Surveillance as casework: supervising domestic violence defendants with GPS technology

Peter R. Ibarra · Oren M. Gur · Edna Erez

Abstract Academic discussion about surveillance tends to emphasize its proliferation, ubiquity, and impact on society, while neglecting to consider the continued relevance of traditional approaches to human supervision, an oversight insofar as surveillance is organized through practices embedded in justice system-based casework. Drawing from a multi-site study of pretrial personnel utilizing global positioning system (GPS) technology for domestic violence cases in the U.S., a comparative analysis is offered to illustrate how the handling of a "problem population" varies across community corrections agencies as they implement surveillance regimes. In particular, the study finds that surveillance styles reflect whether an agency is directed toward crime control and risk management, providing treatment and assistance, or observing due process. These programmatic thrusts are expressed in how officers interact with offenders as cases, both directly and remotely. In contrast to the ambient monitoring of environments and populations through data-banking technologies, the interactive surveillance styles described in the present study highlight the role of casework in surveillance.

Introduction

Surveillance has become pervasive as information systems that document people's quotidian activities have multiplied [49]. These systems collect steadily increasing streams of personal information that are stored in unevenly regulated, coordinated, and accessible data banks, to be tapped into on an "as needed" basis by market- and government-based actors.[1] The assembly and retrieval of these *digitized* data reflect the institutionalization of surveillance as an ordinary and "ubiquitous" feature of

---

[1] These data banks need not be remotely located; for example, "smart phones" provide veritable troves of banked data (cf. [69]).

P. R. Ibarra (✉) · O. M. Gur · E. Erez
Department of Criminology, Law, and Justice, University of Illinois at Chicago, 1007 W. Harrison St., BSB 4022 (M/C 141), Chicago, IL 60607, USA
e-mail: pibarra@uic.edu

O. M. Gur
Department of Criminal Justice, Pennsylvania State University, Abington College, Abington, PA 19001, USA

contemporary life [28]. Such *ambient surveillance* entails the kind of data collection and information management that occurs routinely, silently, and unobtrusively when, for example, visiting web sites, swiping ID cards upon entry to a secured facility, dialing telephone numbers, having one's image captured on closed-circuit television (CCTV), carrying credit cards containing radio frequency (RF) ID tags, or using social media.[2]

A number of academic disciplines consider surveillance an object of inquiry; of interest to criminology is the penetration of surveillance technologies across all phases of the criminal justice process. These developments reflect broader trends in the growth of the "surveillant assemblage" [36], whereby surveillance has become increasingly democratized[3] and embedded, i.e., "rhizomatic" ([36], p. 614, citing [18]). Key to understanding surveillance in United States criminal justice contexts is the idea of *the case*, for the fact that a person is a case means that surveillance becomes interactive, shaped less by its ubiquitous reach and more by the focused processes that organize, for example, supervision or investigation. Whereas ambient surveillance is faceless, diffuse, and operates impersonally, *interactive surveillance* is personified, focused, and pursued in response to a person's status, identity, or actions.[4] Interactive surveillance is purposeful and directed, characterized by unique practices—often including the use of face-to-face interaction—that yield information not necessarily digitized or searchable on demand or by algorithm. Interactive surveillance entails, minimally, interaction between a surveilling agent and an object of surveillance: a case. Rather than constituting a bifurcated pairing, however, ambient and interactive surveillance can function symbiotically: exemplifying "function creep" ([17], *passim*) [48] (cf. [87]), i.e., the repurposing of technological tools and systems, innovations adopted by justice institutions appropriate extant surveillant data streams while also contributing to their growth.

Although electronic monitoring (EM) is a common basis for the surveillance of criminal justice populations in the U.S., scholarly investigation has focused on evaluating EM's impact on various outcomes (e.g., desistance, compliance, recidivism) (e.g., [68, 64, 2]), rather than documenting the surveillance processes it engenders.[5] The purpose of the current study is to examine "styles of surveillance" among community corrections officers using EM, employing a specific and comparative analysis (cf. [30])

---

[2] Ambient surveillance emerges from the rise of ubiquitous computing and ambient intelligence (cf. [83]), which essentially document in digitized form an increasing range of human traces ("footprints") and actions (current location, vehicular movements, economic transactions, interpersonal contacts, online behavior, etc.) (cf. [70, 81]). Ambient surveillance is distinguished from mass surveillance in that the latter is directed by the state, whereas the former encompasses both state- and market-based forms of surveillance.

[3] Surveillance has become democratized as people increasingly have their lives and routine activities recorded, documented, tracked, and rendered into searchable databases, including socially powerful individuals who historically could use their status to shield themselves from bureaucratic organizations that might seek to monitor them (see [36], p. 618).

[4] Because it works "silently," ambient surveillance can be ignored, forgotten, and taken-for-granted, or become the subject of folklore, rumor, and speculation, and hence the object of collective action, such as when users of a smart phone application organize to protest changes in a social media company's "privacy" policies [43]. By contrast, interactive surveillance is difficult to mobilize against politically insofar as those subject to it feel restricted in expressing their rights (e.g., to liberty, privacy), are unaware of their status as a case, or are deemed unsympathetic figures to "rally around." Nevertheless, on an individual level, it is evident that resistance and sabotage may be practiced by those subjected to electronic surveillance.

[5] There has also been extensive work examining how offenders experience the condition of being electronically monitored (e.g., [67, 38, 41, 23]).

of how the tools of surveillance are integrated into local agendas and routines, variegated traditions and ideologies, and legal and extralegal considerations associated with social control and rule enforcement. Specifically, we examine how a "second generation" [52] EM technology—GPS—is implemented through interactive surveillance with domestic violence (DV) defendants in three U.S. jurisdictions. GPS tracking is an instructive technology for conceptualizing the distinction between interactive and ambient surveillance, for it targets a specific group—a set of cases—rather than a general population, and yet its constantly-banked data streams mimic the behavior of ambient forms.

The capabilities of technologies, including GPS tracking, do not describe or explain the practice of surveillance, either in general or as conducted by the criminal justice "system" (cf. [51]). Discussions of the "surveillance society" [50] often posit a unidimensionality to technology-based surveillance that is not supported empirically. According to David Lyon:

> Surveillance today is often thought of only in technological terms. Technologies are indeed crucially important, but two important things must also be remembered: One, 'human surveillance' of a direct kind, unmediated by technology, still occurs and is often yoked with more technological kinds. Two, technological systems themselves are neither the cause nor the sum of what surveillance is today. We cannot simply read surveillance consequences off the capacities of each new system ([50], p. 6).

Surveillance technology acquires its "effects" from how it is used, but surveillance and technology are not coterminous. It is crucial to investigate how technologies are incorporated into the practice of surveillance, and not assume that any given technology is implemented identically by surveilling authorities or with the heterogeneous populations brought under their purview. Paterson and Clamp [66] correctly note:

> It is essential to understand surveillance technologies as social and policy constructs where the function of the technology is determined by the environment in which it is utilized and experienced by the public. Technology manifests itself in different forms in different socio-political and cultural contexts. Therefore, new surveillance programmes must be understood as products of their environment; they are creations of the criminal justice agencies which have developed them and the offenders/victims who interact with the technology ([66], p. 53-4).

As new forms of technology appear, they are "constructed" as useful in responding to "problems" [77, 42] framed through local, instead of, or in addition to, national lenses, and incorporated into pre-existing justice infrastructures. In the current case, EM technology was adopted by courts' pretrial services programs as a way of ameliorating a "problem" that prior means had been unable to effectively address: keeping DV victims "safe" from their alleged abusers pending adjudication and disposition of a criminal case. Yet, as illustrated below, surveillance technology has been implemented dissimilarly across jurisdictions.

We argue for a view of surveillance as casework (cf. [75]) embedded within interactive processes emerging from defendant-focused regimes of social control. The

ends of social control shape the *styles of casework*, and hence how surveillance is mobilized and experienced. Accordingly, the means and ends of social control should be identified in interpreting the organization and practice of surveillance. Characteristic styles of agency practice vary, highlighting the importance of describing and analyzing surveillant technologies in context. GPS tracking is not simply a mechanism for enforcing curfew and mobility restrictions on DV defendants; rather, its compliance-focused agenda is incorporated into the practice of interactive surveillance by pretrial officers who use GPS in accordance with the traditions in which they have been trained, as favored by the agencies where they are employed. These traditions animate and legitimize the varying approaches to, or "styles" of, interactive surveillance that are observed in action. Because these styles reflect varying methods and philosophies of community corrections, we first address how supervision has been conceptualized in the literature and review prior research on supervision utilizing EM technology, before examining interactive surveillance in three U.S.-based GPS for DV pretrial programs.

Literature review

Supervision styles and penological discourse

EM has been increasingly incorporated as a tool for managing the risks posed by offenders on conditional release, including those accused of DV. The use of partially incapacitative ([35], p. 48) conditional release during the pretrial period in the U.S. entails the creation of supervision programs structured as "probation-like alternatives" ([35], p. 12), fashioned on a casework model (e.g., [13], p. 31).[6] The nature of pretrial supervision can be understood by drawing from concepts developed in the probation and parole literature, and by reference to currents in penological discourse that direct or comment on the handling of offenders by the justice system.

Discussions of supervision style in the context of probation and parole have historically centered on the extent to which an officer or agency is oriented toward "law enforcement" or "rehabilitation." For Glaser [31], parole supervision entails some mix of *control* and *assistance*, the former including "surveillance"[7] of the offender, and the latter including practices traditionally viewed as forms of "casework" [55] (cf. [4]). Similarly, for Klockars, probation officer styles of supervision are defined by whether they are oriented toward casework; in the typology he offers, only "synthetic" officers balance the "law enforcer" and "therapeutic agent" orientations ([46], p. 550-1) (cf. [57, 76]), albeit not without difficulty. Accounting for the importance of agency culture, Clear and Latessa demonstrate how a given agency's "organizational philosophy" influences officers' handling of ill-fitting "expectations" ([11], p. 452)—stemming from role conflict associated with the treatment versus control distinction (cf. [1])—whereby officers' use of discretion reflects agency imperatives, rather than individual preferences.

---

[6] These pretrial supervision programs emerged out of the "second generation" bail reform movements of the 1970s and 1980s ([34], p. 1556-8).
[7] Glaser defines surveillance "as any act involving direct or indirect observation of the parolees' activities to ascertain that they conform to supervision rules" ([31], p. 432).

