



PROJECT MUSE®

Keep Calm and Be Counted: Electronic Monitoring's Evolving Effects across Scales of Time and Space

Published by

Ferracina, Simone.

Ⓒ Case Files, Vol. 01.

Punctum Books, 2021.

Project MUSE. <https://dx.doi.org/10.1353/book.84314>.



➔ For additional information about this book

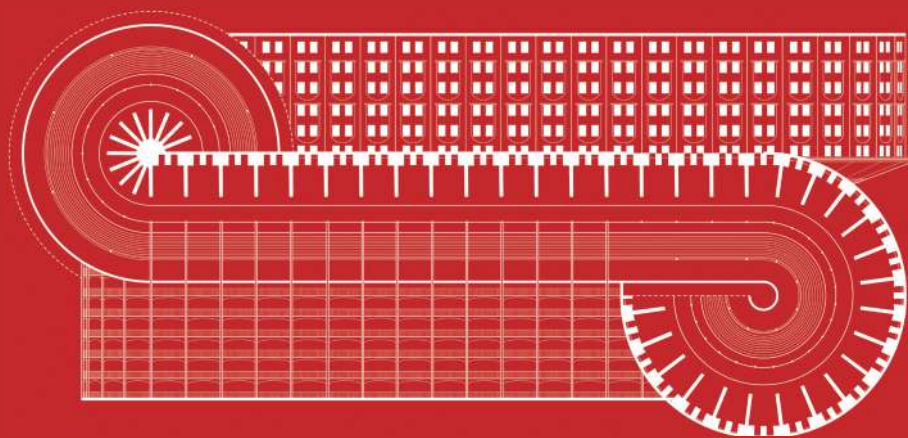
<https://muse.jhu.edu/book/84314>



This work is licensed under a Creative Commons Attribution 4.0 International License.
[136.0.111.243] Project MUSE (2025-01-18 20:53 GMT)

KEEP CALM AND BE COUNTED

Electronic Monitoring's Evolving Effects
across Scales of Time and Space



Jordan Geiger, text and a conversation
with Raphael Sperry

The following is a short description of some origins of “electronic monitoring” (EM) and its architectural and corporeal effects. It is followed by a discussion of EM’s uses and abuses, conducted over email with Raphael Sperry, President of Architects, Designers and Planners for Social Responsibility.

Whither Calm?

Among all things internet-of-things (IoT), one inveterate form of wearable technology stands out and multitasks in ways deserving of our attention. Electronic Monitoring (EM) ankle cuffs like the BI ExacuTrack perform architectural and corporeal feats that pre-date those of our most popular consumer electronics, and still gesture toward where our bodies’ relations to computing may be going. Increasingly worn by parolees and persons awaiting trial, these relate not only to the bodies of the accused, but to the spaces and people around them in ways that were both foreseen and unforeseen.

EM seems to be an insidious payback on computer scientist Mark Weiser’s anticipation and promise of ubiquitous computing: that it would grow invisible and fade into the background. Weiser’s 1991 article, “The Computer for the 21st Century,” related cases of innovation and shared creativity emerging at the Xerox Palo Alto Research Campus (PARC), so-called pads and tabs and badges that would free us to direct our attention to more important things than reporting our location or opening a door. Tellingly, Weiser and his colleague John Seely Brown also referred to this coming mode of computing as “calm” (Weiser and Seely Brown 1995). By this, they meant that the invisible proliferation of sensors and actuators, of code and data, in our buildings and cities would not tax our attention with visibility or a conscious interface. Instead, they would fade into the background. Calm, in a sense, was the alternative not to “nervous,” but

instead to “needy.” A world of calm computing, Weiser and Seely Brown seemed to suggest, was one that had some self-sufficient independence of us. As those wearing the ankle cuff learn, though, calm is neither passive nor neutral, and not without a subject: rather, calm technology effects what we might call “calm bodies moving within vigilant spaces and times.”

The ExacuTrack is the most widely deployed of GPS-enabled anklets, the basis of EM’s rapid growth in the US penal system. Its proponents have much to praise in its relation to incarceration. Architecturally, socially, financially, administratively, the small device purports to relieve our overfilled prisons and promises safe reintegration into society for parolees, meanwhile transferring the cost and responsibility for incarceration to the parolee and to private corporations respectively. The ankle seems to offer something for everyone, be they calling for prison reform or deregulation. What operations does EM effect on space, time and bodies? What role does it play in a neoliberal economic structure? Where might “calm” be leading?

Facing Page - A continuous peel of interior and exterior surfaces, unrolling the enclosures of conditions for control and observation.

