

Promoting Offender Change in the Community: Positive Reinforcement Through EM Technology

by Ronald P. Corbett, Jr., and April Pattavina*

Editor's note: We are reprinting this article for two reasons: first, because the topic is extremely important and of interest to the members of ICCA and, second, because the lead author, Ronald P. Corbett, Jr., is a co-chair of ICCA's 23rd Annual Research Conference, to be held in Boston, Massachusetts, on November 8–10, 2015. The conference program will feature current research and evidence-based practices geared to improving efforts to reduce reoffending and to enhance the delivery of services to offenders being supervised in community settings. Dr. Corbett has a distinguished career in probation and is well known as a conference speaker. He has published in a number of journals and newsletters and has provided leadership to the probation field. He is currently a lecturer in the School of Criminology and Justice Studies at the University of Massachusetts and is the director of the Robina Institute's Community Sanctions and Revocation Project, which has recently published the first volume in its Probation Revocation Project Series: *Profiles in Probation Revocation: Examining the Legal Framework in 21 States* (Corbett, 2014).

Introduction

Electronic monitoring (EM) has a well-established place in the U.S. correctional landscape as a tool for supervising offenders living in the community. Statistics on the extent of EM use vary, but a recent

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projection estimated about 200,000 units in use (DeMichele & Payne, 2009). The use of EM technology is expected to grow considerably as more legislation is passed calling for expanded use of EM supervision for offenders. Most states have passed legislation governing the use of EM technology, and some call for lifetime monitoring of certain offender populations (Button et al., 2009). Compounding this trend is the high rate of incarceration that dominated criminal justice practices for 30 years, resulting in the release of approximately 700,000 former prisoners each year into the community. Many of these people are in need of further supervision and support as they reintegrate into society, and criminal justice agencies require new and creative developments to address the needs of this population.

supervision practices to be consistent with new ways of thinking about how to manage offenders living in the community.

A Brief History of the Electronic Monitoring of Offenders

Although the electronic monitoring of offenders is typically thought of as a relatively recent addition to the correctional toolkit, early prototypes were experimented with as far back as the early 1960s. At that time, Harvard researcher Ralph Schwitzgebel used a portable transceiver called the Behavior Transmitter-Reinforcer (BT-R) that could both identify the location of the offenders who participated in the experiment as well as provide a means for two-way communication. What is most interesting about Schwitzgebel's work—and more than

What is most interesting about Schwitzgebel's work—and more than a little ironic given later developments—is that he conceived of this equipment and process as serving rehabilitative goals.

Indeed, the market for EM technology is well positioned to support expansion. A 2009 market survey published by the *Journal of Offender Monitoring* reported details of various EM systems from more than a dozen companies. The most commonly used types of electronic supervision technologies are radio-frequency (RF) devices used to monitor home confinement conditions and global positioning systems (GPS) for tracking geographic locations.

Increasing the number of units available to correctional agencies for monitoring and tracking offenders is certainly one way to deal with the growing demand. We argue, however, that this would be an overly simplistic solution that fails to take advantage of a renewed enthusiasm for rehabilitation, the emergence of evidence-based practices to support offender change, and advances in mobile communications technology that make it possible to extend the scope of

a little ironic given later developments—is that he conceived of this equipment and process as serving rehabilitative goals. The BT-R was intended to provide a means to send supportive messages to offenders and to warn them of potential trouble if they found themselves in what we would now call "hot spots." To understate the case significantly, Schwitzgebel and his colleagues were ahead of their time, and they failed to gain any support. The BT-R seemed too weird and "big brother-ish" for the 1960s zeitgeist (Burrell & Gable, 2008).

Some 20 years after this initial work, interest in EM grew out of some fledgling efforts in New Mexico, where an enterprising judge joined forces with a technologist from Honeywell to produce a first-generation EM system. Although EM experimentation went through the usual fits-and-starts, it

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eventually reached a critical mass of acceptance and has been a mainstay of correctional practice for at least the past 25 years. It is difficult to get current and accurate counts of the number of offenders on EM, but a 2008 estimate put the number at 200,000, an impressive number but still a small fraction of the roughly four million offenders under community supervision in 2013 (Bonczar & Herberman, 2014).