Drawing from and synthesizing the analyses of such writers as Foucault, Feeley and Simon, Garland, and Deleuze, Nellis [58] has identified "three inter-connected sets of [penological] discourses" ([15], p. 79): "managerial-surveillant," "punitive-repressive," and "humanistic-rehabilitative" ([58], p. 178). These discourses correspond with and ground distinctive practices and emphases—some influential at certain points while others fall out of favor—and hence are pertinent to understanding approaches observed at criminal justice agencies. The broad adoption of EM coalesced with the ascendance of managerial-surveillant discourse, the "new penology" (cf. [26, 9]), and the redirection of community corrections toward reducing dangers that offender populations pose for the public, rather than their rehabilitation [7] (cf. [12]). Investigating the influence of "actuarialism," Lynch's [48] ethnographic study describes how, despite efforts by "regional and statewide managers" (p. 857) in California to organize parole practice in ways consonant with new penological emphases (e.g., handling of offenders in terms of their risk classification and "case plan"), officers approach supervision through traditional investigative techniques, conversational stratagems, and intuition gained during face-to-face interaction to determine who merits treatment as "dangerous." Robinson [71] found that officers in England and Wales are "reluctant to forgo the traditional 'relational basis' of probation practice" (p. 14), viewing risk rationalization schemes as contrary to the "culture" in which they were trained. Lynch, Robinson, and others (e.g., [7]) highlight the continued importance of officers' front-line practices and professional training and tradition, notwithstanding the penological discourses that may be promoted by others standing at some remove (e.g., management, policy makers, the public, social theorists).

Surveillance with electronic monitoring

Initially, upon EM's emergence, scholars speculated about its implications for probation [27, 44, 25, 14] and its welfarist traditions (cf. [80])—at times with ominous undertones (see [27]). Thus, Erwin [25] suggested that EM might lead to "a fascination with the technologies of enforcement" ([25], p. 66), supplanting probation's traditional focus on constructively changing individuals. The "complex analysis required of the treatment model" ([14], p. 408)—reliant on "higher-order skills (interpersonal communications, personality assessment, diagnostic protocols, crisis intervention, substance abuse assessment and referral)" (p. 408)—would be displaced, cementing the "secondary" position of the rehabilitative model in relation to control ([14], p. 407, citing [10]). The "panacea" of EM ([14], p. 399; cf. [52]) threatened to promote supervision styles more reliant on the mechanical collection of "facts"—as emphasized by EM's capacity to regularly bank and afford access to quantified information about clients—and less on casework and human interaction. EM promised to reduce "anxiety and guesswork endemic to the casework approach" ([14], p. 408) in favor of a surveillance-based regime whose officers have "responsibilities akin to those of a clerk/technician" ([14], p. 408).

While studies of how officers monitor offenders with EM have been scant, research from England and Wales [39, 45, 65] and the U.S. [40] highlights the importance of the institutional context within which EM-based surveillance is practiced. EM in England and Wales is predominantly administered by a mixture of privately contracted monitoring companies (e.g., G4S, Serco), sometimes with the involvement of state-sponsored justice agencies (i.e., the English Probation Service) (cf. [32]); in the U.S.

it is typically[8] embedded within traditional criminal justice professions operating at local, state, and federal levels. Probation staff and sheriff's deputies are justice professionals, rather than technicians of a private company: the former are fully nested within agencies functioning under state mandate (e.g., courts, police departments, and community corrections), providing sources of training, tradition, career advancement, job security, fraternity, professional identity, and infrastructure (e.g., sworn law enforcement as professional peers or colleagues) not readily available to the latter, i.e., those contracted as private-sector employees (see [39], p. 62).[9]

The England and Wales-based research examines how privately contracted field monitoring officers (FMOs)[10] surveil offenders while demonstrating an abiding concern for the "bottom line." "The work undertaken by [FMOs] in principal is the same nationwide" ([45], p. 582; cf. [32]): They are focused on observing the terms of "strict contracts" ([39], p. 62) that specify "performance targets" ([65], p. 317), while facing "financial consequences" ([39], p. 62) if they fail to meet them. Aside from verifying curfew compliance,[11] FMOs trouble-shoot technical problems, relay information to inductees, handle installation and de-installation procedures, and conduct "tamper investigations" ([45], p. 583; [39, 65]). Companies can be penalized if officers do not respond to alerts quickly enough, respond to too many curfew violations, or take too long to install equipment or submit documentation.[12] Given these benchmarks, offenders do not receive a long-term focus or forms of support from officers ([65], p. 321). Rather, FMOs administer "punishments imposed by the courts" in a role organizationally defined as being "about 'control' rather than 'care'" ([39], p. 60). Unlike a traditional criminal justice organization, which models approaches its employees should adopt, none of the officers' "working credos" [39] (cf. [73])—encompassed through contrastive terms that mirror somewhat the styles of probation/parole supervision documented in the literature—appear to be endorsed by the private company. "Credos" seem to function as individual preferences, perhaps because much of the "working life" [39] of FMOs is colored by management of personal fear and risk,[13] rendering the organization's imperatives less consequential while raising questions about the infrastructure and support provided to FMOs.

---

[8] Approximately ten states use private probation (for-profit and non-profit) to supplement state-run probation services, including Alabama, Arkansas, Florida, Georgia, Missouri, Tennessee, and Utah. These agencies are entrusted with supervising misdemeanants and low-risk offenders [74]. Stillman [78] offers an in-depth journalistic account of the private probation industry in the U.S.

[9] See the article by Nellis (this issue) [61] for a historical account of the relationship between EM and probation in England and Wales.

[10] Hucklesby's sample of privately-contracted FMOs ($N=20$) had worked in retail, office, and factory settings, in the security industry, as cable television installers, or served in the armed forces ([39], p. 63). Paterson's [65] sample includes a mix of privately contracted FMOs, as well as staff employed in state-based agencies (e.g., probation officers), but systematic comparisons between the two groups' supervision practices are not made.

[11] Information about curfew compliance is forwarded to a central monitoring service, "where it is acted upon," but it is not clear by whom or how ([45], p. 582).

[12] Such tracking of the FMO's working practices implies that FMOs are surveilled as much as they surveil, a point that Paterson [65] explores in some depth.

[13] Hucklesby describes officers who skirt threats in the field by avoiding assigned areas ([39], p. 69), misrepresenting the auspices of their home visits, minimizing their authority to offenders, aborting visits prematurely, and sidestepping confrontation ([39], p. 70). The company's policy—stating that "if monitoring officers felt unsafe before or during a visit they were not required to complete it and simply had to inform managers of their decision" ([39], p. 69)—presumably encouraged such an orientation.

In a fieldwork-based account (see [40], p. 34) of a pretrial supervision program in a Midwestern U.S. county's probation department, Ibarra [40] examines how EM is deployed in the context of DV cases to deter defendants from contacting an estranged partner. Ibarra explicates how EM is embedded amidst a series of liberty restrictions.[14] Compliance is documented by monitoring records that, along with the immediate arrest report, arrest history, and information provided by the victim, constitute an assemblage of tools used to construct a client's "risk horizons" ([40], p. 46)—i.e., the officer's emergent sense of the range of dangers a client poses to a victim, himself, or others (e.g., children, pets). Reminiscent of Emerson's [17] term "remedial horizons," as used by Ibarra [40], the risk horizons are in play and constantly changing based on the officer's reading of converging data streams. "Red flags" are signals to the officer that a defendant merits close scrutiny, while "trigger control" involves prospectively anticipating and managing the defendant's thoughts and feelings to ensure he remains actively deterred from harming the alleged victim [40]. As officers "work the case," red flags are not strictly, or even mainly, derived from the RF-based EM records (including logs registering curfew-related behaviors, and tamper alerts), or risk classification.[15] Rather, and consistent with Lynch's study of parole officers [48], Ibarra ([40], p. 40) finds that, beginning with the initial intake meeting (cf. [46], p. 553; [79], p. 42), officers identify red flags by interacting strategically with supervisees, attending to what defendants reveal (intentionally and inadvertently) about their doings and states of mind, noting whether defendants dissemble, are evasive or overly-friendly, try to direct the conversation, or resist their authority.[16] By contrast, trigger control can involve encouraging the offender to take up certain pursuits, or altering the defendant's living environment so that presumably noxious influences are limited or removed (e.g., requiring that a defendant with a history of substance use relocate from a neighborhood with high drug activity).[17] The organization of casework around red flags and trigger control suggests that officers view surveillance technology as an insufficient means of deterrence or source of insight into a defendant's mentality.

---

[14] Inductees were prohibited from communicating with the victim and approaching the victim's residence, and faced a number of probation-like constraints and obligations.

[15] From the perspective of the risk horizon, a risk assessment score is but one seemingly static albeit validated data point among the many information streams that a community corrections officer can consider. Risk assessment generally pertains to placement and programming, and scores do not incorporate emergent information; the risk a client poses is constructed as being more or less "static." Constraints on defendants are based on a prediction about what they are "likely" to do (e.g., abscond, reoffend, violate court orders), and result in the offender being placed into a (a) program designed to receive "high" (or "low") risk clients [37], (b) risk-graded *version* of a program [72], or (c) judge-customized regime ([82], p. 11). See Lynch [48] and Bullock [7] for an examination of the role of risk classification in the work of parole and probation officers, respectively.

[16] For example, "Clients who seem inclined to 'test' rules, or who seem prepared to challenge the PO's [probation officer's] right to enforce them, stand out and are easily discerned by the PO in interaction, both because of their non-deferential manner as well as their gripes about various program elements" ([40], p. 40). The officer will tend to think that the defendant "is up to something," and subject them to "surprise" home visits.

[17] The approach echoes the strategy described as "environmental corrections" [16].