Architectural Inversion

Alongside efforts to stem architects' complicity and contribution to the creation of spaces for execution and torture, all forms of prisons continue to expand in the United States.¹ Not despite but perhaps because of this, EM has grown as well. Although its proponents often describe its potentials for moving people out of prisons, EM instead can be understood as extending the space of prisons; outsourcing their program to urban space and private homes; and, by their punishing cost to probationers, as leveraging the continued full capacity of prisons.

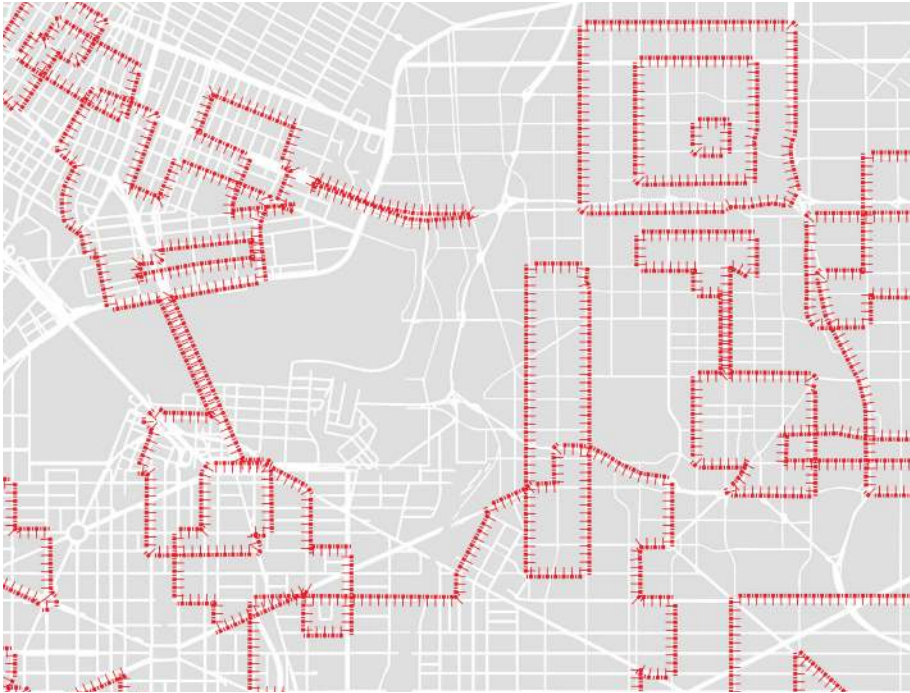
EM has been described as bringing about an "open air panopticon" (Wood 2010). Referring to Jeremy Bentham's prototypical prison design, and its familiar analysis by Michel Foucault as an instrument for placing the prison guard within a prisoner's very mind, this description of EM conceives it as a kind of anti-matter—or rather, a dark matter for the prison industrial complex.² As it proposes a dissolution of prison architecture, the object instead just turns incarceration inside out, inverts its space so that the city is a calm prison of sorts. Further, as it enables parolees to walk the streets amongst other citizens, it inspires the creation of crowdsourced maps of sex offenders and other ex-cons.³ How to understand the complex spatial and temporal performance of the ExacuTrack in social and political terms? How does EM alter the prison type if not architecture's status more generally? How does it exact selective punishment on bodies and on spaces of the city, even if it appears as a placeless, decidedly anti-ergonomic device?

Incarceration outside of prison architecture has some history in "non-building" forms that skirt certain regulatory or financial constraints, such as vessels permanently moored on

an urban edge.⁴ Yet electronic monitoring really alters the space and time of incarceration in ways that have not been achieved previously. To begin with, GPS-based anklets work on "inclusion zones" and "exclusion zones"—places where a parolee is perpetually monitored for leaving a safe area or entering a prohibited part of town (where, say, a restraining order is in place). But they also act temporally with "inclusion times" and "exclusion times" to enforce curfews and to prod wearers to do their jobs. As has been noted, these are not monitored in real time, because they can't be. "Case managers receive a stack of daily reports on convicts' movements, which they can scan for peculiarities—but they aren't constantly sitting in front of a computer screen, following dots on a GPS map" (Swan 2014). The reports yield maps, but uninterpreted and often unverifiable ones. Further, the mappings that they inspire now proliferate as traced by (and under the eyes of) the general public, similarly unverified. Setting aside the logistical challenge of processing a surfeit of incoming data, we may consider the ethical and teleological ones.

