ability to exercise self-control (Nellis 2009). To some extent, then, PL appears *more restrictive* than traditional EM because wearers of PL technology are stripped of any autonomy over their own movement (and the caregiver's autonomy over when to contact authorities is also removed), albeit with far less severe consequences. Overall, though, both forms of EM constitute a socio-technical practice (see Nellis 2009) in that the state engages others in the control process while retaining ultimate authority over the parameters of the surveillance practice.

Finally, PL is similar to traditional EM in terms of the high level of state involvement. Police organizations with formal PL partnerships oversee the program in their jurisdiction and, typically, are involved in any search and rescue operations involving wearers of the technology who have been reported as missing. Police are also responsible for outfitting wearers with the PL transmitter and replacing the transmitter's battery on a regular basis (every sixty or ninety days, depending on the model of transmitter being used). The vast majority of Ontario police organizations with PL partnerships contract out these home visits to volunteers, who, like parole officers, act as representatives of the state. And, as with traditional forms of EM, there are notable carceral undertones present during these home visits. For one, the wearers of PL are outfitted with the technology without their consent.⁷ State agents also check during home visits to see that caregivers are following strict program protocols: the PL program follows a "three strikes rule" whereby caregivers must sign a checklist daily indicating that they have checked that the batteries of the wearable tracking device are in working order. If, on three separate occasions, state agents coming into the home to perform battery changes notice that the checklist has not been signed appropriately, caregivers and those they care for face removal from the PL program. Finally, while encounters with state agents carry far less punitive potential for PL clients than for people

⁵ One should bear in mind, however, that this technology is not necessarily accurate and reliable (see, e.g., Shklovski et al. 2015).

⁶ The wearable device (the transmitter) emits an RF signal, which requires a tracking device (the receiver) to be used in tandem to locate the wearer—a process that requires gradually honing in on the signal transmitted from the wearable device by programming the receiver to the same RF frequency and following a "chirping" sound.

⁷ Caregivers' consent is used instead.

subjected to parole, the characterization of police as gatekeepers to the criminal justice system (Brayne 2017) suggests that any such interaction with police or police representatives carries with it a risk of criminalization to some degree. The presence of state agents in the homes of PL clients, while not necessarily criminalizing, can be quite punitive in nature and further highlights the carcerality of this protective surveillance practice.

Targeted Vulnerability and Distortions of Risk

A key factor in the successful deployment of protective surveillance is the designation of a person or group as “vulnerable” (see Musto 2016); that way, invasive surveillance practices appear appropriate when geared toward people who otherwise pose no serious threat to society. PL technology, which in many ways resembles the technology used in the EM of people on parole, would likely seem excessively invasive were it not for the designation that people with cognitive impairments constitute a particularly vulnerable group in need of state intervention for their own well-being. Indeed, a consistent message throughout PL’s various public platforms is that people with cognitive impairments are particularly helpless because of their cognitive condition:

- “Once a person with cognitive disorders goes missing, the vulnerabilities start to stack up” (Firestone 2019).
- “Our clear and singular focus is on providing these most vulnerable groups and their caregivers with the support and protection they need” (<https://projectlifesaver.org/>).

These statements demonstrate PL’s reliance on blanket classifications of vulnerability; the coercive elements of the technology are justified through a narrative that emphasizes the potential danger people with cognitive impairments face. In reality, the term “cognitive impairments” engenders a wide range of diagnoses and cognitive capacities. While a subsection of individuals with cognitive impairments—such as individuals diagnosed with advanced forms of dementia or diagnosed as being on the more severe end of the autism spectrum—may be vulnerable to various outside risks like those associated with wandering, in general, people with cognitive impairments are not inherently vulnerable. Yet, PL marketing material appears to characterize *all* individuals with cognitive impairments as vulnerable in a way that emphasizes their need for intervention. Indeed, PL employs a form of targeted vulnerability, co-opting the term by explicitly linking it to a need for their surveillance technology:

- “Project Lifesaver is the premier search and rescue program operated internationally by public safety agencies, and is strategically designed for ‘at risk’ individuals who are prone to the life threatening behavior of wandering” (<https://projectlifesaver.org/>).
- “We see our mission as bringing peace of mind and improving the quality of life of these high risk populations and their caregivers” (Chief’s Blog 2019).
- “Project lifesaver is a program of proactive involvement and specialized operations that respond to incidents of victims of Alzheimer’s, Autism, Down syndrome, and related disorders that have wandered from a safe location” (Project Lifesaver Basic Training Course 2019).