The current framework

Surveillance with, and without, supervision

Surveillance and supervision—as reviewed above—have varying degrees of interconnection in the work of EM officers. Surveillance-without-supervision is less informed by data stream discoveries, including those emerging from one-on-one encounters with surveilled persons. Such "surveillance" is atomistic: episodic, passive, non-cumulative, and fragmentary. Thus, the FMOs described in the England- and Wales-based research seem unaware of why an offender has been "tagged" or subjected to curfew, and the possible import of what they observe of an offender's actions or environment.[18] Supervision-informed surveillance (i.e., surveillance-*with*-supervision), by contrast, is characterized by recursivity, i.e., an officer's engagement with data streams that productively shape the ongoing "working of a case." Such practice is predicated on a holistic grasp of each person as having a particular biography, offense history, personality, set of needs, or complex of risks. When an individual is not a mere "data double" [36], but comprehended through a variety of sources, surveillance enables insight into a person's issues and challenges, and thus can extend the agency's emphasis on "control" *or* "care" ([39], p. 61). Ibarra [40] shows that a surveillance approach predicated on recursivity entails using accumulating information about a given subject to iteratively direct how surveillance proceeds; as bits and details about the defendant (and victim) are pieced together from personal encounters and technologically-mediated sources (E-mail and text messages, urine screens, monitoring logs, etc.), the officer crafts strategies to work the case. In such circumstances, surveillance and supervision are intertwined: each informs the other and can only be distinguished nominally. Surveillance is bound up with cases as they unfold and challenge supervising officers' interpretive practices. Core surveillance processes are integrated with and expressed through how officers interact with and interpret data streams, including "signs given and given off" [33] by offenders under their watch.

Accounting for "sense of mission" and due process

The preceding review also affirms the importance of accounting for the style of surveillance endorsed by a given jurisdiction, agency, or department to direct officer decision-making. While penological discourses are relevant for understanding societal changes and large-scale institutional trends, an organization's "sense of mission" ([85], p. 13) better illuminates the logic of casework practiced by officers, as it may permeate units therein. For Wilson, an organization has a sense of mission when its culture "is widely shared and warmly endorsed by operators and managers alike" ([86], p. 95). Influenced by overriding philosophies, professional background and training, organizational features, particular goals, and logistical considerations, surveillance styles—

---

[18] Although some of the offenders are also under the supervision of a probation officer, there is no indication of how data streams that emerge from monitoring affect the practice of probation supervision; indeed, as Mair and Nellis [53] note, in England and Wales, both policy and practice on probation and EM run on "parallel tracks" and rarely inform each other.

just like Wilson's "policing styles" ([84], cf. [3])—reflect the unique sense of mission characteristic of the unit where the officer is employed (cf. [11]).

The sense of mission animating justice agencies' programs and policies commonly reflect orientations skewed toward either end of two continua, each with inherent tensions between polarities: first, a due process versus crime control continuum associated with the means of criminal justice [63], second, a treatment versus punishment continuum associated with the ends of criminal justice—to "rehabilitate" or to sanction [29]. The community corrections literature is largely conceptualized around the handling of convicted parties, obscuring the central role of due process in casework with pretrial populations. Whereas a crime control orientation endorses the idea that "the repression of criminal conduct is by far the most important function to be performed by the criminal process" ([63], p. 48), and operations presume that offenders are "probably guilty," a due process focus prioritizes the "doctrine of legal guilt" over factual guilt ([63], p. 53), recognizing the "possibility of error" entering into criminal justice procedures. The treatment versus punishment continuum concerns the extent to which justice responses pursue the "ideal" of rehabilitation [29], as opposed to being content with acting retributively. The former orientation emphasizes discerning offender needs and constructing a remedial regimen in response; the latter is indifferent to offender needs, imposing instead deprivations and hurdles amounting to an ordeal. Although practices and considerations associated with opposing polarities will likely be found (cf. [6], p. 12), such divergences are apt to be constructed in ways that are consistent with, or do not undermine, the agency's commitment to its sense of mission.[19]

GPS for DV programs pursue a balance of emphasis along each of the two continua. Those programs stressing victim protection will likely have extensive supervisory levers in place, and hence affinities with a "crime control" approach. Such programs may establish restrictions pertaining to clients' lifestyles and social environments as much as the spatial and temporal mobilities [59] tracked by the technology. Programs dedicated to due process will tend to hold that restrictions should only involve what is minimally required to accomplish client supervision, valuing flexibility in handling the exigencies of clients' situations while being wary about creating legal jeopardy for participants or responding in a police-like way to real-time infractions. The treatment versus punishment continuum encapsulates different directions in which a GPS for DV program's built-in supervisory structure can be leveraged—to help rehabilitate, or secure suffering?—and therefore frames the meaning and purpose of surveillance in distinctive ways: both can be focused on "teaching" the offender, but the agenda driving the instruction is different (i.e., self-improvement or celerity). The professional backgrounds of officers employed at a given agency can be instrumental: personnel certified as social workers are apt to adopt different way of interacting with clients than those trained as deputies who cycle into the program directly out of a stint as a jail guard (cf. [5], p. 65).

---

[19] Making a parallel point in his discussion of probation's shift from a rehabilitation-centered practice to one focused on risk management, Garland (as quoted in [71], p. 17) argues that, now, when probation officers aim to rehabilitate, it is because it is deemed "necessary for the protection of the public[,]" as "It is future victims who are now 'rescued' by rehabilitative work, rather than the offenders themselves." Thus, for Garland, rehabilitation is "represented as an instrument of risk-management," rather than being cast as "an end in itself."

Methods

The present article extends research on EM for DV [21, 24, 40, 41] by examining established programs that deploy GPS tracking in the context of pretrial supervision. Data for the analysis are based on in-depth interviews conducted between 2008 and 2011 in three U.S. jurisdictions—Midwest, West, and South[20]—with criminal justice personnel involved directly or indirectly with the administration of GPS in DV cases ($N=50$).[21] These three agencies have distinct approaches to operating GPS for DV programs, enabling comparative analysis of offender supervision and victim services across the sites; such differences include the extent to which programs are onerous for offenders, seek the consent or participation of victims, focus on victim safety issues, incorporate treatment modalities, and demonstrate flexibility in accommodating unique defendant and victim circumstances. The three sites are also contrastive in their construction of legal issues, professional training of staff, and payment structures; the Midwest site does not require that defendants pay per diem costs, the West site almost always requires payment of fees, while the South site utilizes a sliding scale that usually results in defendants not paying any fees for participating in the program. The overarching logic of each agency's approach emerged through interviews with personnel and the full range of stakeholders at the respective sites (see [22]), enabling triangulation of statements pertaining to processes, practices, and perspectives.

Topics broached during semi-structured interviews (averaging duration of 90 min) were designed to garner the most pertinent descriptions and evaluations that personnel could offer based on their expertise and experience. Although interviews were wide-ranging, they focused on probing the a) legal, organizational, and technological distinctions and practices that define and structure the program's working environment, b) emotional, psychological, and practical impact that GPS program participation has on defendants and victims (including the latter's safety), and c) quality and intensity of victim support and offender supervision built into the program's design.

In-depth interviews were transcribed into electronic documents and coded manually. The coded data were the basis for memos on the themes that emerged during interviews. Taking note of the site at which the interviews were conducted, variations in themes were discerned, resulting in an analysis that was sensitive to both common themes and distinctive site differences. The memos were revised and developed into the following thematic sections in accord with principles of constructivist grounded theory [8]. Principles guiding this inductive approach include the identification and honing of core social processes, use of constant comparative analysis to infer common "properties" or characteristics of evolving categories, and discernment of conditions associated with patterns and configurations of action and meaning.

---

[20] Confidentiality was extended to defendants, victims, and professionals at participating agencies, and hence "Midwest, South, and West" are pseudonyms.

[21] The interviews are drawn from the qualitative prong of a multi-method study [22]. Overall, six agencies participated in the study: three "impact" sites (Midwest, West, South) and three "supplemental" sites; the former are sites where the bulk of data collection was conducted, including over three quarters of the interviews (for a complete discussion of the study's methodology, see [22], p. 15–28). The three supplemental sites have small programs; one had only recently been launched at the time of data collection and hence had not yet acquired a distinctive identity or sense of mission. The framework used to distinguish approaches to "working" GPS for DV cases was developed through a consideration of all six sites. For a discussion of the three supplemental sites and their approaches to supervision, see ([22], p. 58–61).

Interactive surveillance: the use of GPS for DV in three pretrial programs

The GPS-based programs for DV that participated in the present study implement EM technology as a way of bolstering casework in distinctively organized ways, shifting the focus, practice, and ends of interactive surveillance accordingly. Nonetheless, they share certain attributes due to their use of the same technology for the same offense type, and from having originated as responses to notorious local incidents in which arrestees accused of DV-related charges—and released on bail—seriously harmed (and in some cases murdered) their estranged partners, even though a formal protection or restraining order was in place. These programs typically pivot around one rule: the defendant must stay away from a named party, i.e., the alleged victim or prosecuting witness. Regardless of the objectives and values that animate a particular program's jurisdictional response to DV, the inherent capabilities of GPS tracking technology allow for "incessant" ([59]: *passim*) monitoring across time and space, and the creation of multiple and potentially unlimited zones of exclusion of various sizes where defendants may not enter. The GPS for DV defendant will likely be required to stay away from the victim's residence as well as any areas that either the victim or her children routinely visit (e.g., the victim's workplace and her family's residence; the children's school).

Like other "surveillance-based compliance" initiatives that use EM [60], GPS for DV programs have a basis for verifying and enforcing curfews that supervisors put into place. Compliance with curfew and zone restrictions is monitored via transmissions from a tamper-proof one-or-two piece GPS unit in communication with the monitoring system through satellite or cellular technology. "GPS points" that register the defendant's movements are documented and reported in real time by the monitoring system ("active" GPS), enabling the issuing of alerts to supervising staff, or after the fact, via download ("passive" GPS). Officers access the GPS data stream through proprietary mobile and desktop software applications that they request issue alerts based on selections from a drop-down menu (i.e., graphical user interface [GUI]). These settings pertain to such common "codes" (cf. [60], p. 156-7) as strap and device tampers, exclusion and inclusion zone violations,[22] and low battery or tracker-out-of-range readings, thereby permitting remote surveillance of the offender's temporal and spatial presence for the duration of enrollment in the program. Which codes are chosen as the basis for receiving alerts, the thresholds (i.e., spatial and temporal) at which alerts are set, and officers' responses to alerts, however, will tend to reflect their learning curves, along with the priorities and procedures the program has identified as congruent with its objectives and philosophy.