Here are the first shifts from Jeremy Bentham's Panopticon and its later Quaker cousin in Philadelphia's Eastern State Penitentiary. The latter is considered perhaps the first panopticon built in this country, steeped in ideologies of reform through hard labor: unlike the British original, the American debut had a tiny work yard for each cell outfitted with tools and a bible. Today, EM's role extends the country's contemporary logic of incarceration: not toward reform, but to constant spectacle, to financial sanction, to shaming and sometimes to the curious vanity of being worn.^{5,6}

The ankle conditions things like the space and time of schools⁷—not for the protection of students from potentially

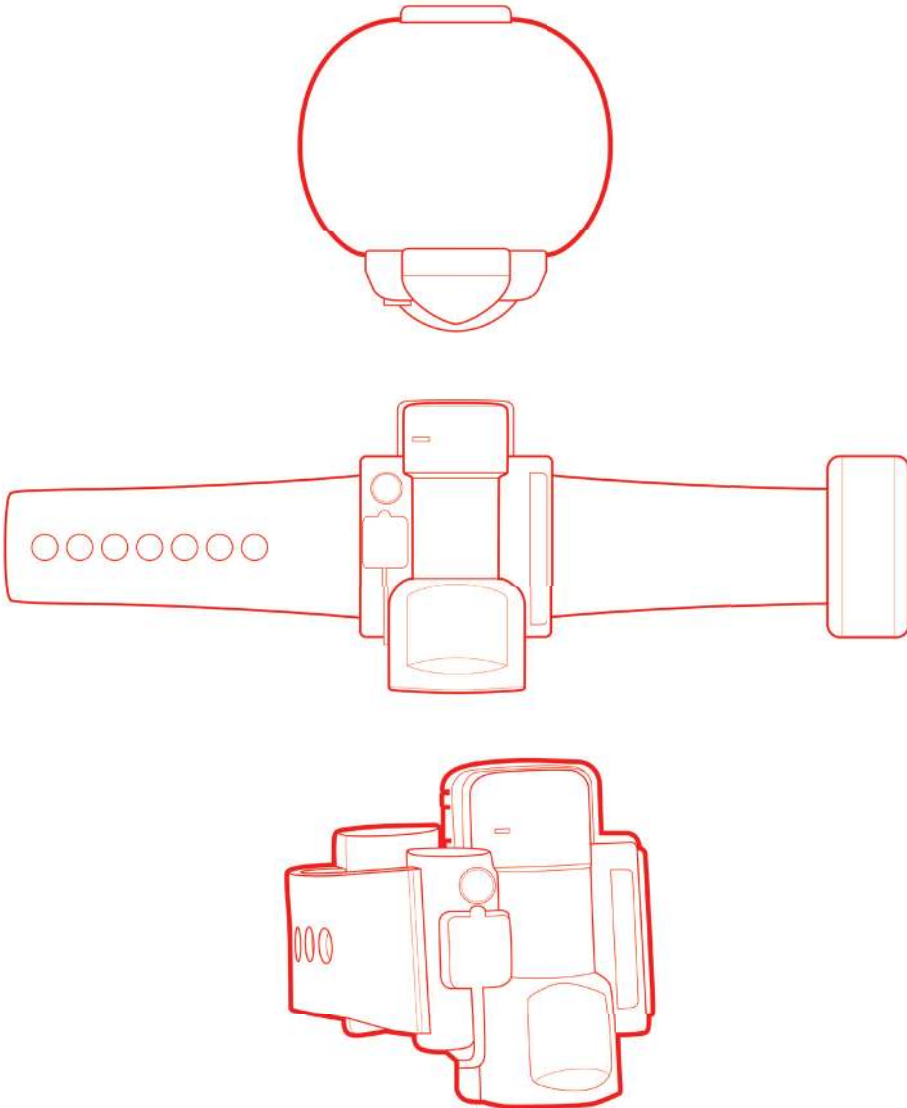


The surface of inscription at a larger scale: overlay of city street grids with multiple inclusion and exclusion zones, curfews and other time codes: the urban plan grows a choreography of personalized control routines.

predatory citizens at large, but from one another. Now, evidence suggests that the prison swells not merely beyond single authorities with transparent oversight, but to a web of geopolitically expanding participants and controls. In some instances (SFBG 2010), purview already extends beyond the city, to the entire planet, as immigration and deportation authorities turn to the device for assistance in determining compliance. Recently, EU committee ministers have adopted new principles (Voice of the Monitored 2014) to redress the lack of standards for administering EM and ensuring things like data privacy and public oversight—yet the implementation and further review of EM's effects remain to be seen.