- “Our ability to safeguard the most vulnerable among us has never faltered” (Firestone 2019).

These statements show how PL makes use of language centering on risk and victimhood in order to classify people with cognitive impairments as an inherently vulnerable population while simultaneously suggesting that PL is the only appropriate response to this vulnerability. In addition to employing this targeted vulnerability, PL, as an organization, amplifies the risk associated with cognitive impairments to justify their surveillance program. Specifically, PL projects a narrative that individuals with cognitive impairments face serious danger because of their tendency to engage in wandering behavior. The following statement, taken from presentation materials offered through PL’s Basic Training Operator Course, exemplifies this narrative: “Remember, a search is a critical emergency; half of victims not found will die; the remainder are very sick or injured” (Project Lifesaver Basic Training Course 2019).

Research suggests that the prevalence of wandering behavior among people with cognitive impairments is not well known (Baptiste et al. 2006). Moreover, as Enang and colleagues (2019) note, there is considerable ambiguity in both the criteria that make up a wandering incident, and the level of danger associated with such an event. Yet, despite ambiguity regarding the definition, prevalence, and seriousness of wandering among people with cognitive impairments, PL promotes a heightened sense of severity around the issue of wandering—even for caregivers who are not concerned about wandering incidents or are reluctant to put the device on individuals who are likely to be agitated by the technology:

To caretakers who presume their wanderer won’t wear a device, Saunders asks, simply, “How do you know?” And for those participants who do refuse a wrist bracelet, he’ll find some other way—maybe strap it to the ankle. Trained PLI agents can even desensitize a reluctant child by pre-exposing him or her to the bracelet for short periods of time until it no longer feels alien to the wearer. [Firestone 2019]

Although there are certainly known instances of people with cognitive impairments becoming lost and endangered—and, no doubt, a level of risk that produces extreme levels of stress for family members and caregivers—PL strategically uses discourse that amplifies the risk of wandering beyond what is known, connecting this risk to a need for PL technology.

While PL augments the risk that individuals with cognitive impairments face themselves, they also effectively disperse this risk to anyone who may engage with the individual. In this way, PL markets itself not only as a protective mechanism for people with cognitive impairments, but also for caregivers and first responders, shifting the risk originally posed to the individual with cognitive impairments to one now faced by those who come in contact with that person:

- “The initial hurdle often involves overcoming caregivers’ deniability of the problem. The first time a person wanders, it’s easy for guardians to argue that he or she has only wandered once, Saunders said. ‘Well,’ he poses, ‘how many times do you want them to do it?’ Others argue that their loved ones will only wander within the neighborhood. Saunders asks, ‘What will happen the day the neighbors don’t spot them?’” (Firestone 2019).

- “Have you been involved with any of the following: Alzheimer’s, Autism, Down Syndrome? If you haven’t encountered these individuals at an emergency scene, it is only a matter of time before you will” (Firestone 2019).

Through this diffusion of risk, PL’s technology becomes not just about the safety of the individual who wanders but a necessary tool for those tasked with caring for that person. This shift is necessary for the marketing of PL technology to be truly effective because the organization is not advertising its technology to people with cognitive impairments themselves, but to caregivers and first responders who are in contact with these individuals. Thus, for targeted vulnerability to work as a justification for PL technology, the risk faced by people with cognitive impairments not only has to be augmented but also must be dispersed among all users of the technology. Once the burden of risk is effectively transferred to caregivers, PL can then present their technology as a solution to this risk: “Project Life-saver’s Program has helped provide thousands of families peace of mind daily knowing that their loved one has protection and safety in case they wander” (<https://projectlifesaver.org/>). Overall, PL’s deployment of targeted vulnerability, and its subsequent use of risk amplification and dispersal—or, together, risk distortion—sheds important insights into how paternalistic surveillance practices can operate as a mode of carceral expansion, as will now be discussed.