The practice of EM since the 1980s has been a striking departure from Schwitzgebel's vision. Both the radio-frequency version of EM (which establishes whether an offender is present or absent from a home base) and the later enhancement add-on using GPS technology (which can track all movements of an offender) were instruments

climate of opinion fearful of dramatically rising serious crime rates and policies favoring strict if not harsh sentencing. The notion of rehabilitation as a preeminent goal of corrections was badly damaged by a widely reported and equally widely misunderstood essay by criminologist Robert Martinson (1974) that reported rehabilitation programs were a collective failure. This conclusion left the field open for mandatory sentences, intensive probation supervision, and "get tough" policies generally. Such a climate was hardly a fertile ground for reimagining the uses of consistently evolving EM devices that were improving in reliability and in operational features such as remote alcohol detection.

By the mid-2000s, however, with crime in dramatic decline and concern turning toward the costs—both financial and human—of

Our ideas are definitely informed by this new paradigm, and hence we want to serve the purposes of the new ethos by transforming not the nature but the uses of extant technology, in the service of empirically established strategies. We believe that our conception of evidence-based technology (EBT) will reduce reoffending among high- and moderate-risk offenders by this application and will serve as a stand-alone benefit to low-risk offenders who need help getting themselves better organized to meet the demands of a satisfying life.

Two significant articles (Burrell & Gabel, 2008; Pattavina et al., 2010) appearing in the last several years have pointed the way toward a reconceptualization of the utility of EM, promoting ideas in support of positive uses of the technology to aid efforts of offenders struggling to change their lives and create a productive future for themselves.

In "From B.F. Skinner to Spiderman to Martha Stewart: The Past, Present, and Future of Electronic Monitoring of Offenders," Burrell and Gable (2008) envision an EM practice that incorporates the tenets of social learning and uses immediate contact with the offender to reinforce positive actions such as negative drug tests and compliance with other conditions of supervision. In making this suggestion, the authors draw on the findings of other researchers who recommend changes in supervision practice that could reduce reoffending. In the Urban Institute's 2008 publication *Putting Public Safety First* (Solomon et al., 2008), the authors point to a line of research that validates the power of positive reinforcement in enhancing offender motivation and reducing recidivism. Other researchers referenced in the publication emphasize the importance of reinforcers being applied swiftly and consistently in the wake of positive behaviors in order to maximize their impact. It is also observed that while these principles are widely recognized as efficacious, there is little evidence (as of 2008) that they have been incorporated into community supervision practice.

Pattavina and her colleagues (2009, 2010) make the important point that there is a need to change the purpose of EM from the traditional emphasis on offender control to that of offender change. This observation no doubt grows out of the published evaluations of EM, which, as a whole, have been at best equivocal regarding impact on reoffending. What was characterized in 2008 as the "most comprehensive and rigorous meta-analysis of evaluation studies to date" indicated that EM did not stand out among a variety of

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of surveillance and control, with no intentional efforts at positive behavior change (Pattavina et al., 2010). EM/GPS worked off of a pure deterrence approach, emphasizing detection of offenders in prohibited areas (close to the home of victims in the instance of domestic violence cases or, for sex offenders, near areas where children were known to congregate). In fairness, this enforcement-oriented approach was not without benefit to the offender, for whom the alternative might well have been a period of incarceration, with the attendant negative effects of lost jobs, interrupted treatment programs, and ruptured family relationships. But gone from this technology was the added capacity, originally envisioned by Schwitzgebel, for facilitating offender change through communication.

New Perspectives on the Potential of EM

Not surprisingly, the general perception of the utility of EM was a reflection of the dominant correctional politics of the time. Although the Cambridge project may have suffered from coming forth at a time when the impact of state action on personal liberty and freedom was being roundly called into question by the radical politics of the 1960s, emerging EM technology of the 1980s was quickly seen as being in the service of a

the policy of "mass incarceration," there was breathing room to return to the aspirations of those early pioneers in Cambridge.

New Wine in Old Bottles: Reviving Rehabilitation Through EM/GPS

In our view, corrections may have reached an inflection point in 2015, when the philosophy of punishment and enforcement, which has held sway since the late 1970s, may finally be giving way to a revival of the ethos of rehabilitation. New insights from better and widely disseminated research about "what works" and better analyses of the cost/benefits of prison versus community-based alternatives have, particularly in challenging fiscal times, led to "left-right" political support for rethinking the reliance on mass incarceration.