EM's complex spatial performance is part of a vast and multi-scalar shift in which

the architecture of incarceration, whether panoptic or not, is more than merely inverted; the spaces and times of the city, if not the nation, are fundamentally mutated. Since tracking is based in part on GPS, and jurisdictions are increasingly subject to legal maneuvers like gerrymandering and migration policy,⁸ this mutation has no specific dimension. Its reach is across scales, from the single body to the planet.



The ExacUtrack GPS monitoring anklet from BI Incorporated, the smallest scale at which EM's tangle of computational, legal, financial and spatial structures converge and encircle the human body.

Bodies and Byproducts

What unseen economics underlie the ankle, as various industries, technologies and administrations outsource incarceration to the domain, but not the shared oversight, of the polis? The adoption of GPS anklets represents an array of partners, beginning with the GEO Group and its subsidiary BI Incorporated, which manufactures the ankle in the US for over 200,000 people per year; GEO in turn, is also a major operator of private prisons in the United States. As a result, its profit structure ensures business whether it manages inmates before, during or after a prison term.

We might consider this arrangement a high-efficiency economic structure for the given circumstance, where EM offers a panoply of chances to monetize the incarcerated. Those released under the condition of wearing an EM device have already entered a loop of (literal, physical) pay structures: not only are many of the US's private prisons owned and operated by the GEO Corporation, but halfway houses that purport to reintegrate the incarcerated into society are as well. With BI as a subsidiary, GEO continues its earnings by collecting fees from those wearing an ExacuTrack. This is as much explainable by the logics of redundancy in the prison industrial complex as by the mores of punishment that prevail today.⁹

At the scale of a single subject, the bargain to exit prison with an ankle carries a daily charge paid by parolees themselves, thereby not merely decongesting prison beds but also offloading costs to the convicted. It goes further, as the accounting for this alternative to current prison administration costs get mobilized to elide and obviate larger ethical and societal questions (Saletan 2005). And so the ankle proves itself not merely spatially and temporally nimble,

but also lucrative and redundant in its profits. This chain of byproducts extends to data monetization, and also represents a recent sort of "technology transfer." By this we can understand how technologies for one market sector find new life in another. There are historical precedents to today's migration of carceral monitoring equipment into the recreational use of consumers. As Paul Virilio has recounted, the same metal detecting portals that found their way into French maximum security prisons by the 1980s had already been long in use in French airports (Virilio 1991, 12–14).

GEO practices aren't the focus of our concerns per se, and not only because the company faces new competitors.¹⁰ Rather, IoT products tend to blossom wherever incarceration was formerly effected only through physical structures. This is due in part to the partnerships of private concerns and governments that yield each new carceral technology as an extension of the contemporary ethics of punishment. JPay, the self-proclaimed "home for corrections services," handles money transfers, consumer electronics, and information management to inmates in prisons around the country. Its recently introduced tablet computer, the JP5 mini, customizes an Android operating system to prevent other operating systems from being installed. This enables the device to be monitored by prison staff for reading and approval of all incoming and outgoing communications. The device is pitched by JPay as serving "inmate rehabilitation and education," but it also primes the inmate for their data monitoring on the outside. All this relies on lucrative participation of various state legislatures, satellite service providers, civic Departments of Corrections, and, last but not least, the individual subjects who wear these devices.

The growth of GPS ankle monitoring also sparks a kind of knowledge industry with the legal academic research published in the *Journal of Offender Monitoring* (CRI, n.d.). The tether that encircles a prisoner, in short, is now made of many strands. In print and online, one finds a growing body of literature, most of it from law (Voice of the Monitored, n.d.).

Consider the contemporary status of the body as a monitored and surrounded thing. In this context, what is to be made of the quantified self movement, which outfits bodies with health monitors of different stripes and stylings? What differences are to be perceived between the BI ankle and a Fitbit? Here, we confront a cultural question as the decision to trade biometric privacy grows decreasingly startling in everyday life (Lallanilla 2013). Is some Hudsuckerian delirium to be found or forecast in EM's grip on the body and in the diagram of a scaleless circle?

From the economic to legal, spatial and corporeal orders, we can now see a growing set of concentric circles widen outwards from the GPS ankle. Originating in the human body and extending around the globe at shifts in scale, the morphology of incarceration now leverages a pervasive computing technology to supplant Bentham's radiating arms with the endless loop of an encircling boundary.

Jordan Geiger: What spatial effects are to be anticipated now thanks to EM? I described a geography of concentric circles of information centered on the body and eventually reaching an international dimension, as with immigration and deportation proceedings. What's your take?