Discussion: Paternalistic Surveillance as a Mode of Carceral Expansion

PL in practice bears resemblance to the panoptic surveillance typical of the criminal justice system in that it removes the target of the surveillance (those wearing PL tracking devices) from the watcher (police) to such a degree that, though the surveillance is not continuous, the possibility of state tracking is omnipresent. Unlike traditional EM, however, where the wearer is acutely conscious of the technology’s panoptic elements (Richardson 2002), people with cognitive impairments wearing PL technology may not be fully cognizant⁸ of their own monitoring and so the state cannot rely on the panoptic effects of the practice to induce self-control as it does with traditional EM. In the case of PL, self-control is diffused from wearers to their caregivers, who are mandated to ensure the technology is in working order and to alert authorities the moment the wearer is no longer in their purview. Nonetheless, PL, as a regulatory surveillance apparatus, carries with it a potential to, like traditional EM, alter the self-subjectivity of the wearer (Henne and Troshynski 2013; Puumeister 2014).

Feminist scholars use the term, “paternalism,” to describe “coercive interference with individual liberty to protect or promote the person’s welfare, good, happiness, needs, interests, or values” (Mackenzie 2014: 47). The coercive features of PL, such as the way autonomy and consent are stripped from the wearer, in conjunction with the targeted vulnerability employed to justify the technology’s use, designate this practice—like many public health surveillance practices—paternalistic. In addition, similarities between PL and more traditional forms of EM, including the potential for stigma, the restrictive nature of the

⁸ While people with cognitive impairments may not be fully aware of the implications of PL technology specifically, research suggests that, due to their cognitive impairments, these individuals “are at a greater risk of experiencing care and control as punitive” and that, while they “may not understand... spatial limitations, [they] may wonder what bad thing they have done to be locked up” (Repo 2019: 235, 238).

technology that designates the home a penal space (Nellis 2009), and state control over both the wearer and caregiver, reveal the carceral undertones of this paternalistic surveillance practice. The law enforcement approach underpinning PL further underscores the carcerality of PL, as the organization is largely run by—and for—police. As noted above, PL's founder and CEO is a former police officer with SWAT experience that he indicates has influenced his development of PL (Firestone 2019) and that is likely appealing to partnered police organizations, who manage the deployment of the technology.

Because PL merges ideas of protection with elements of control and punishment, it constitutes an example of what Jennifer Musto (2016) calls “carceral protectionism.” In her work examining state intervention into the lives of domestic sex trafficking victims in the US, Musto (2016: 28) documents how state protection efforts can manifest in “moments of protection interspersed with instances of punishment,” including when victims are arrested and charged with prostitution. Musto’s “carceral protectionism” identifies how even well-intentioned state protective interventions can merge protection with control for those the state deems to be “at-risk” victims. Similar to Gottschalk’s (2015) observation that the carceral state now penetrates a wide range of government institutions and services, Musto (2016) tracks how state efforts to protect vulnerable populations can make use of the “carceral enforcement apparatus,” through which victims are routed in order to receive state assistance. And though the use of a carceral apparatus for the purpose of protection carries with it a capacity to generate additional harms for both victims and society writ large, its “protective ends [are used to] justify the means” (Musto 2016: 22). Musto (2016) also identifies the use of technology and collaboration with nonstate actors as core features of carceral protection, noting how both are used strategically by the state to augment their protection efforts. For example, partnerships between law enforcement and community advocacy groups can be mobilized by police to “soften” what are “otherwise punitive carceral systems and processes” (Musto 2016: 46).

Though there are obvious differences between domestic sex trafficking victims and people living with cognitive impairments—and between efforts to monitor each group by the state—the EM of people with cognitive impairments through PL can be understood as a form of “carceral protectionism.” Indeed, the carceral features of PL suggest that state interventions to protect people with cognitive impairments culminate in “protective logics fus[ing] with carceral systems” (Musto 2016: 46). Like protective interventions for domestic sex trafficking victims, PL is justified as necessary in order to protect this particularly vulnerable and at-risk population despite the coerciveness of the technology. In addition, PL, as a surveillance practice, is dependent on technology (EM) and is ameliorated through partnerships between state (police) and nonstate actors: PL as an organization not only provides the technology and training for police, but also the narrative to justify the technology’s use; partnerships between PL and various advocacy groups, like the Alzheimer’s Association, provide legitimacy to the program and, in some cases, provide police with referrals for new clients; and, the program could not operate without the consent of caregivers, who act as a proxy for the wearer’s consent and who take on a portion of responsibility and control over the technology.