Simultaneously, new and better principles and instruments have been developed in community corrections. The widespread adoption of the Risk-Need-Responsivity model, which provides for careful assessment of the criminogenic drivers in the offender's life, the likelihood of reoffending, and the best-suited mode of intervention, has led to a new generation of classification instruments that hold the promise of improved outcomes for probationers and parolees.

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community supervision interventions but did offer some effect on behavior as long as the monitoring was in place (Renzema & Mayo-Wilson, 2005).

Pattavina et al. (2010) stress the force of EM in providing positive reinforcers on a “real-time” basis, which is critical for success. Even among those probation and parole personnel who have been trained in and recognize the power of positive reinforcement, the impact is attenuated if those reinforcers are delivered only during intermittent meetings, putting the praise or reward at some distance in time from the approved behavior, thus discounting the effect of the reinforcement. The authors also usefully enumerate a number of ways in which mobile contact with the offender through an EM link can serve multiple purposes, for example, by:

- Contacting offenders at times of day they are at risk for relapse;

- Facilitating treatment by directing offenders to nearby programs (based on location monitoring);
- Sending motivational messages intermittently to encourage prosocial behavior; and
- Sending reminders of key meetings, job interviews, and treatment sessions.

In cognate fields, the power of positive support and communication has found considerable empirical support. Technologies supporting this perspective are conceptualized as “persuasive technologies” (Fogg, 2003), which are communications technologies used to improve attitudes and motivations, thereby shaping behavior in a positive direction. In a 2014 review of 95 studies of persuasive technology, the authors found that 54.7% (52) of the studies reported positive results. Another 37.9% of the studies reported partly positive results in which some of the elements of the persuasive practice were successful. These experiments were conducted in contexts where the goal/

behavior to be changed involved health- and exercise-related domains, with a smaller group targeting education and learning outcomes (Hamari et al., 2014). Applications have been developed for use with persons suffering from substance abuse, a problem common among offenders (McTavish et al., 2012; Wang et al., 2013), and preliminary evaluation research suggests that these applications hold promise for substance abusers (McTavish et al., 2012). One important distinction that limits the application of these findings to EM is that in the studies reported here, the change goals were goals desired by the participants, which is not always the case with offenders.

A research review of positive behavioral support (PBS), published in 2005 by Allen and colleagues, reviewed the impact of reinforcing strategies in the context of working with students with learning disabilities or challenging behavior (Allen et al., 2005). The review included 109 published articles,

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reporting results for 366 measurable intervention outcomes. All of the indicators were positive, with reductions of 80% or greater realized in 68% of the interventions. Despite these encouraging results, the authors of the review point out that their own survey of current practice demonstrated that PBS was used in less than 20% of settings studied and that the treatments of choice were psychotropic drugs and restraints, two interventions that researchers have not found to be supported through experimental research. The authors summarize their findings memorably: “What works best is used least, and what works least is used most” (Allen et al., 2005, p. 8).

New Research in Behavioral Economics Offers New Support for EBT

Poverty is a demanding, stressful, depressive, and often violent state. No one seeks it; they are born or thrust into it. In poverty, the whole of your life becomes an exercise in coping and correcting, searching for a way up and out, while focusing today on filling the pots and plates, maintaining a roof and some warmth, and dreading the new challenge tomorrow may bring (Charles Blow, *New York Times* columnist, 2014)

For, when you are approaching poverty, you make one discovery that outweighs some of the others . . . you discover the great redeeming feature of poverty: the fact that it annihilates the future. Within certain limits, it is actually true that the less money you have, the less you worry (George Orwell, *Down and Out In Paris and London*, 1933)

The idea of retooling GPS tracking technology to serve new, affirmative purposes finds additional support with the publication of a book by two prominent behavioral economists in 2014. *Scarcity: Why Having Too Little Means So Much*, by Sendhil Mullainathan of Harvard and Eldar Shafir of Princeton, delineates the psychological and cognitive effects of living in a state where you have fewer resources than you need for adequate living. Experiments undertaken by the authors have at their core the notion of “focus” and how the ability to concentrate on the multiple demands of life are severely compromised in the face of having too little in the way of material goods. Those whose lives are defined by scarcity become

single-minded—they can attend only to the immediate demands of getting through the day. This intense one-directional “focus” leaves no “cognitive bandwidth” available for other matters that also require attention. It diminishes insight about future requirements, leading to a kind of “tunnel vision” that ignores obligations and duties and an array of important matters. We simply shut out the demands of life beyond meeting immediate needs. Scarcity also leads, these authors find, to impulsive, poorly considered actions, the inability to resist temptation, and a pervasive carelessness.