The Midwest site: crime control and punitiveness

Housed within the Sheriff Department's Electronic Monitoring Unit, this agency's program is led by sworn personnel who were previously employed in the county's Probation Department (on the "enforcement" rather than "treatment" side); more recent arrivals to the unit have backgrounds as either patrol officers or jail guards. The emphasis on crime control and law enforcement is a logical extension of these backgrounds. Although officers will say that they do not know whether the defendant is guilty or innocent of his charges, they do have access to his case file, in which often

---

[22] An inclusion zone is an area within which an inductee must remain, such as a county or residence.

appears an extensive listing of prior arrests and convictions.[23] Even if a given defendant is understood as possibly not guilty "this time," the officer has a general sense that the defendants he supervises are drawn from the larger population of those at "high risk" to re-offend. Furthermore, a precondition for enrollment into the program is that the putative victim in the case has consented to participate on the basis of her being actively fearful of the defendant. Thus, the program's structure is premised on the idea that the client represents a serious threat to the victim, and strongly implies that the defendant should be approached as someone capable of doing that with which he has been charged.

The program's regime of rules and restrictions pivots around risk management. The sense that the enrollees may be involved in banned activities, and hence pose a problem for both victims as well as an organization focused on "fighting crime," accounts for why officers do not let their supervisees know the nature of the technological apparatus to which they are tethered: GPS tracking. As one officer put it:

> We don't tell [defendants] that these units are GPS-enabled. We don't tell them that they're cellular-enabled. We really don't get into any of the technical aspects as it relates to the client—to assist us in maintaining the integrity of the program.

Keeping defendants in the dark is a strategy meant to detect which enrollees should not benefit from the relative freedom and mobility the program can allow. Thus, officers have an orientation that is aimed at managing the risks defendants pose to victims and the broader community by "weeding out" those deemed especially troublesome. As they see it, GPS "shines a light" on who can and cannot follow rules, and divulging too much technical information defeats one of GPS's advantages.

A second way in which risk is managed is by controlling how the defendant spends his days. An hourly schedule imposed a week ahead of time delimits his permissible movement; last-minute changes to the schedule are frowned upon. When there is divergence between a given location and what has been scheduled for a particular time, an alert is issued. As a sergeant explained it:

> We're going to know by scheduling out where you're at, you know? If you're supposed to be at work, is that your work location? Or, if you're not working, you've got to go see a doctor, okay? We should know where you're going to see your doctor, 'cause the last 'ping' we got was you going into that building, okay? Alright, now you're in there for a while, whatever. Now you're gonna come out. We should pick [the 'ping'] up as soon as you walk out the door.

The rigorous scheduling of the client's mobility is intended to impress upon him that he is being actively controlled. From the officer's perspective, "free hours" introduce too much unpredictability:

> You know, I don't have a camera on them, but if I see somebody in an area of high drug dealing and see that they're motionless for 15, 20 minutes, I think I have an idea of what they're doing. They're shopping for drugs. But I still do not

---

[23] Those enrolled in Midwest's GPS for DV program over a 3-year period ($N=531$) tended to have a relatively high number of prior arrests (mean=13.3) ([22], p. 64).

know what they're doing. If they have 'out hours,' they can say, 'well, yeah, I'm going to the grocery store, I'm going to do this or that.' Any time they are out and they're not at work and they're not at their house, bad things could happen. So I'd just as soon keep them one place or the other.

Given what is viewed as their unpredictability, defendants are limited to five "out hours" a week—a minimum not granted, however, to the unemployed.

When not at work, clients are expected to be at home, where they are subjected to "surprise" home visits. These can entail officers conducting anything from an "in plain view" to a fully-fledged search of common living areas as well as the defendant's sleeping quarters. The purpose of such searches ordinarily is to detect the presence of substances (e.g., drugs or alcohol), weapons (e.g., firearms or swords), and influences (e.g., associates, pornography) that may forecast heightened risk to the victim. As the lead officer for the unit commented:

> We look at living conditions; we're allowed per law [to] do plain view [searches]. And if there's nothin' when we look around, we're lookin' in here and go, 'Ok, it looks pretty clean, show me the rest of the house.' 'Do you care if I look in your closets, see, make sure there's no guns, or nobody's hurt or dead cats or dead dogs or grandma's not shoved in the closet?' And you start lookin' around and it's like, 'Ok, good to see you, have a good day,' check the equipment and you're gone. And there's other times you walk in there and there's beer bottles and cocaine and there's stuff in the corner, somebody's hanging [out]. And they're like, 'I didn't think you were coming over tonight!'[24]

Although defendants are tracked, victims are not, and so it can happen that victims in the case will visit and even be living with the defendant in his (usually) temporary residence. Rather than consider such discoveries as indicating that the original charges may be dubious or that the couple are working on reuniting, encountering the wife/victim at the defendant's dwelling during a surprise home visit is treated as an occasion for penalty. Thus, in one case the present researchers were accompanying officers in the field when a defendant's wife and their four children were found in the defendant's living quarters, watching television. After verifying the wife's identity with her driver's license, the defendant was asked to go downstairs, where he was handcuffed out of view of his children, and driven to the jail for re-booking.

Consistent with both crime control and punishment values, personnel are strict in their enforcement of program rules and requirements, to the point of appearing unreasonable and inhumane to the clients. For example, weekly office visits are required of defendants, during which the information exchanged will usually be fairly minuscule (though urine screens will at times be collected during these visits, and the encounters will be more substantial with those who are suspected of engaging in problematic activities). Despite their ordinarily perfunctory nature, all inductees are

---

[24] A compliant defendant described the nature and impact of the home visits as follows: "If [the officer] comes in and he searches, he searches my cabinets. He opens my refrigerator; he goes in the bathroom, opens the cabinets. He goes through my house. And you get caught with anything, you're going to jail. If he comes over and my brother's there, and my brother's breath smells like beer, I'm going to jail. So, I don't have nobody at my house… It's really, really strict. You have to really be careful and, like, really stay decent."

required to appear, often having to travel long distances and wait for hours before their visit with their supervisor—at the expense of their weekly allocated "out hours" and the patience of affected employers. The theme of consistent inflexibility is also seen with respect to the drawing up of exclusion zones, or the areas into which the abuser cannot venture: programmed as radii of two miles in circumference—by far the widest *default* perimeter in use at the three agencies—officers are unwilling to create zones of irregular (non-circular) shapes that would accommodate travel routes (interstate highways, bus lines, etc.) that otherwise "clip" the zone, resulting in increased burdens on defendants' commutes, especially those reliant on public transportation. Officers are suspicious, arguing that allowing exceptions to the rules will encourage clients to ask for more dispensations in the interest of getting officers to let their guards down.

The array of rules and restrictions has the merit, from the officer's perspective, of helping to identify those who struggle with being compliant. The officer's management of the information stream provided by GPS tracking logs is thereby directed: those who perform poorly with respect to rules and restrictions are also likelier to have their patterns of movement studied for possible issues representing risk to the victim (e.g., is the client having secret rendezvous with the victim? Are the locations where he dawdles possibly indicating that he is following her when she moves beyond the exclusion zone?). When they occur, minor infractions of the rules are seized upon by the officer to warn the client that such conduct can lead to the withdrawal of whatever limited liberties they have left: threats that the client could be put "on lockdown" (or total house arrest), for example, or be sent back to jail (officers have arrest powers), should he not "get with the program," are not uncommon. It should be noted that because these supervisors are also sworn law enforcement personnel, such warnings are not likely to be viewed as bluffs or empty threats. These reproaches are likelier to happen early in the history of the client-officer relationship; once the officer has a sense of the defendant's overall pattern of compliance and personality, "breaks" can be given.[25]

Face-to-face interaction is both a source of control and a means of surveillance. Warnings are an important mechanism in both respects, as when the defendants' GPS tracking history, also referred to as "GPS points," are incorporated into the substance of the conversation, alerting clients to the fact that their supervising officer knows more about them than the defendant may have assumed. Thus, one officer points out how

> It's interesting to find out, [to] see where these clients are, cause when you go from RF to GPS, you realize pretty quickly that the clients aren't always telling you everything. You see that, 'Well, I went to work today,' [can be responded to with] 'You also stopped by a grocery store, Blockbuster, you got a couple movies, and you happened to go to the liquor store [on your way home]. But you forgot to mention that to me.'

Over time, as the officer acquires a sense of the defendant's personality, cues gleaned through the extensive face-to-face interaction entailed by program participation alert the

---

[25] Clients who appear to be in circumstances where the case for their culpability is weak (e.g., because the victim comes across as bellicose in her dealings with the officer, or makes statements indicating she is unafraid of the defendant) are also likelier to be treated in a gentler and more flexible fashion should the need arise, but such treatment is based on impressions formed over time.

officer as to when something requires investigation. Thus, this supervisor advises GPS for DV officers to pay attention to changes in mien and demeanor:

> 'Is somebody more irritated than they usually are? I mean, you see these guys in their home, you see them in your office. Is this person acting what you might consider 'normal' for them, or is this person a little more irritated than normal? Keep an eye open for this.' [Training officers to work with GPS for DV clients entails] getting them to open their eyes beyond the traditional supervision they've done in the past.

Familiarity with the various events that are occurring in defendants' lives, including those on their calendars, is important for understanding sources of irritation that can engender non-compliant conduct. An upcoming divorce or custody hearing, for example, or inability to be present at a child's basketball game or birthday party, can distress a defendant and lead to desperate actions, according to officers.

A corollary of the program's effort to continuously receive updated information about the alleged abuser as well as provide better victim protection is the contact specialized program officers maintain with the victim in the case (two officers work as "victim specialists"). These officers contact victims about the defendants' proposed assignment to GPS, solicit victims' consent to participate, and provide victims with the officer's direct cell phone number, with instructions to contact her on an as-needed basis, 24/7. Good relations with a victim can provide the basis for conveying receptiveness to prosecuting a defendant who violates a temporary protection order (TPO). The victim has access to evidence not otherwise available to the officer, such as voicemail messages, personal letters written by the defendant, or flowers delivered to her address, which can attest to contact attempts that systematically evade GPS tracking. A pretrial officer states:

> I just went to court on one TPO—I arrested someone for a TPO violation, just went to court—[and] the prosecuting witness gave me handwritten letters signed by [the defendant] that were dropped off at [her] house. I listened to her voicemail, there's fourteen voicemail messages left on her phone. She didn't show up for court, but I still got him convicted on a TPO violation because of the evidence I had.

In pursuit of keeping open this source of insight into the defendants' activities, victims are encouraged to provide updates about their residence, the defendant's circumstances or other pertinent information for monitoring the client, and they are offered escort to court appearances to bolster their resolve to stand by the case and not be intimidated by the defendant or his family. So, while officers who use GPS do rely on it as a basis for casework, more classical sleuthing and evidentiary efforts are still useful and necessary to discern violations, perhaps especially in cases of DV, where interactive surveillance of a defendant can include reaching out to a victim for insight into otherwise opaque or ambiguous issues.