Paternalistic surveillance is often linked to carceral expansion, as is evident through Musto’s (2016) study of carceral protection. Examining the risk narratives that justify various state surveillance practices can provide insight into how this process of carceral expansion occurs. Traditional security-based surveillance relies on risk logics for justification, as does the burgeoning practice of protective state surveillance (Bennett et al. 2018), though there is a notable difference in the way risk is employed between the two practices. Security-based surveillance is advertised as an appropriate response to the risk posed by

individuals toward others (i.e., the risk an individual subject to parole may pose to society) and is thus positioned as serving to protect society as a whole. By contrast, protective surveillance is promoted largely as being for the protection of the individual being surveilled from self-contained risks (e.g., the risk of contracting HIV), with an indirect potential to benefit society more broadly. Yet, because protective surveillance is invasive and carries a multitude of discursive effects for those it targets, it requires the labeling of certain individuals and groups as “vulnerable,” or as requiring state intervention for their own well-being (Bielefeld 2018) in order to justify the monitoring of individuals who do not pose an immediate threat to society. Through this targeted vulnerability, a distortion of risk occurs, and individuals labeled as vulnerable are simultaneously characterized as being *in need of help* and *as a threat to others* (Bennett et al. 2018). In the end, any risk that vulnerable groups may face not only justifies their targeting with invasive surveillance technologies (Eubanks 2014, 2018), but also their exclusion from society more broadly (Monahan 2017).

Because PL operates at the nexus of security-based and protective surveillance, it constitutes an ideal example of risk distortion in practice, further illuminating how the risk narratives that support paternalistic surveillance also position this practice as a mode of carceral expansion. In other words, the expanded use of EM, from the monitoring of people on probation and parole to the monitoring of people with cognitive impairments, represents more than the adaptation of a security-based technology to address a public health concern; it exemplifies the flow of punitive ideology, bolstered by technologies of control, into the state’s management of vulnerable populations. Importantly, it is the paternalistic features of PL that buttress this expansion of the carceral state; the carceral seepage that occurs when people with cognitive impairments are outfitted with state-monitored location tracking devices is concealed through the process of targeted vulnerability and risk distortion, which effectively position the technology as necessary for the well-being of all who engage with it (wearers, caregivers, and first responders). This process of obfuscation is a testament to what Gottschalk (2015: 39) has described as the “tenacity” of the carceral state.

Musto’s (2016: 4) work on “carceral protectionism” makes visible the ways in which paternalistic state surveillance can operate as carceral expansion and, in doing so, “provides a conceptual blueprint to account for collaborative state and nonstate initiatives where the lines between protection and punishment are less than clear.” Findings from the current study situate PL as a form of “carceral protectionism,” providing another example of the ways in which “punitive techniques [can] be leveraged in the name of protection” (Musto 2016: 30). The identification of PL as a type of “carceral protectionism” has important implications in its own right, as it suggests that wearers of PL technology experience “a process of carcerality inflected with care” and that this process can be concealed through state reliance on narratives of protection (Musto 2016: 4). Findings from the current study, however, also expand on Musto’s “conceptual blueprint,” identifying targeted vulnerability and distortions of risk as central to supporting punitive state protection.

Conclusion

The identification of PL as a carceral surveillance practice has important implications for individual targets of the surveillance because people with cognitive impairments monitored by PL technology may experience similar discursive effects to those monitored by traditional forms of EM. Future research should examine lived perspectives of both people with

cognitive impairments and their caregivers in order to identify how PL is experienced in practice, including both positive and negative effects (and affects) of the technology. Such research will also assist in identifying alternatives to care for people with cognitive impairments that are less carceral in nature, which is valuable given the noted importance of facilitating individual autonomy for vulnerable populations lest “discourses of vulnerability” be used to “justify paternalistic and coercive forms of state intervention that generate pathogenic forms of vulnerability” (Mackenzie, Rogers, and Dodds 2014: 15). Importantly, future research should also examine the racialized dimensions of EM as a paternalistic surveillance practice because it is communities of color that are most likely to be adversely affected by coercive state intervention and to disproportionately experience the violent effects of carceral expansion.

The current study extends Musto’s (2016) notion of “carceral protectionism” by identifying targeted vulnerability and risk distortion as integral to the process whereby paternalistic surveillance operates as carceral expansion. Examining this is important when tracing twenty-first-century power and governance and reveals how expanded state power can go unquestioned or even unnoticed. Reflecting on broader policy implications, Nellis (2014: 505) observes that the widespread state use of EM signals “a moment, a general readiness among governments to infuse technology into particular spheres of social life, particular forms of social practice ... where it did not exist before (or exist in the same way), and a readiness on the part of citizens to accept, or at least not actively reject, this.” Building on this observation, I would suggest that future research could seek to link findings from the current study to broader theories of power and governance. As Henne and Troshynski (2013: 109) conclude in their study of risk embodiment for wearers of traditional EM, it is important to question “what becomes of our ‘rights’, as well as our sense of self, autonomy, and privacy, in light of these shift in governance strategies?”

