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Satellite Tracking of Offenders and Integrated Offender Management: A Local Case Study

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Abstract: This article reports findings from an evaluation of a Global Positioning System (GPS) pilot that took place in the Cardiff Integrated Offender Management Unit (IOMU). The evaluation was based primarily upon qualitative interviews with about half of the tracked sample of offenders, plus interviews with key stakeholders from the IOMU, police and courts. The findings revealed a general consensus of positive views from both offenders and practitioners about the experience of GPS tracking. However, these generally positive outcomes were clearly related to the voluntary and relatively targeted nature of the pilot, which would be challenged if/when GPS tracking was introduced more widely.

Keywords: GPS tracking; electronic monitoring (EM); Integrated Offender Management (IOM); satellite tracking

This article describes a small evaluation study of a Global Positioning System (GPS) tracking pilot that took place in the Cardiff Integrated Offender Management Unit (IOMU) between January and December 2012. GPS or ‘satellite tracking’ is a relative newcomer to the British penal landscape, although the practice has been established for some time in parts of the USA. Much of what is known about in the UK concerns electronic monitoring (EM) through the operation of curfews supported by ‘static’ radio frequency (RF) tags. EM has been described by Nellis (2009) as a distinctively new kind of ‘late modern’ penalty, one whose primary characteristic is surveillance rather than confinement. These kinds of argument apply with even more force to satellite tracking that offers a degree of potential surveillance of offenders’ movements previously unheard of in community supervision. The aims of the current article are to help address the current gap in empirical research about satellite tracking in the UK, and explore some of the broader implications of the approach. The article is divided into four main sections. The first provides a brief overview of developments in EM in England and Wales, and summarises key themes in extant research on EM and satellite tracking. The second summarises the aims and methods of the current study. The third outlines the key findings of the research; and the final section provides some reflections for future directions in policy and practice.

Electronic Monitoring in England and Wales

Since the 1990s, EM of offenders has become an increasingly important part of the criminal justice system in England and Wales. EM can be applied at three points in the criminal justice system: as a condition of bail, as a sentence of the court, and as a condition of release from prison. The use of EM as a condition of bail was trialled in the late 1980s (Mair and Nee 1990). The use of EM as a sentence of the court was introduced by the Criminal Justice and Public Order Act 1994, which allowed for EM-enforced curfew of two-twelve hours per day

for up to six months, as part of a community sentence. Between 1995 and 1997, there were Home Office trials of about 300 such curfew orders in different parts of England and Wales (Mair and Mortimer 1996). The use of EM was then extended under Labour administrations, with expanding its use to fine defaulters and young offenders, sanctioning the removal of the consent requirement, and finally introducing the Home Detention Curfew (HDC) scheme. The HDC scheme provided for early release from prison for certain categories of prisoners nearing the end of their sentence and willing to undergo EM enforced curfew. Since this time, there has been a substantial expansion of the use of electronically monitored curfews, growing from 9,000 cases in 1999/2000 to 116,000 in 2010/11 (Gallagher 2011). EM curfews are now one of twelve requirements of the generic community sentence (introduced through the Criminal Justice Act 2003). As such, it can be used to support other elements of an order (such as probation supervision or drug/alcohol treatment) or as a sentence in its own right.

The majority of the use of EM in the UK (and in other parts of the world) to date has involved RF curfew tagging that alerts supervising officials if the offender moves beyond a certain distance from a base unit during specified time periods. The subject of the curfew is required to wear a tag, usually worn round the ankle or wrist, and have a monitoring unit installed (usually in the home). These systems use a radio signal, and the tag acts as a transmitter that communicates with the monitoring unit. This, in turn, updates the authorities and ensures that the subject does not breach his/her curfew by leaving home during a particular period (Nellis 2009). Although more recently arrived in the UK, tracking via active GPS has been established in the USA for many years (for example, it was first implemented in Florida in 1997, see Bales *et al.* (2010)). This form of EM can track offender location in ‘real time’ using global positioning satellites. In ‘active’ GPS, offenders are actively monitored in real time, with monitoring officials responding quickly to breaches of

conditions. 'Passive' GPS stores data for a set period and transmits a summary of data to the system, for retrospective review if necessary.

Between 2005 and 2013, two companies held the UK government contract for operating EM in England and Wales: Serco and G4S. These did not include any GPS provision. Local satellite tracking pilot schemes were, however, operating on a non-statutory basis from September 2004 to June 2006 in three areas of England: Greater Manchester, Hampshire, and the West Midlands. Following these pilots, the then Labour government decided against proceeding with a national rollout (Offenders' Tag Association 2010). However, interest re-emerged as a result of GPS trials arranged outside the auspices of the Ministry of Justice (MoJ) with the private company Buddi and Hertfordshire police in 2010. The Hertfordshire model introduced GPS tracking to its existing Integrated Offender Management (IOM) programme to manage and monitor Prolific and Priority Offenders (PPOs), and the trials received significant attention from the Coalition government (2010). A conservative think tank, Policy Exchange, published a report which supported further expansion of EM, including GPS (Geoghegan 2012). The company, Buddi, was very much seen to be at the forefront of GPS technology and fitted neatly into the Conservative Party's Technology Manifesto (Nellis 2014). The report stressed the financial imperatives of GPS tracking but also reflected on 'Buddi/police confidence in the superior potential' of this technology (Nellis 2014, p.175). Following the Hertfordshire pilots, further GPS tracking pilots were introduced across England and Wales such that by late 2012, it was reported that 27 police forces, probation areas and youth offending teams were running or showing interest in establishing GPS tracking pilots (Nellis 2014).