Raphael Sperry: EM will reinforce the already existing geography of

urban ghettos (see Loïc Wacquant, the UC Berkeley sociologist, on the link between the ghetto and “hyperincarceration”). If one were able to map where EM “inclusion zones” most heavily overlap, the result would be unsurprising: it would be poor neighborhoods heavily populated by people of color where opportunities for employment and even decent housing are scarce, where violence and police activity are already heavily concentrated. Will the inclusion of EM technology—and the drain on individuals' financial resources to pay for it—do anything to address the already well-known problems of American ghetto communities? More likely, by rendering the rest of the city an “exclusion” zone, it will reinforce patterns of legalized discrimination and racial segregation that have yet to be dismantled.

JG: I also think about the transnational question—the expansion of inclusion zones beyond cities and their ghettos, just as the technology and the reach of its corporate structure suggests. EM has also a strange relationship to a history of surveillance beginning with the panopticon. Some goals remain and others have changed and hardened.

RS: Surveillance was supposed to help discipline and reform offending people through forcing them to internalize a regime of self-control modeled on an exterior regime of control. Ironically, the actual design of the panopticon—to achieve direct human surveillance of prisoners at all times—did not become widely realized in prison design until the advent of “podular” prisons in the late 1970s in the U.S., the same time that CCTV began to promise an additional form of technologically-enabled constant supervision that might serve the same function. As many cases of abuse by prison guards

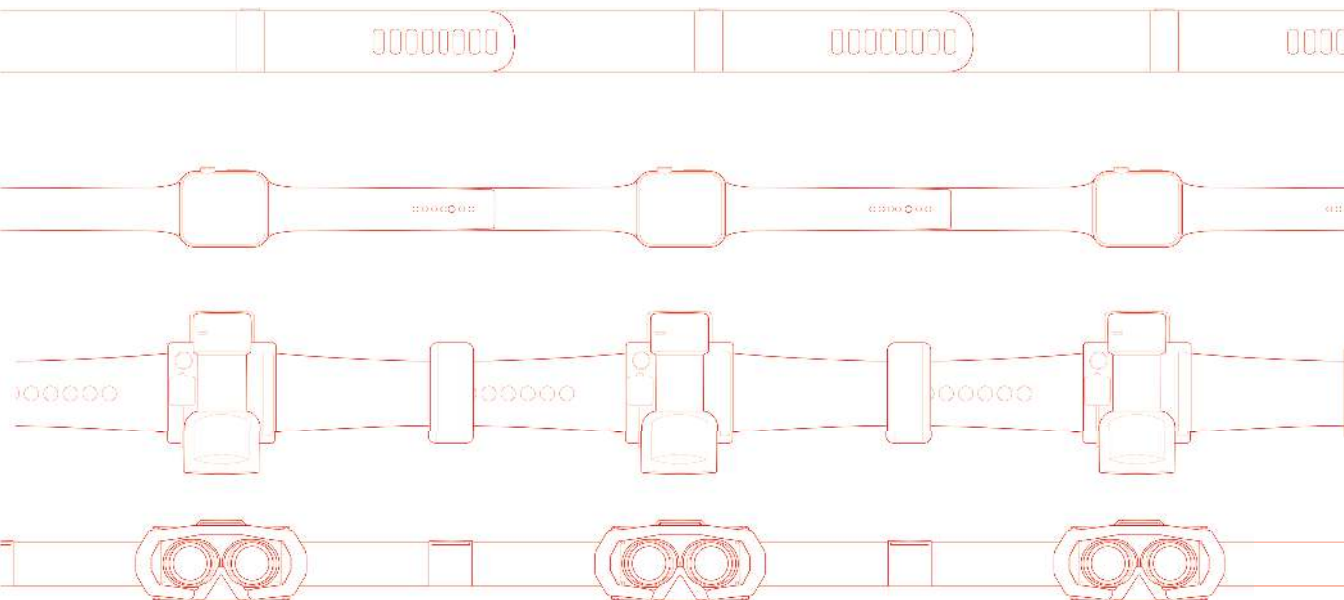
caught on videotape in prisons of all design types demonstrate, however, the prospect of surveillance does not do much to restrain people's actions. All too many video cameras have no one watching them, or at least no one who is prepared to do anything about what they see. So since surveillance by camera did little to fulfill the dream of the panopticon, there's good reason to doubt if EM will be more successful.