Noted concerns about state power, in general, in conjunction with specific concerns about the harms of coercive surveillance practices for individuals, in particular, point to a need for state claims about the protection of vulnerable groups to be inspected with close scrutiny. This article offers a case study of wearable tracking technology that is promoted as being for the protection of people with cognitive impairments and shows how, particularly through targeted vulnerability and risk distortions, paternalistic surveillance practices can serve as a mode of carceral expansion. Tracing power in this way is particularly important considering the rapid expansion of twenty-first-century surveillance. As Eubanks (2014: 3; see also 2018) reminds us, a deep understanding of how current surveillance operates and is experienced—particularly in the context of vulnerability—is essential since such practices are clear markers of “surveillance-to-come.”

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References

- Alzheimer’s Association (2018). Alzheimer’s disease facts and figures. *Alzheimer’s & Dementia*, 14(3), 367–429.
- Baptiste, S., Steggle, E., Grochowina, N., & LeBeau, M. A. (2006). *Report on the processes, procedures, and findings of the locating technology project*. Hamilton, ON: McMaster University.

- Bennett, C. J., Haggerty, K. D., Lyon, D., & Steeves, V. (Eds.). (2018). *Transparent lives: Surveillance in Canada*. Edmonton, AB: Athabasca University Press.
- Bentham, J. (1995). *The Panoptic Writings*. Miran Bozovic, Ed. London: Verso.
- Bielefeld, S. (2018). Cashless welfare transfers for 'vulnerable' welfare recipients: Law, ethics and vulnerability. *Feminist Legal Studies*, 26(1), 1-23.
- Brayne, S. (2017). Big data surveillance: The case of policing. *American Sociological Review*, 82(5), 977-1008.
- Cohen, S. (1985). *Visions of social control: Crime, punishment and classification*. Cambridge, UK: Polity Press.
- Dodds, S. (2014). Dependence, care, and vulnerability. In C. Mackenzie, W. Rogers, & S. Dodds (Eds.), *Vulnerability: New essays in ethics and feminist* (pp. 33-59). Oxford, UK, and New York: Oxford University Press.
- Enang, I., Murray, J., Dougall, N., Wooff, A., Heyman, I., & Aston, E. (2019). Defining and assessing vulnerability within law enforcement and public health organizations: A scoping review. *Health and Justice*, 7(2), 1-13.
- Ericson, R., & Doyle, A. (2004). Catastrophe risk, insurance and terrorism. *Economy and Society*, 33(2), 135-173.
- Ericson, R. V., & Haggerty, K. D. (1997). *Policing the risk society*. Toronto, ON: University of Toronto Press.
- Eubanks, V. (2014). Want to predict the future of surveillance? Ask poor communities. *The American Prospect*, January 15. Retrieved on March 1, 2021, from <https://prospect.org/power/want-predict-future-surveillance-ask-poor-communities/>.
- Eubanks, V. (2018). *Automating inequality: How high-tech tools profile, police, and punish the poor*. New York: St. Martin's Press.
- Feeley, M. M., & Simon, J. (1992). The new penology: Notes on the emerging strategy of corrections and its implications. *Criminology*, 30(4), 449-474.
- Ferguson, A. G. (2017). *The rise of big data policing: Surveillance, race, and the future of law enforcement*. New York: NYU Press.
- Firestone, N. (2019). *Deploying High: The man, the mission, and the story behind Project Lifesaver International*. Virginia Beach, VA: Koehler Books
- Foucault, M. (1980). *Power/knowledge: Selected interviews and other writings, 1972-1977*, C. Gordon, Ed. C. Gordon, L. Marshall, J. Mepham, & K. Soper, Trans. New York: Pantheon.
- Gottschalk, M. (2015). Razing the carceral state. *Social Justice*, 42(2), 31-51.
- Haggerty, K. D., & Ericson, R. V. (2000). The surveillant assemblage. *The British Journal of Sociology*, 51(4), 605-622.
- Henne, K., & Troshynski, E. (2013). Suspect subjects: Affects of bodily regulation. *International Journal for Crime, Justice and Social Democracy*, 2(2), 100-112.
- Laurie, E., & Maglione, G. (2020). The electronic monitoring of offenders in context: From policy to political logics. *Critical Criminology: An International Journal*, 28(4), 685-702. <https://doi.org/10.1007/s10612-019-09471-7>.
- Mackenzie, C. (2014). The importance of relational autonomy and capabilities for an ethics of vulnerability. In C. Mackenzie, W. Rogers, & S. Dodds (Eds.), *Vulnerability: New essays in ethics and feminist* (pp. 33-59). Oxford, UK, and New York: Oxford University Press.
- Mackenzie, C., Rogers, W., & Dodds, S. (2014). Introduction: What is vulnerability and why does it matter for moral theory? In C. Mackenzie, W. Rogers, & S. Dodds (Eds.), *Vulnerability: New essays in ethics and feminist* (pp. 33-59). Oxford, UK, and New York: Oxford University Press.
- Marx, G. T. (2016). *Windows into the soul: Surveillance and society in an age of high technology*. Chicago, IL: University of Chicago Press.
- McClelland, A., Guta, A., & Gagnon, M. (2020). The rise of molecular HIV surveillance: Implications on consent and criminalization. *Critical Public Health*, 30(4), 487-493.
- Monahan, T. (2017). Regulating belonging: Surveillance, inequality, and the cultural production of abjection. *Journal of Cultural Economy*, 10(2), 191-206.
- Mullin, A. (2014). Children, vulnerability, and emotional harm. In C. Mackenzie, W. Rogers, & S. Dodds (Eds.), *Vulnerability: New essays in ethics and feminist* (pp. 33-59). Oxford, UK, and New York: Oxford University Press.
- Musto, J. (2016). *Control and protect: Collaboration, carceral protection, and domestic sex trafficking in the United States*. Berkeley, CA: University of California Press.
- Nellis, M. (2014). Understanding the electronic monitoring of offenders in Europe: Expansion, regulation and prospects. *Crime, Law, and Social Change*, 62(4), 489-510.