These developments affected the next round of EM contract awards in August 2013. With the withdrawal of Serco and G4S due to the accusations of fraudulent overcharging and further scandals involving them, four companies, Capita, Buddi, Astrium, and Telefonica,

were named as preferred bidders for a new six-year contract for EM. Capita was named the preferred bidder for the overall management of the service, with the three other firms commissioned to deliver elements of the infrastructure. However, in March 2014, Buddi pulled out of negotiations citing repeated changes in specification and a risk to its intellectual property as its reason (*Financial Times* 2014). The new service will make use of GPS, though it is unclear in what capacity. Since this time, the Policy Exchange report's author has made further calls for an expansion of GPS tracking in the criminal justice system, and in particular to devolve commissioning powers (and related funding) from the MoJ to elected Police and Crime Commissioners (PCCs) at the local level (Geoghegan 2015). PCCs have themselves campaigned to have the powers and funding to commission GPS tracking services, but to date with little success as the MoJ has reiterated its commitment to a centralised commissioning process (Nellis 2014).

Supporters of EM have suggested that it potentially provides a less damaging, yet credible, community sentence as an alternative to prison, with a consequent reduction in costs for the criminal justice system. It is also promoted as a more effective and reliable way of detecting curfew breaks or other non-compliance with community sentence/release from custody conditions, a reduction of reoffending through either greater deterrence (for example, a greater perceived chance of detection) and/or providing rehabilitative benefits (in terms of giving a degree of structure to the daily lives of offenders, allowing them to maintain family/community/employment ties etc.) (see Offenders' Tag Association 2010). On the other hand, critics have highlighted civil liberties concerns about the implications of EM (degrading or disproportionate punishment, damaging implications for offenders' families, the extension of State control into the family sphere etc.), the problem of 'net-widening' (whereby offenders who would have received a lesser penalty than custody are placed under EM, as opposed to it being targeted on reducing the use of custody, for example), the danger that it will replace

constructive ‘face-to-face’ work between offenders and probation officers, and broader concerns about the involvement of corporate interests in the penal system (see Jones 2014; Nellis 1991, 2005, 2013). This last concern becomes particularly acute in the context of the controversial reforms to the probation service in England and Wales under ‘Transforming Rehabilitation’. This has involved the replacement, from February 2015, of the previous 35 individual Probation Trusts with a single National Probation Service (responsible for the management of high-risk offenders) and 21 Community Rehabilitation Companies (CRCs) comprising consortia of private and voluntary agencies which are responsible for the management of low- to medium-risk offenders in 21 areas across England and Wales (Calder and Goodman 2013). The market imperative for the CRCs to drive down costs of delivering services may well ‘lead them to prefer cheaper EM-technologies over people-skills’ (Nellis 2014, p.186).

There is now a substantial body of research evidence on the operation and impact of EM, though the majority of this focuses upon static forms of RF monitoring (see Nellis 2009). This research has suggested that EM curfews can have positive impacts, relating to improved compliance with curfew conditions, to changing the criminogenic ‘habits’ of some offenders (Hucklesby 2008). However, much of the extant research continues to conceptualise EM in terms of a confinement discourse – presenting it as an alternative to custody (Nellis 2009). Nellis argues that this fails to capture the distinctive nature of EM, as a qualitatively new form of penalty whose primary characteristic relates to its surveillant properties. Nellis goes on to argue that although much analysis of EM draws upon ‘ocular metaphors’ such as the ‘panopticon’, it is not helpful to theorise EM primarily in terms of Foucauldian ‘discipline’. In itself, EM is not really disciplinary in the Foucauldian sense because it does not seek to work on the ‘soul’ of the offender, and to transform their ways of thinking. It works simply by introducing spatial-temporal regulations over their bodies, and

even then this does not physically confine them in the way that prison does. They retain choice about whether, and how much, to comply with the restrictions upon them, albeit in the knowledge that the electronic surveillance raises the probability of detection of any breaches. Nellis also argues that previous research has not paid sufficient attention to examining the experiences of those on the end of electronic surveillance, with the focus of official evaluations often upon statistical measures of breaches and reoffending that give little insight into the precise mechanisms via which EM does (or does not) affect behaviour. A number of studies have explored the views of offenders who have experienced EM. Hucklesby's (2008, 2009) study drew on interviews with 76 offenders wearing an EM tag, and Richardson's (2002) study reported her experience as a participant observer of EM, by actually undergoing an EM curfew herself. Hucklesby found that in some cases, EM-enforced curfew orders reduced offending via their effects on offenders' social capital. She found that curfews both reduced offenders' 'anti-social capital' (that is, contact with 'situations, people, places and networks' associated with their offending), and enhanced levels of 'pro-social' capital (for example, improving connections with family and employment). However, she also noted that curfew orders can have negative impacts on pro-social capital by disrupting employment and family ties and responsibilities.