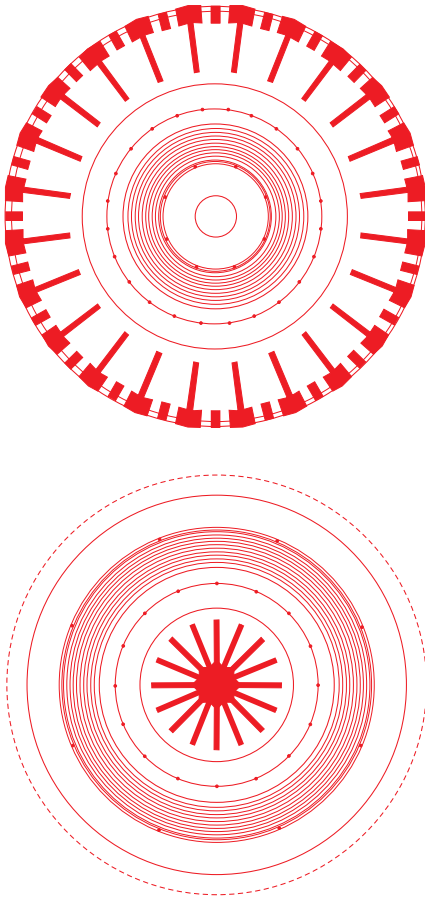
In general, I think that these technologically mediated systems of control are still very subject to human intervention. The example you raised from Paul Virilio, of the use of metal detectors in prisons, has been frequently circumvented, as evidenced by the widespread presence of contraband in prisons. Very often, the smuggling is carried out by prison guards themselves: the collusion of the metal detector operator defeats any improvement in the technology. In the case of EM, the devices generate so much data that the question becomes who is responding to which parts of it, why, and how. Not only is data not

neutral, but in the American private for-profit implementation of EM, the corrupting aspects of the profit motive have moved from "informal" arrangements to a central feature of the program. Data will be pressed to flow, and control will be accumulated to further the profits of those in charge of the system, not directly for public safety or for the rehabilitation of those on the monitors.

JG: This is but one of many cases in which the rhetorics of Big Data meet two logical challenges. On the one hand, there are the unresolved technical and ethical questions you raise around data ownership and interpretation. Virilio's point was more to raise the irony of the tech transfer, to address the fact that this particular technology had moved from spaces of motion (airports) to stasis (prisons), and not the other way around as one might presume. Obviously, both were marked by authoritarian control. Today, EM shows how surveillance has moved from detection to data collection and interpretation.

The quantified self and its varied instruments of measure.





Plan of Jeremy Bentham's archetypal Panopticon and its inversion, an orthographic diagram of EM's shift from centripetal to centrifugal orientation of the spaces of incarceration.

RS: This is also an interesting challenge to the widely-held notion that “information wants to be free”: what does that statement mean in this context? EM information isn't generally available to the person wearing the monitor, and the companies that own it aren't (or at least shouldn't be) free to use it any way they want either. This kind of forcibly collected personal data actually undermines freedom by its very existence—which is the point: to use information to replace prisons. I am often struck by the shallow libertarianism of the tech sector; EM seems to really showcase a lot of those problems.

JG: Will EM change the politics of invisibility of the carceral system?

RS: One of the central features of the current system we have of mass incarceration is how it is structured to render the incarcerated population invisible. The remote locations and high walls of prisons are perhaps the most obvious aspects of a much broader network of stigmas and restrictions that keep the incarcerated and the formerly incarcerated outside the bounds of mainstream social and civic life. (As one formerly incarcerated person remarked to me, it's obvious that this system is racially and class structured: no one talks about Martha Stewart as an “ex-convict.”)

In this context, EM seems to promise a reinclusion in civic life for those found guilty of crimes, but I'll believe that when I see it. One of the chief forms of exclusion has been the use of questions about criminal history to discriminate against people seeking jobs, housing, etc. EM has the potential to automate discrimination on the basis of criminal records. One of the most successful means of rolling back discrimination has been through

“ban the box” campaigns, several of which have been won by organizations of formerly incarcerated people. It is not uncommon for parole restrictions associated with EM to include a prohibition on associating with other people with criminal histories; if widely implemented, this could criminalize organizing against criminalization itself.

JG: Yes, there is the Miami case that Lisbet Portman recounts (Portman 2014)... The rules enforced by EM limited probationers to only living under a bridge. To intensify the absurdity, once word got out that parolees were living under the bridge, a small piece of land nearby was designated as park and even that space was no longer permissible. EM effectively leveraged expulsion of citizens who had been complying with restrictions and abiding by the conditions of their release after imprisonment. EM ensured continuous punishment and alienation.

RS: It seems like technology actually has the potential to take us into the past rather than the future. Banishment hasn't been a criminal sanction for centuries (if not longer), but that seems to be exactly what was achieved in Miami.

JG: What do you make of the quantified self question? The opt-in and opt-out is essential.