In short, all sorts of "data"—from victim reports, to observations of non-verbal behavior, living conditions at home, client testing of geo-zoned boundaries, and urine

screen results—become a source of insight into how to manage and respond to the risks that the defendant poses. As one officer put it:

> Everything becomes a tool in this program. You know, it's not the GPS equipment; that equipment—honestly, in this program—is no more of a tool than this computer is [said while pointing to laptop computer].

The South site: treatment and due process

South's GPS for DV program is housed in the pretrial supervision unit of a county-based community corrections department. Historically operated by staff members whose role was identified with enforcement of court orders, the department's spirit and approach were fundamentally altered when a sizable number of probation officers with a social work orientation were folded into the agency, under the direction of a former probation officer with an inclination toward treatment and services. South's approach to surveillance considers clients flawed, rather than guilty: as persons with patterns of conduct, feeling, or thinking that result in their getting into trouble, or "messing up." Officers grasp their clients through their biographies, and not just their arrest histories or pending charges. Clients may be described as having grown up without parental supervision or someone in a position to offer proper guidance as they matured, and they are seen as socially marginalized, lacking social support or social capital. Surveillance entails, in part, identifying, and having the client recognize in turn, why they get into "trouble," so that the client will be motivated to "change" and be better positioned to "successfully re-enter" society. As an agency director put it: "GPS is intervention, not punishment." In addition, based on an assessment tool used at intake, the agency has clients referred into its program with a wide range of risk profiles, scoring from low to high.[26] The risk "level" into which clients are placed also shapes the divergent approaches that supervisors take to exigencies that commonly arise. The result is an agency that individuates treatment and brings a flexible attitude to client management.

The bedrock of South's approach appears to center on the notion of rapport and the building of a trusting relationship. Partly this can be promoted by creating the idea of a working relationship, as is indicated in this officer's statement about how "schedules" are established:

> Our schedule process is not, 'You have to leave at 4.' It's, 'What time do you have to be at work? How long does it normally take you to get there?' Um, 'If you take the bus, how long does it take you to get there? If you don't have a ride, what happens then?' So that schedule process is a meeting of the minds, you're going over it with them. You're not giving them a schedule; you guys are coming to an understanding of the schedule.

---

[26] Those enrolled in the GPS for DV program in South over a 9-year period ($N=177$) tended to have a relatively low number of prior arrests (mean=3.8) ([22], p. 83).

"Working together" is viewed as being consistent with a successful "intervention." As described by the agency's director:

> We want to create a relationship with [the] clients, a relationship of trust with our case officers. It's not one, like I said, of a 'gotcha' game. We're here to make you succeed in what you're supposed to do. 'Comply with all the conditions, do what you're supposed to do, we're not going to do a gotcha, we're going to work with you, we've got some leeway, but work with me, too, and our officers.' We do motivational interviewing, all those types of things very much to get the person to succeed…

Motivational interviewing is a revealing strategy in that its use presumes that the client can be coaxed into wanting to "improve" through social interaction, whether in person or by telephone. A "violation" can hence become fodder for motivational interviewing as much as a client's statement that he has turned a corner on how he handles a persistent problem, such as unemployment or anger. Both are grist for the mill of intervention. Thus, violations are not necessarily taken at face value and the underlying dynamic is not immediately related to risk-management issues. Instead, issued are construed as pertaining to problems in living—immediate or long-term—that the client is managing with varying degrees of success. Officers understand that clients are

> … not necessarily the most responsible of people if they've gotten [involved with] the criminal justice system, and they are going to mess up as they go through what's going on with their case in the system, so we try to give them some leeway. You know, if somebody comes back 5 minutes late from a curfew, we're not going to automatically violate them. If they continue to do it and we know that there's other things—they're testing positive for drugs, those types of things—then we give our officers a great deal of discretion as to when enough is enough.

Persistent problems with arriving home after curfew could be related to issues the client has in asserting himself as someone who must leave the work site at an exact hour. Repeated attempts to telephone his previous address may be associated with a father's difficulty in managing being separate from his children, and leaving home before previously authorized "out hours" to the reasonable responsible discharge of familial responsibilities (e.g., tending to a sick parent).

Rather than trying to catch the client unaware, doing something he ought not to have been doing, the program aims at transparency—unlike Midwest, for example, South is forthcoming about the nature of the technology and the perimeters encompassed by exclusion zones, to the point of giving the clients maps with street boundaries indicated[27]—and the focus of casework becomes tantamount to managing the client's well-being and path to reentry. The use of discretion is likelier to culminate in referral to services or an impromptu counseling session than in the writing up of a

---

[27] Such transparency is consistent with the theme of "helping the client succeed," as well as the general idea that GPS tracking is concerned with the management of offenders' spatial and temporal locations irrespective of the "discourse" underlying that management [58].

violation or submission of a request for a bond modification. Given that violations offer an occasion to address needs and encourage self-insight into how the client can change in a "healthier" direction, open and honest dialogue are essential to the client-caseworker relationship. Clients should feel that they have nothing to hide (including violating conduct), and hence clients who mislead the officer are likely to be met with punitive measures. That rapport is established between clients and staff is evinced in the familiarity that they sometimes show each other (researchers observed hugging between officers and clients upon arrival or departure); during interviews with the present researchers, clients commented on how the caseworker "helps" them deal with various issues, and how the caseworker had become a parental figure to them. The benefit of participating in the program is that clients will learn, as one officer put it, "that they have to be accountable. Some who found themselves in this position never would have gone out to look for a job or tried to go back to school."

In effect, violating behavior requires a diagnosis as much as an investigation, and the case worker's task is to help the client determine what is keeping him from being successful. A focus on violating the individual is not productive, for as one officer put it, "I firmly believe you can get everyone if you're going to play 'gotcha.' I don't know of a 100 %-compliant individual." Indeed, officers make a concentrated effort to convey to the clients that they are being tracked, by constant reiteration of geo-spatially based queries over the phone, meant to impress that there is no point in clients' attempting to defeat the system, or lie about their whereabouts, and hence needlessly violate exclusion zones. As a pretrial supervisor noted:

> We instruct staff, [in] that initial 24-to-48 hours, even 72 hours after they get on [GPS], that's where you want to do that. Even if you're not investigating an 'alert' or even if you're calling them and saying, 'I see you went on 27th and 31st and stopped there for about 4 minutes, what was going on over there?' And in your mind you really know it's probably nothing but you really want them to know, because believe it or not you put a device on someone and you tell them… 'Big Brother's watching,' sometimes they might not get that, so sometimes what you want to do in that 24-to-72 hours is you want to be calling them. Call them different times and say, 'Hey, I see you went to so and so, I see you went,' and they [realize], 'Oh, he can actually see me!' So we try to do that in the beginning to establish the fact that we are watching.

In the spirit of individuated "treatment," the program does not create a universal template of rules for clients to follow. Instead, it takes guidance from the presiding judge or magistrate who referred the client to the monitoring program and formulated the terms of pretrial release; case workers may add new foci to the case management as needed, such as providing assistance to a client who becomes interested in obtaining a GED. Some judges even allow defendants to have limited, "non-hostile" interaction with victims (i.e., so long as it stays on a narrow topic, such as contact with respect to shared business assets or parental issues), and allow a smaller number of clients to live with their victims (essentially undoing the idea that GPS tracking should be deployed in the interest of shielding the victim from the defendant).

Thus, there is wide variation in how restrictive or demanding "life on the box" will be for clients, pursuant to the judges' orders (and the client's "risk level"). Exclusion zones are irregularly shaped and can be of diverse ranges, from as few as 500 ft to as much as a few miles, but can also be drawn up to encompass entire cities or other jurisdictions (i.e., when the victim lives in another city, county or state). Some clients do not have curfews at all, others are directed to attend mental health treatment, drug counseling (Narcotics Anonymous), anger management, batterer intervention programs, or to submit to urine screens. One pretrial specialist remarked:

> I have a couple that they can stay out all night if they want to. As long as that equipment is working properly, there is no problem. On the other hand, you have other [inductees] that the court orders a lot more strictly: NA meetings, competency restoration classes, mental health evaluations and things like that. So we have to make sure that they follow their court order.

GPS points may be checked not just in the interest of victim protection, but to follow up on whether a client is making the kinds of positive changes he has indicated he is interested in making, such as attending church more regularly, according to one officer:

> A lot of those who… ask—when they find out they have three [allotted] hours of religious ceremony time—'Oh, yeah? I go to church.' And I'll put a—what do we call it?—an 'area of interest zone' around the church, as an area of interest, and every so often I'll go back and check during the time they said they were in church services to see in fact if they were in that area of interest.

Experience has taught the caseworkers that monitoring-based information (i.e., GPS points relative to exclusion and inclusion zones), as well as victim-reported complaints, cannot be taken at face value and need to be "checked out."[28] GPS alerts are checked against clients' schedules, statements elicited through direct cellular communication with the client, GPS tracking histories, search engines, and social media sites (e.g., Google, Facebook); at times, such triangulation may even entail contacting employers for verification and estranged partners for insight. Even in non-alert situations, points on a map do not per se reveal what a client is doing:

> I guess it would be nice if we could just sit at the computer and look at points, but even looking at points—and I've been to different jurisdictions where they do that—you still have to rely on information because you don't know everything on that map. You don't know where that was. You don't know if that's a crack house they went to—I'm just giving an example—you don't know if that's the actual attorney's address, *if* that's an actual attorney. Just looking at the map, you have to rely on other information, even if you are just looking at points.

Thus, much supervision occurs by telephone. There are many calls back and forth between client and supervisor. Clients call and leave messages if they will return home

---

[28] Strap tampers, drained batteries, and transmitter out-of-range readings trigger alerts that are also investigated immediately.

late or leave home early. Supervisors call clients if there are issues with getting a signal from the client's transmitter. Thus, one officer noted:

> Usually I'm asking them, 'Ok, well why did you leave home before you were supposed to leave out?' Or, you know, 'why is it that you, why are you out late, why are you half an hour late getting back home,' and for the most part, most of them, they've already been in the habit of, if you check your voice messages first, the answers to those alerts are already on the voice messages. 'I'm on the bus,' 'I missed the bus, I'm on my way home now,' it's already on the voice message; they've called and let you know.