The authors are describing a condition that applies to the lives of many offenders under community supervision, whether they are on probation in an environment where jobs are scarce (Goffman, 2013) or on release from prison whereupon a felony record and the time lost while serving a

and mindfulness that those in the grasp of scarcity are missing. Casting back to the Orwell quotation, those under community supervision by the state need to worry, and a GPS/cell system can help them do that until they can learn to worry on their own.

As an offender’s material situation improves, a schedule of declining reminders could lead to self-monitoring capabilities that have the potential to build self-sufficiency. In the meantime, a successful system of reminders and notices could prevent offenders from finding themselves in breach of their responsibilities to their probation and parole officer, preventing the toxic effects that flow from a period of incarceration for violating their probation or parole conditions. Reminders could also promote improved health by keeping offenders on their medication schedule and by providing useful information about positive opportunities in the community.

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sentence of even moderate length leave the parolee adrift in a world where the nature of marketable job skills evolves rapidly and he/she is unable to manage the demands of working with the new technology and machinery.

GPS applications could provide workable solutions to this condition. A system in which offenders wear GPS/cell phone equipment could provide the following potential antidotes to predictable failure:

- Notification by texts of appointments scheduled for that day;
- Warnings by text notifying offenders when geographic tracking indicates an offender is out of position in a way that could make him/her miss crucial meetings; and
- Reminders by text of the importance of taking prescribed medications on time or of being back to his/her residence to meet curfew obligations.

There also exists the potential for notification—by employing GPS capabilities—of nearby AA meetings, job opportunities, GED classes, and a host of similar service or treatment opportunities that could be helpful to offenders. Finally, there is the added benefit of positive reinforcement for adhering to the conditions of release.

In other words, GPS/cell communication could serve as a proxy for the kind of focus

None of this could be expected from those on their own and stuck in a condition of scarcity, unable to see beyond their immediate needs.

Recent research in a cognate field offers evidence in support of this approach. In 2013 and 2014, Benjamin Page (University of Virginia) and Lindsay Page (University of Pittsburgh) reported on studies of the impact of texting on low-income high school students to increase follow-through by graduating seniors on enrollment in college, and on rates of filing renewal forms for financial aid by rising college freshman. In both studies, Castleman and Page found that the use of text nudges/reminders produced positive results. Enrollment for the first group increased at the three study sites from 4% to 7% over the controls who did not receive texts. Texting to the second experimental group increased submission of financial aid forms by 12% over the control group, which translated into higher retention rates for sophomore year.

Organizational Preparedness

In an article reporting on innovative practices within nonprofit agencies, Quinn and Wagner (2013) point out that organizations without the means to continually adopt the latest technology can nonetheless leverage existing, conventional technology to discover

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new ways of delivering services and attaining gains in efficiencies and effectiveness without incurring new and unsustainable costs. Recent research into successful innovation by human service agencies in Minnesota revealed that an examination of the untapped potential of the tools at hand and the encouragement of imaginative thinking could yield new operational gains (Quinn & Wagner, 2013).

It is our contention that correctional agencies, which have the same financial limitations that face many nonprofits, can similarly look to use already employed technology—along with some new, affordable enhancements—to bring new possibilities for effectiveness into practice by linking the technology with the principles of evidence-based practice as developed by leading researchers. Specifically, current GPS tracking technology has functionalities that are not as yet used in any significant way in community corrections, functionalities that directly support well-established evidence-based technology as well as newly emerging research findings in behavioral economics. As of the summer of 2015, work was going forward—with the assistance of Dr. Guanling Chen of the University of Massachusetts/Lowell Department of Computer Science—to finalize the software necessary for an initial field test using a smartwatch and existing community corrections case management and GPS architecture.

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