RS: This question seems so basic, but the simple fact that one has a choice of wearing a Fitbit or not sets it worlds apart from EM. This mirrors the distinction that sets prisons apart from other places: unlike a home, school, workplace, etc. you cannot choose to leave a prison. The liberal formulation of punishment is that the prison's restriction on liberty is the punishment itself, not the all-too-often degrading or dangerous conditions,

which are supposed to be unintended aberrations. Historically, however, the United States has not been able to operate prisons that come close to the liberal ideal. There are similar issues with EM and how it transcends the ostensible simplicity of its geofencing operations. You must opt-in to the geographical restrictions, but then you are also involuntarily opting in to contributing to the profits of the GEO Group. Or if the technology fails, you are treated like a criminal, not a consumer. A faulty battery can get you sent to jail, rather than on hold with customer service.

JG: But how does the quantified self render the future of EM? In one of James Kilgore's essays, he seems to predict that the IoT's birthing of the quantified self will render EM obsolete: we'll all be reporting, everything, already. Are we all, as the title of this article suggests, starting to “keep calm”?

RS: On the one hand, as we were just discussing, there is an essential difference between opt-in and opt-out scenarios, but over time those may fade away. Dave Egger's *The Circle* is only one recent vision of a coming world of total transparency that appears at first as an opt-in but rapidly becomes one that people cannot avoid opting out of due to social pressures. As quantified self technologies that are currently considered optional—think social media—become more essential and regulated (as happened, say, with electricity), their pervasiveness might approach the level of calm computing. Then perhaps future criminal sanctions would include restricting or even eliminating one's social media avatars. It is already acceptable in many states to inflict “civil death” as a criminal sanction through banning convicted criminals from voting or serving on juries (among other things); if

the virtual self became more legally incorporated into civic life, that might start to seem like a rational prospect.

JG: How about prospects for progress? Where might we hope to go now that the internet of things seems to be with us to stay?

RS: I'm not sure I like the idea I just came up with here: that criminal sanctions might take place in the virtual world. In some ways, I suppose it already happens and I'm OK with that. For instance, electronic monitoring of bank accounts might be a reasonable way to interdict fraud and simultaneously rein in the power of the financial sector. But the idea that social media becomes an essential part of civic life strikes me as potentially very destabilizing to human relations, governance, and trust. We've discussed how many within the technology sector seem to be fairly naïve when it comes to questions of liberty and privacy; this makes me nervous to accept the internet of things as it is currently advertised.

To the techno-optimist, perhaps a future where prisons are fully replaced by EM and people can reintegrate into their neighborhoods via social media would be the ideal, but from where I sit the possibilities seem far less bright. The communities most afflicted by crime and violence, and by violent policing, are already on the losing side of the "digital divide." For criminal justice, the most valuable progress I see being made is in the evolving practices of Restorative Justice and community empowerment. Human rights are of central importance here, for instance with the recent update of the *UN Minimum Standards for the Treatment of Prisoners* (PRI 2015): this kind of progress, which is powerful and essential, does not rely on the

internet of things. I can't speak for people who are sitting as victims in a Restorative Justice circle, but even with my imagination I can't see how if I were in that position, and I was faced with someone who had offended me who genuinely wanted to make it right, what use EM would be. After all, the person who offended has to opt in to make Restorative Justice work, so how much use would any technology structured so fully around coercion be?

Drawings by Jordan Geiger with assistance by Pouyan Bizeh.

Endnotes:

1. For an account of the story around ADPSR's proposed rule 1,402 to the American Institute of Architects, see Zeiger (2015).

2. As Sperry points out, "dark matter is like regular matter, only it can't be seen except through its effects on other things."

3. These are plentiful now, drawing on publicly accessible big data sets from sources like Megan's Law in California (<http://www.meganslaw.ca.gov>), and feeding private concerns with names like Family Watchdog (<http://www.familywatchdog.us>) or Criminal Watchdog (<http://www.criminalwatchdog.com/neighborhood-watch/>). See also the gunfire detection site ShotSpotter (<http://www.shotspotter.com>), which represents reports of urban gunfire—seemingly innocuous, but possibly meaningless.

4. Jacob Reidel recounts for example the Vernon C. Bain Correctional Center at Hunts Point, New York (Reidel 2014).

5. This ambiguity was epitomized as Martha Stewart wore it—and got caught by it—defying house arrest after a conviction for insider trading. To this we can append a growing list of fame and infamy in public figures who have been fitted with the ankle, a sort of contemporary star map of our times. See Kilgore (2012a).