Defendants are encouraged to call if they have problems, or to consult their supervising officers if they encounter difficulties in conforming to the rules, or if hardships have arisen in their lives. Some clients develop the practice of calling in just to check in with their supervisor and let them know that everything is okay. The telephone-based interaction can hence become a basis for reinforcing themes that emerged during office visits, or identifying new issues with the client.

Home visits are rare and conducted by an unarmed, non-supervisory field officer who does not enter the client's home premises unless he has to inspect equipment for technical problems, including transmission issues, whether related to signal strength, battery charge, or power outage. Home visits do not involve searches or efforts at detecting risk factors in the residence, as they do in the Midwest agency. As an officer who makes home visits puts it:

> I shouldn't go in and be, 'I'm in charge.' You know, I respect their home, I let them know that this is their home and I respect it. And usually if you, depending on, if you go in with an attitude that you're just here to do your job, not be a police officer, then you usually don't have any problems.

Officers in South do not have arrest powers, reinforcing the idea that penal and crime control responses need not be the default routes for caseworkers. The philosophy seems to be that surveillance should not be too intrusive, especially if it undermines attempts to build rapport instead of reinforcing the primary aim of rehabilitating the client.

The West site: due process and punitiveness

The sense of mission shaping West's approach to surveillance emphasizes the neutral collection of information for potential use at *a later date* in judicial proceedings. This approach approximates the idea of "banked data," except here the collected information is to be leveraged in an evidence-based model of prosecution on an ad hoc basis. Flexibility is provided to defendants by the absence of inclusion zones and the programming of relatively small victim (i.e., exclusion) zones—practices ideologically consonant with a due process approach. While flexibility is tied to clinical and rapport-building goals in the South site, West's flexibility is adopted as a way of placing minimal constraints on defendants as non-convicted parties. Defendants are not under curfew restrictions and need not return home to the same residence on a daily basis: there is an understanding that many of the clients likely to be enrolled in the GPS program will be self-employed and have irregular schedules. Exclusion zones are

typically set for comparatively narrow radii, on average about 500 ft (though they can be smaller if the defendant lives closer to the victim), because it is believed that the inductees should not be overburdened. The radius size is especially an issue because this agency sets multiple exclusion zones for each victim (home, work, parents' home, etc.): if the zones are sufficiently large, entire swaths of the metropolitan area's transportation grid could become off-limits. Although clients are often subject to urine testing—as per a judge's order—there are no routine home visits, and in-person office visit requirements are relaxed over time, so that weekly appointments can eventually become bimonthly or monthly, and clients can check in via telephone as needed. Any violations that are found, whether because of positive urine screens, victim-zone incursions, or equipment tampers, are forwarded to the district attorney (DA); caseworkers do not have arrest powers.

West's officers underscore that GPS "brings data to the table;" it is no longer a matter of "he said, she said" where claims of abuse and unlawful contact are concerned. Given the geo-temporal information banked by GPS surveillant technology and at the DA's, defense attorney's and judge's disposal, what otherwise might be obscured by claims and counter-claims may be illuminated.

> We have been able to exonerate someone; they were wearing a bracelet and they were not at a particular place and let's say a victim says, 'Oh, he was stalking me here, there, and everywhere.' And we can show where he was and if the victim says [he was in a particular location], we can prove he was either there or not there.

The defendant's case can be helped or hurt by the GPS points logged by the technology, and sometimes the victim's credibility can be enhanced or undermined. The latter has occurred when a defendant was logged as having been miles away from a site that a victim identified as a place in which an altercation occurred, but also when a victim was found to have requested exclusion zones under false pretenses:

> We've had victims too that kind of try to manipulate the whole program. I remember this one case: she wanted so many zones, but it got to a point where we realized that she wanted the strip clubs as a zone. She lied to us and told us she had five jobs: one was a strip joint, one was a bar, one was some hamburger place—which was really her location, but we realized she wanted all those zones because she didn't want him to go to the strip bars. She didn't want him to hang out with his friends. She didn't want him to go certain places.

The exonerating potential of GPS tracking is emphasized in officers' comments to defendants, providing a source of solace against the threat of false accusation. The ambient data that is collected by GPS technology thus is organized and used in ways consistent with a due process approach.

Although defendants in West's GPS for DV program are considered by staff to be "high risk,"[29] caseworkers are loath to needlessly pry into the doings or mental states of their clients. The West approach to GPS monitoring favors a "teamwork" approach in which caseworkers "share" clients, meaning clients encounter different caseworkers at

---

[29] Those enrolled in the GPS for DV program in West over a 6-year period (N=639) tended to have a relatively low number of prior arrests (mean=4.6) ([22], p. 76).

various points of contact. Such an approach lays great emphasis on the information stream that GPS tracking documents as a way of processing clients—"the whole thing is reactive"—rather than by developing a personal sense of specific clients and their issues. By contrast, the rehabilitation emphasis of South and the proactive enforcement approach of Midwest presume intensive, one-on-one casework, with the supervisor developing an evolving understanding of the client's issues. Nevertheless, officers at West usually receive the accused's unsolicited version of the event, for example:

> … the minute you pick 'em up from the jail. Some of 'em are furious. They start—they wanna start telling their entire life story to you, that 'it was her fault,' 'she provoked it,' 'she's just mad at me,' 'she wanted to get me arrested.'

Revelations stemming from these interactions can be problematic for a due process style and hence are unnerving to staff. Inadvertent admissions by clients would make caseworkers legally responsible for relaying any divulged information to the District Attorney, transforming themselves into witnesses for the prosecution, which is not how they define their role: as a neutral collector of information.

Thus, surveillance is less interactively organized in the West than at the other two agencies. Relationships with clients are not as robustly developed, contacts are not as frequent, and agendas are less ambitious. Practitioners do not attempt to rehabilitate clients or proactively catch them in the act, as in the South and Midwest agencies, respectively, although they will notify police under certain circumstances, such as when the exclusion zone is breached and the offender remains in the area and unresponsive to automatically-triggered messages demanding he immediately exit. However, given the narrow radii that define the exclusion zones that defendants must observe, they can be within close proximity of the victim without being in direct violation of the program's rules. Grazing of zone boundaries is the likelier scenario that officers report encountering:

> And that's what we find out. A lot, lot of 'em are more discreet about it, they'll go and hit the zone a little bit and leave, to see how much they can get away with. And maybe the next day they'll get a little closer to see what happens. If we see somebody go in and touch the zone and leave we may question it at their weekly meeting, but we ain't gonna make a big deal because they kinda hit the zone and left.

While information about such zone breaches is recursively used to guide future interactions with the defendant, the officer does not necessarily initiate contact with the defendant immediately.

The program's minimally-intrusive strictures require few adaptations on the defendant's part, compared to the behavioral modification required or encouraged in the Midwest and South sites. One employee acknowledged the untapped potential of GPS to help modify behavior (at the court's and DA's discretion):

> I think it would be, again, if we're looking at GPS as perhaps a behavioral modification tool, I think the more immediate the exchange of information between electronic monitoring and the prosecutor's office, and the more immediate the response of the prosecutor's office to any potential violations, and the more immediate the court response to that, is the more likely it is to affect behavior.

Staff in the DA's office, however, pointed out that they rarely act on violation reports before a case is disposed, except when they might seek leverage in their plea bargain negotiations with defense counsel. Therefore, the information relayed by the EM unit to other justice system actors is not processed and returned in a way that allows for immediate response by those who monitor the defendant. In sum, West's due process orientation affords inductees greater freedom and flexibility in their daily activities and movements, making it less likely they will be found violating program rules. In the event transgressions are noted, violations will be referred to other court officers, who use such information when it is to their legal advantage.

Victims are told that the GPS program is an information tool that will play a role in the legal outcome if required, but are otherwise given no reason to believe that the program will act proactively, automatically, or reactively with regard to their safety. Personnel at the West agency "never" explicitly use the word "protection" when describing the GPS program to victims. Rather, victims are reminded that they are responsible for their own safety and should remain watchful of their environment; optimally, victims should have "peace of mind" but not a "false sense of security." Indeed, it seems the victim is on her own if, or when, the defendant enters an exclusion zone. As an EM officer explained:

> [When] we feel that her safety is in jeopardy, then we can call her. And what we mean by ['in jeopardy'] is: you have, say, a 1,000 feet exclusion zone, sometimes they might clip the outer edge of that zone and we'll look and say, 'Ok, yes, it's a violation 'cuz they're clipping it'—but it's on … our big interstate and he's going 75 mile per hour, he clipped it. [However,] if we see, ok, 'ping, ping, ping, ping,' and he's in the center, we're gonna call and say, 'You know what, he's in your zone, you need to contact police.'

The most onerous aspect of the program for defendants is the cost of participation: on average 10 U.S. dollars a day (in 2008), though ranging as high as 16 dollars daily. The high cost is seen as possibly having its own benefits by staff, however:

> I think anytime it's costing you money to do something people tend to pay a little more attention. Is it going to change someone's behavior long-term, probably not, but it may get you past an initial crisis if there was something that sparked this particular event, then yea, it may get very well get the family through that.

The EM program prides itself on being financially self-sufficient, relying on defendants paying these fees on a weekly basis, which may also affect the program's reach and intrusiveness (i.e., surveillance strategies): the program's survival depends on clients submitting fees, thus it is best if the client's ability to earn a living is not hampered. At the same time, as a significant portion of the population has an immigrant background, administrators believe that the experience of being on GPS and paying sizable per diem fees can have the effect of teaching men from cultures with traditions of machismo that violence against women is taken seriously in the U.S.[30]

---

[30] The high number of GPS defendants who are of Hispanic or Latino descent—almost half the caseload—is important to note in this regard, as many were sending remittances to their ancestral countries, making the per diem an especially difficult burden on their familial responsibilities. In Midwest, burdens stem entirely from extensive restrictions and heightened transparency, rather than from fees: there are no GPS program fees that participating defendants are required to pay.