- Nellis, M. (1991). The electronic monitoring of offenders in England and Wales: Recent developments and future prospects. *The British Journal of Criminology* 31(2), 165-185.
- Nellis, M. (2009). Surveillance and confinement: Explaining and understanding the experience of electronically monitored curfews. *European Journal of Probation*, 1(1), 41-65.
- Novak, A. (2021). Toward a criminology of HIV criminalization. *Critical Criminology: An International Journal* 29(1). <https://doi.org/10.1007/s10612-021-09557-1>.
- Owusu-Bempah, A. (2017). Race and policing in historical context: Dehumanization and the policing of Black people in the 21st century. *Theoretical Criminology*, 21(1), 23-34.
- Paterson, C. (2007). "Street Level Surveillance": Human Agency and The Electronic Monitoring of Offenders. *Surveillance and Society*, 4(4), 314-328.
- Poon, A. F., Gustafson, R., Daly, P., Zerr, L., Demlow, S. E., Wong, J., . . . Moore, D. (2016). Near real-time monitoring of HIV transmission hotspots from routine HIV genotyping: An implementation case study. *The Lancet HIV*, 3(5), e231-e238.
- Project Lifesaver (2019). About Project Lifesaver. Retrieved on March 1, 2021, from <https://projectlifesaver.org/>.
- Puumeister, O. (2014). Biopolitics, surveillance, and the subject of ADHD. *Semiotica*, 2014(202), 301-320.
- Richardson, F (2002) A Personal Experience of Tagging. *Prison Service Journal*, 142, 39-42.
- Saunders, G (2019) Defying the odds: Here's to the next 20 years of advancements [Chief's Blog]. September 19. Retrieved on March 1, 2021, from <https://projectlifesaver.org/defying-the-odds/>.
- Shklovski, I., Troshynski, E., & Dourish, P. (2015). Mobile technologies and the spatiotemporal configurations of institutional practice. *Journal of the Association for Information Science and Technology*, 66(10), 2098-2115.
- Simon, J. (1987). The Emergence of a Risk Society-Insurance, Law, and the State. *Socialist Review*, 95, 60-89.
- Turnbull, S., & Hannah-Moffat, K. (2009). Under these conditions: Gender, parole and the governance of reintegration. *The British Journal of Criminology*, 49(4), 532-551.

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