6. "While house arrest is no doubt preferable to a stay behind bars, many people upon release are being put on monitoring as an additional means of constraint. In such cases, the use of EM is extending the length and intensity of a sentence, rather than relieving it. Electronic monitoring is often conflated with prison reform, but in most cases, it is used to intensify punishment" (Portman 2014, 121).

7. See Kilgore (2012b).

8. In the Canadian context, see Tings Chak's *Undocumented: The Architecture of Migrant Detention* (2014), which has taken form as a graphic novel and exhibition.

9. "Proponents of electronic monitoring hew to a doctrine of personal responsibility; they believe restitution—even to a jailer or taxpayers—is the first step toward recognizing one's misdeeds [...] Progressive politicians roundly support the devices" (Swan 2014).

10. SuperCom, based in Israel since 1988, entered the US market in 2014. Its many product lines range from EM to secure payment, e-office, healthcare, and parking management. Some of their technologies are used across all of these uses, showing a sort of agnosticism to the "calm."

Works Cited:

Chak, Tings. 2014. *Undocumented: The Architecture of Migrant Detention*. Montreal Amsterdam: Sections, an imprint of The Architecture Observer.

Civic Research Institute (CRI). n.d. "Journal of Offender Monitoring." <https://www.civicrosearchinstitute.com/jom.html>.

SFBG. 2010. "Who Profits from ICE's Electronic Monitoring Anklets?" *48hills*, 16 March. <https://sfbgarchive.48hills.org/>

[sfbgarchive/2010/03/16/who-profits-ices-electronic-monitoring-anklets-0/](https://sfbgarchive.48hills.org/2010/03/16/who-profits-ices-electronic-monitoring-anklets-0/).

Kilgore, James. 2012a. "The Rise of Electronic Monitoring in Criminal Justice." *Counterpunch*, 30 April. <https://www.counterpunch.org/2012/04/30/the-rise-of-electronic-monitoring-in-criminal-justice/>.

Kilgore, James. 2012b. "Would You Like an Ankle Bracelet with That? Winners and Losers in Electronic Monitoring." *Dissent*, Winter, 66–71.

Lallanilla, Marc. 2013. "'Biohacker' Implants Chip in Arm." *Fox News*, 4 November. <http://www.foxnews.com/tech/2013/11/04/biohacker-implants-chip-in-arm/>.

Penal Reform International (PRI). 2015. "UN Standard Minimum Rules for the Treatment of Prisoners (Nelson Mandela Rules)." *Penal Reform International*. <https://www.penalreform.org/resource/standard-minimum-rules-treatment-prisoners-smr/>.

Portman, Lisbet. 2014. "Change of Scenery: The Architectural Reach of Electronic Monitoring." *Scapegoat* 7. Toronto: Scapegoat: 119–32.

Reidel, Jacob. 2014. "Shipping Out." *Clog 10: Prisons*, edited by Kyle May. New York: Clog.

Saletan, William. 2005. "Call Me Cell: Why GPS Tracking Is Good News for Inmates." *Slate*, 7 May. <https://slate.com/technology/2005/05/why-gps-tracking-is-good-news-for-inmates.html>.

Swan, Rachel. 2014. "Jail To-Go: Ankle Bracelets Could Be the Next Great Law Enforcement Tool, If the City Doesn't Get Defeated by Data." *SFWeekly*, 21 May 2014. <https://www.sfweekly.com/news/jail-to-go-ankle-bracelets-could-be-the-next-great-law-enforcement-tool-if-the-city-doesnt-get-defeated-by-data/>.

Virilio, Paul. 1991. "The Overexposed City." In *Lost Dimension*, translated by Daniel Moshenberg. Cambridge, MA: Semiotext(e).

Voice of the Monitored. 2014. "European Committee of Ministers Adopts New Recommendations on Electronic Monitoring." *Voice of the Monitored*, 24 March. <https://voiceofthemonitored.com/2014/03/24/european-committee-of-ministers-recommendations-on-electronic-monitoring/>.

Voice of the Monitored. n.d. "About." *Voice of the Monitored*. <https://voiceofthemonitored.com/about/>.

Weiser, Mark, and John Seely Brown. 1995. *Designing Calm Technology*, Palo Alto: Xerox PARC.

Wood, Graeme. 2010. "Prison Without Walls." *The Atlantic*, September. <https://www.theatlantic.com/magazine/archive/2010/09/prison-without-walls/308195/>.

Zeiger, Mimi. 2015. "Tough Cell: Architects' Involvement in Prison Design." *The Architectural Review*, February 2. <https://www.architectural-review.com/essays/tough-cell-architects-involvement-in-prison-design>.



Ling Tan, *Reality Mediators*, 2013.