Conclusion

The criminal justice personnel described in this article work with surveillant data streams, adapting the tools and products of technology in pursuit of locally-defined ends. The current study identified distinct styles of pretrial supervision at three U.S.-based agencies with GPS for DV programs. An agency's overarching philosophy of supervision and sense of mission, rather than the technology employed, set the tone and direction that casework takes, shaping how officers practice surveillance. Failure to distinguish between ambient (i.e., remote) systems and interactive (i.e., local) surveillance is bound to efface the role played by human labor in using surveillance technologies and hence obscure the interpretive processes that underlie the everyday casework of agency personnel. Interactive surveillance is work, and as such is socially organized—compensated, evaluated, used as the basis for advancement, or found wanting with respect to organizational goals and criteria. A quarter century ago, Peter Manning observed municipal police departments' adoption of a variety of then new (and now rudimentary) technologies and their impact on officers' work routines, describing how technological tools and products become incorporated into an overall information "flow":

> The increased message flow processed by these new technologies (computer-assisted dispatch, information retrieval, allocation and distribution of personnel, the two-way radio, three-digit telephone numbers, and centralized collection of calls) is not self-sufficient but organizationally embedded. It is accommodated within traditional role structures, classified in quasi-legal codes in line with emergent and accepted practices based on the occupational culture, and disposed in accord with traditional police procedures ([54], p. 3).

Notwithstanding predictions that "higher-order skills" would become obsolete in the "mechanical" and "relatively uncomplicated world of EM" ([14], p. 408)—"in sharp contrast to the traditional 'casework' approach" ([14], p. 407)—we find that casework proceeds apace, encouraging and redirecting interpretive practice in the melding of new tools and techniques with "old" kinds of information (i.e., GPS tracking data and cues presented in social interaction) and in relation to traditional criminal justice concerns (treatment, punishment, crime control, due process issues). While it is evident that EM's ambient data-banking systems can encourage "mechanical" approaches to surveillance (e.g., [39, 45, 65]), our study suggests that recursively-organized programs of supervision with access to emergent surveillant data streams can yield a robust casework approach. A hard and fast distinction between casework and surveillance impedes insight into these core processes. Surveillance in GPS for DV programs, as documented in this study, can be rigorously pursued regardless of whether crime control or treatment organize supervision efforts, i.e., inasmuch as officers "work the case," for it is under such auspices that the interpretive practices of interactive surveillance develop and flourish.

Understanding the logic of justice-based surveillance requires a grounded and comparative approach to its systems and practices, rather than a "grand theory" of surveillance or "'post modern' penality" ([62], p. 97; cf. [47]). Challenging the influence of the "new penology" on probation and parole officers' supervision practices, earlier work [48, 7, 71] showed the continued salience of front line workers' preferences, professional identity, and values. Our findings about EM officers who work in pretrial supervision are consistent

with this line of research. Personnel employed at the three agencies examined in this article appeared sincere in their commitment to the ideals and goals promoted by the agencies that employed them and the traditions they upheld. Research participants at each agency had a difficult time fathoming what those at other agencies were doing when—during debriefings at the conclusion of the investigation—we described the approaches taken at the other research sites. Such bewilderment suggests that personnel process and implement paradigms possessing an internal logic that is sensible to its users, and that officers' actions are best understood relative to systems of indigenous practice, i.e., as "members' meanings" [20]. Future work examining the use of EM by justice personnel should consider the local organizational and cultural realities that shape how surveillance is pursued. A narrow evaluative emphasis on bottom-line "outcomes" will obscure the contextual differences "on the ground" that shape and inform such results, and hence fail to illuminate how surveillance technology achieves its effects. A focus on ground-level implementation is especially vital insofar as surveillance continues to expand in ways inflected by local considerations, resulting in differentiation more than convergence of surveillance practices and systems.

Research in the area of electronic surveillance by the justice system has mostly focused on convicted parties (i.e., people on probation or parole), rather than the accused on conditional release. However, work on the use of EM for DV cases in the U.S. finds that EM is predominantly applied in DV cases during the pretrial phase of the justice process. This practice stems from an understanding that the pretrial (or post-arrest) period is especially volatile, as an alleged abuser may be inclined to harass, intimidate, injure or influence a putative victim [22]. Accordingly, surveillance under these conditions introduces two complications not necessarily present in other surveillant circumstances. First, a sense of injustice may color how defendants experience being tethered and rendered transparent—i.e., punished—before conviction. Second, victims may develop expectations about the extent to which surveillance ensures their safety and well-being. It cannot be assumed that the existential challenges generated for either surveilled parties or presumed beneficiaries are identical or uniformly met. The insertion of electronic supervision into emotionally fraught circumstances demands close attention to how surveillance is utilized to manage and remake social relationships and identities (cf. [56]), and, more broadly, the agendas that surveillance practices inject into the realm of private and domestic affairs. Studies of justice-based EM that simultaneously take into account the multiple dimensions shaping interactive surveillance—jurisdictional auspices, the agency's sense of mission and infrastructure, the "nature" of the population being surveilled, and the presence and role of victims (actual or potential)—together with the capacities of technologies in use, will advance the understanding of the logic and practice of controlling people by remotely monitoring their use of space.

References

1. Allard, T. J., Wortley, R. K., & Stewart, A. L. (2003). Role conflict in community corrections. *Psychology, Crime & Law, 9*(3), 279–289.
2. Bales, W. D., Mann, K., Blomberg, T. G., Gaes, G. G., Barrick, K., Dhungana, K., & McManus, B. (2010). A quantitative and qualitative assessment of electronic monitoring. Report Submitted to the Office of Justice Programs National Institute of Justice U.S. Department of Justice. http://www.ndcrc.org/sites/default/files/assessment_of_electronic_monitoring.pdf. Accessed 15 May 2014.
3. Bittner, E. (1967). The police on skid-row: a study of peace keeping. *American Sociological Review, 32*(5), 699–715.
4. Blake, M. A. (1948). Probation is not casework. *Federal Probation, 45*, 54–57.
5. Bonta, J., Wallace-Capretta, S., & Rooney, J. (2000). Can electronic monitoring make a difference? An evaluation of three Canadian programs. *Crime & Delinquency, 46*, 61–75.
6. Brown, K. L. (2007). Effects of supervision philosophy on intensive probationers. *Justice Policy Journal, 4*(1), 1–32. http://www.cjcj.org/uploads/cjcj/documents/effects_of_0.pdf. Accessed 12 June 2014.
7. Bullock, K. (2011). The construction and interpretation of risk management technologies in contemporary probation practice. *British Journal of Criminology, 51*(1), 120–125.
8. Charmaz, K. (2003). Qualitative interviewing and grounded theory analysis. In J. Holstein & J. F. Gubrium (Eds.), *Inside interviewing: New lenses, new concerns* (pp. 311–330). Thousand Oaks: Sage.
9. Cheliotis, L. K. (2006). How iron is the iron cage of new penology?: The role of human agency in the implementation of criminal justice policy. *Punishment & Society, 8*(3), 313–340.
10. Clear, T. R., Flynn, S., & Shapiro, C. (1987). Intensive supervision in probation: A comparison of three projects. In B. McCarthy (Ed.), *Intermediate punishments intensive supervision, home confinement and electronic surveillance* (pp. 31–50). Monsey: Willow Tree Press.
11. Clear, T. R., & Latessa, E. J. (1993). Probation officers' roles in intensive supervision: surveillance versus treatment. *Justice Quarterly, 10*(3), 441–462.
12. Cohen, S. (1985). *Visions of social control*. Cambridge: Polity Press.
13. Cooprider, K. W., & Kerby, J. (1990). A practical application of electronic monitoring at the pretrial stage. *Federal Probation, 54*(1), 28–35.
14. Corbett, R., & Marx, G. T. (1991). Critique: no soul in the new machine: technofallacies in the electronic monitoring movement. *Justice Quarterly, 8*, 399–414.
15. Cotter, R., & DeLint, W. (2009). GPS-electronic monitoring and contemporary penology: case study of US GPS-electronic monitoring programmes. *The Howard Journal, 48*(1), 76–87.
16. Cullen, F. T., Eck, J. E., & Lowenkamp, C. T. (2002). Environmental corrections—a new paradigm for effective supervision. *Federal Probation, 66*(2), 28–37.
17. Curry, M. R., Phillips, D. J., & Regan, P. M. (2004). Emergency response systems and the creeping legibility of people and places. *The Information Society, 20*, 357–369.
18. Deleuze, G., & Guattari, F. (1987). *A thousand plateaus*. Minneapolis: University of Minnesota Press.
19. Emerson, R. M. (1981). On last resorts. *American Journal of Sociology, 87*(1), 1–22.
20. Emerson, R. M., Fretz, R. I., & Shaw, L. L. (1995). *Writing ethnographic fieldnotes*. Chicago: The University of Chicago Press.
21. Erez, E., & Ibarra, P. R. (2007). Making your home a shelter: electronic monitoring and victim re-entry in domestic violence cases. *British Journal of Criminology, 47*(1), 100–120.
22. Erez, E., Ibarra, P. R., Bales, W., & Gur, O. M. (2012). *GPS monitoring technologies and domestic violence: An evaluation study*. A report submitted to the National Institute of Justice, Washington D.C. Available: https://www.ncjrs.gov/pdffiles1/nij/grants/238910.pdf. Accessed 15 May 2014.
23. Erez, E., Ibarra, P. R., & Gur, O. M. (2013). Using GPS in domestic violence cases: lessons from a study of pretrial programs. *Journal of Offender Monitoring, 25*(1), 5–10.
24. Erez, E., Ibarra, P. R., & Lurie, N. A. (2004). Applying electronic monitoring to domestic violence cases: a study of two bilateral programs. *Federal Probation* (June), 15–20.
25. Erwin, B. S. (1990). Old and new tools for the modern probation officer. *Crime and Delinquency, 36*(1), 61–74.
26. Feeley, M., & Simon, J. (1992). The new penology: notes on the emerging strategy of corrections and its implications. *Criminology, 30*, 449–474.
27. Friel, C. M., & Vaughn, J. B. (1986). A consumer's guide to the electronic monitoring of probationers. *Federal Probation, 50*, 3–14.
28. Gane, N., Venn, C., & Hand, M. (2007). Ubiquitous surveillance: interview with Katherine Hayles. *Theory, Culture & Society, 24*(7–8), 349–359.
29. Garland, D. (2001). *The culture of control*. Chicago: University of Chicago Press.

30. Garland, D. (2012, November 16). Sutherland Address. Presentation. http://www.asc41.com/videos/2012/GarlandDavid_2012_Sutherland.html. Accessed 16 May 2014.
31. Glaser, D. (1969). *Effectiveness of a prison and parole system*. Indianapolis: Bobbs-Merrill.
32. Geoghegan, R. (2012). Future of corrections: Exploring the use of electronic monitoring. Policy Changes. http://www.policyexchange.org.uk/images/publications/future%20of%20corrections.pdf Accessed 15 May 2014.
33. Goffman, E. (1959). The presentation of self in everyday life. In *the presentation of self in everyday life* (p. 17–25). New York: The Overlook Press.
34. Goldkamp, J. S. (1984). Questioning the practice of pretrial detention: some empirical evidence from Philadelphia. *The Journal of Criminal Law and Criminology, 74*(4), 1556–1588.
35. Goldkamp, J. S. (1985). Danger and detention: a second generation of bail reform. *The Journal of Criminal Law and Criminology, 76*(1), 1–74.
36. Haggerty, K. D., & Ericson, R. V. (2000). The surveillant assemblage. *British Journal of Sociology, 51*(4), 605–622.
37. Hedlund, J., Cox, S. M., & Wichrowski, S. (2003). Validation of Connecticut's risk assessment for pretrial decision making. Final Report submitted to Court Support Services Division, Judicial Branch, State of Connecticut. http://www.jud.ct.gov/cssd/research/Val_CTRiskAssess_PDM.pdf. Accessed 20 May 2014.
38. Hucklesby, A. (2009). Understanding offenders' compliance: a case study of electronically monitored curfew orders. *Journal of Law and Society, 36*(2), 248–271.
39. Hucklesby, A. (2011). The working life of electronic monitoring officers. *Criminology and Criminal Justice, 11*(1), 59–76.
40. Ibarra, P. R. (2005). Red flags and trigger control: the role of human supervision in an electronic monitoring program. *Sociology of Crime, Law, and Deviance, 6*, 31–48.
41. Ibarra, P. R., & Erez, E. (2005). Victim-centric diversion? The electronic monitoring of domestic violence cases. *Behavioral Sciences & the Law, 23*(2), 259–276.
42. Ibarra, P. R., & Kitsuse, J. I. (2003). Claims-making discourse and vernacular resources. In J. A. Holstein & G. Miller (Eds.), *Challenges and choices: Constructionist perspectives on social problems* (pp. 17–50). Hawthorne: Aldine de Gruyter.
43. Isidore, C. (2013, September 5). New Facebook flap: Your face in some product's ad. *CNN Money*. http://money.cnn.com/2013/09/05/technology/social/facebook-privacy/. Accessed 15 May 2014.
44. Johnson, B. R., Haugen, L., Maness, J. W., & Ross, P. P. (1989). Attitudes toward electronic monitoring of offenders: a survey of probation officers and prosecutors. *Journal of Contemporary Criminal Justice, 5*, 153–164.
45. Jones, A. (2005). A tagging tale: the work of the monitoring officer, electronically monitoring offenders in England and Wales. *Surveillance and Society, 2*(4), 581–588.
46. Klockars, C. (1972). A theory of probation supervision. *Journal of Criminal Law, Criminology, and Police Science, 64*(4), 549–557.
47. Lemert, E. M. (1993). Visions of social control: probation considered. *Crime & Delinquency, 39*(4), 447–461.
48. Lynch, M. (1998). Waste managers? The new penology, crime fighting, and parole agent identity. *Law & Society Review, 32*(4), 839–870.
49. Lyon, D. (Ed.). (2002). *Surveillance as social sorting: Privacy, risk, and digital discrimination*. London and New York: Routledge.
50. Lyon, D. (2008, September 28). Surveillance society. Presentation. http://www.festivaldeldiritto.it/2008/pdf/interventi/david_lyon.pdf. Accessed 26 June 2013.
51. McCahill, M. (2002). *The surveillance web: The rise of visual surveillance in an English city*. Cullompton: Willan Publishing.
52. Mainprize, S. (1996). Elective affinities in the engineering of social control: the evolution of electronic monitoring. *Electronic Journal of Sociology, 2*(2), 26. http://www.sociology.org/content/vol002.002/mainprize.html. Accessed 20 May 2014.
53. Mair, G., & Nellis, M. (2013). "Parallel tracks": Probation and electronic monitoring in England, Wales and Scotland. In K. Beyens & D. Kaminski (Eds.), *Electronically monitored punishment: International and critical perspectives* (pp. 63–81). London: Routledge.
54. Manning, P. K. (1988). *Symbolic communication: Signifying calls and the police response*. Cambridge: MIT Press.
55. Meeker, B. (1948). Probation is casework. *Federal Probation, 45*, 54–57.
56. Merry, S. E. (2001). Spatial governmentality and the new urban social order: controlling gender violence through law. *American Anthropologist, 103*(1), 16–29.
57. Miller, J. (2013). Contemporary modes of probation officer supervision: the triumph of the "synthetic" officer? *Justice Quarterly*. doi:10.1080/07418825.2013.770546. Published online: 12 Mar 2013.

58. Nellis, M. (2005). Electronic monitoring, satellite tracking and the new punitiveness in England and Wales. In J. Pratt, D. Brown, M. Brown, S. Hallsworth, & W. Morrison (Eds.), *The new punitiveness: Trends, theories and perspectives* (pp. 167–185). Cullompton: Willan.

59. Nellis, M. (2008). 24/7/365: Mobility, locatability and the satellite tracking of offenders. In K. F. Aas, H. O. Gundus, & H. M. Lommel (Eds.), *Technologies of insecurity: The surveillance of everyday life* (pp. 105–124). London: Routledge.

60. Nellis, M. (2013). Surveillance-based compliance and electronic monitoring. In P. Raynor & P. Ugwdike (Eds.), *What works in offender compliance?* (pp. 143–164). London: Palgrave MacMillan.

61. Nellis (this issue). Understanding the electronic monitoring of offenders in Europe: Expansion, regulation and prospects. *Crime, Law, & Social Change.*

62. Norris, C., & McCahill, M. (2006). CCTV: beyond penal modernism? *British Journal of Criminology, 46*(1), 97–118. http://eprints.whiterose.ac.uk/4078/. Accessed 27 June 2013.

63. Packer, H. L. (1968). *The limits of the criminal sanction.* Stanford: Stanford University Press.

64. Padgett, K. G., Bales, W. D., & Blomberg, T. G. (2006). Under surveillance: an empirical test of the effectiveness and consequences of electronic monitoring. *Criminology and Public Policy, 5*(1), 61–92.

65. Paterson, C. (2007). 'Street-level surveillance': human agency and the electronic monitoring of offenders. *Surveillance and Society, 4*(4), 314–328.

66. Paterson, C., & Clamp, K. (2014). Innovating responses to managing risk: exploring the potential of a victim-focused policing strategy. *Policing: A Journal of Policy and Practice, 8*(1), 51–58. doi:10.1093/police/pat028.

67. Payne, B. K., & Gainey, R. R. (1998). A qualitative assessment of the pains experienced on electronic monitoring. *International Journal of Offender Therapy and Comparative Criminology, 42*, 149–163.

68. Renzema, M., & Mayo-Wilson, E. (2005). Can electronic monitoring reduce crime for moderate to high risk offenders? *Journal of Experimental Criminology, 1*, 215–237.

69. *Riley v. California*, 573 U.S. ___ (2014); *U.S. v. Wurie*, 573 U.S. (2014).

70. Roberts, D. J., & Casanova, M. (2012). Automated license plate recognition systems: Policy and operational guidance for law enforcement. A report submitted to the National Institute of Justice, Washington D.C. Available: https://www.ncjrs.gov/pdffiles1/nij/grants/239604.pdf. Accessed 21 May 2014.

71. Robinson, G. (2002). Exploring risk management in probation practice. *Punishment & Society, 4*(1), 5–25.

72. Rose, K., & VanNostrand, M. (2009, June 9). *Pretrial risk assessment in Virginia.* Presentation http://www.dcjs.virginia.gov/corrections/riskAssessment/PretrialRiskAssessment.pdf. Accessed 20 May 2014.

73. Rutherford, A. (1993). *Criminal justice and the pursuit of decency.* Oxford: Oxford University Press.

74. Schloss, C. S., & Alarid, L. F. (2007). Standards in the privatization of probation services: a statutory analysis. *Criminal Justice Review, 32*(1), 233–245.

75. Seiter, R. P., & West, A. D. (2003). Supervision styles in probation and parole. *Journal of Offender Rehabilitation, 38*(2), 57–75.

76. Skeem, J. L., & Manchak, S. (2008). Back to the future: from Klockars' model of effective supervision to evidence-based practice in probation. *Journal of Offender Rehabilitation, 47*(3), 220–247.

77. Spector, M., & Kitsuse, J. I. (1977/2001). *Constructing social problems.* New Brunswick: Transaction Books.

78. Stillman, S. (2014, June 23). Get out of jail, Inc.: Does the alternatives-to-incarceration industry profit from injustice? *The New Yorker.* http://www.newyorker.com/magazine/2014/06/23/get-out-of-jail-inc. Accessed 26 June 2014.

79. Tomaino, L. (1975). The five faces of probation. *Federal Probation, 39*, 42–45.

80. Ugwudike, P. (2011). Mapping the interface between contemporary risk-focused policy and frontline enforcement practice. *Criminology & Criminal Justice, 11*(3), 242–258.

81. Vinge, V. (1993, March 30-1). The coming technological singularity: How to survive in the post-human era. Presentation (NASAConference Publication CP-10129). http://www-rohan.sdsu.edu/faculty/vinge/misc/singularity.html. Accessed 20 May 2014.

82. Virginia Pretrial Risk Assessment Instrument (VPRAI) (2009, May 15). VPRAI instruction manual version 1.2. http://www.dcjs.virginia.gov/corrections/riskAssessment/VPRAIInstructionManual.pdf. Accessed 20 May 2014.

83. Weiser, M., Gold, R., & Brown, J. S. (1999). The origins of ubiquitous computing research at PARC in the late 1980s. *IBM Systems Journal, 38*(4), 693–696.

84. Wilson, J. Q. (1970). *Varieties of police behavior: the management of law and order in eight communities.* New York: Atheneum.

85. Wilson, J. Q. (1978). *The investigators.* New York: Basic Books.

86. Wilson, J. Q. (1989). *Bureaucracy: What government agencies do and why.* USA: Basic Books.

87. Winner, L. (1977). *Autonomous technology: Technics-out-of-control as a theme in political thought.* Cambridge: MIT Press.