In relation to satellite tracking forms of EM, there is limited research evidence available from the UK given the limited experience to date of this form of EM. The 2005/06 pilots mentioned above were subject to independent evaluation (Shute 2007). The study found that sentencers generally had positive views about satellite tracking as a sentencing option, field monitoring officers reported that the equipment had performed well, the majority of offender managers were positive about the satellite tracking, and almost half of offenders wearing the tracker reported that GPS had helped them to avoid trouble. However, a substantial minority of offender managers expressed negative views about GPS tracking,

suggesting that more positive face-to-face work with offenders was reduced as meetings became dominated by technical discussions about the equipment etc. In addition, 58% of offenders wearing a GPS tracker in the pilots were recalled or had community penalties rescinded for breaking their regimes. There were also some problems relating to the technical performance of the equipment, and also with speed of response to requests to the monitoring companies for data.

More extensive research evidence on the use and impact of GPS tracking is available from the USA, given the longer experience of this form of EM and the greater potential for larger-scale research designs (Nellis 2005). These studies have produced mixed results in terms of the impact of GPS as compared with RF tracking. For example, Padgett, Bales and Blomberg (2006) analysed data on almost 76,000 offenders placed on home curfew in Florida between 1998 and 2002, comparing outcomes for EM (both RF and GPS) and non-EM cases. They found that both forms of EM reduced significantly the probability of technical violations, reoffending and absconding. Whilst such studies provide a useful backdrop to considering GPS tracking in the UK, Nellis (2006) makes a number of points of caution. The large-scale quantitative research designs may provide a veneer of scientific credibility, but provide little evidence about the supposed mechanisms via which compliance is achieved, nor the longer-term outcomes for offenders. Most particularly, he warns against the uncritical acceptance of GPS tracking as a technological silver bullet, a 'standalone panacea' to concerns about insecurity and prison overcrowding that understandably proves tempting to politicians and the general public. His concerns about the dangers of 'the pursuit of surveillance without rehabilitation' seem prescient in the current political climate in England and Wales.

The Cardiff Case Study

At the time of the study, Cardiff IOMU supervised and monitored about 270 IOM cohort offenders including PPOs, most of whom were repeat offenders convicted of serious acquisitive crimes such as robbery, domestic burglary and auto-crime. From January 2012, similar to GPS trials introduced in Hertfordshire, Cardiff IOMU made an agreement with Buddi for a free pilot including the provision of tracking equipment to enable tracking of around 40 cases (each for up to three months) from January 2012. The MoJ had not given permission for these to be used as a sentence of the court, and so the use of the GPS trackers during the pilot was restricted to those clients who consented voluntarily. Clients were given full information about the pilot, and also required to sign consent forms. Given the limited number of trackers to be supplied for the pilot, priority was given to licence cases subject to restrictive requirements, cases judged to be at 'risk' of breach/recall to custody, and offenders with index offences of burglary and/or robbery. Following the start of the pilot, the authors were commissioned by the South Wales Probation Trust to undertake a small-scale evaluation.

Methods

The study involved three elements. First, a series of qualitative semi structured interviews with about half of the offenders wearing a GPS tracker ($n = 21$) who participated in the pilot. These interviews covered issues such as motivation for participation in the pilot, general perceptions/ experiences of the tracker, practical issues relating to the equipment itself, and perceived impact on their own behaviour. Second, qualitative semi-structured interviews with key stakeholders ($n = 19$) including offender managers (OMs), police officers (POs), representatives of the Probation Trust, Buddi, HMP Cardiff, and local magistrates. Third, collation and analysis of available secondary data relating to each of the cases of GPS tracking ($n = 43$). This information was collated automatically via the web-based system operated by the Cardiff IOMU. It was hoped that analysis of these data would provide a clear

picture of the numbers and types of offenders subject to GPS tracking (and over what period); the number and types of incidents of non-compliance during tracking, and the consequences thereof (for example, breach, recall, etc.); and the number/type of incidents of arrest or reoffending during the tracked period. Comparisons with the wider IOMU population do not provide strong evidence that the sample of those who agreed to be GPS tracked for a period were dramatically different from the wider group of offenders under supervision by the IOMU (at least in terms of demographic features such as age, gender and ethnicity, and criminal justice-related factors such as main offence type and current criminal justice status). However, because of the small numbers involved, and the consequent impracticality of producing a control sample (based on random allocation of offenders to the GPS tracker), it was not possible to conduct robust statistical analysis of outcomes and the findings are not generalisable beyond those offenders who wore the GPS tracker in the group. For this reason, this article draws primarily on the interview data. As all those offenders participating in the pilot consented voluntarily, it is highly likely that as a group they were unrepresentative of the wider population of known offenders.

Findings

The following section presents an overview of the main findings from the evaluation study of the GPS tracking pilot that took place in the Cardiff IOMU. It first outlines some of the potential benefits of GPS tracking, before exploring some of the broader implications of GPS tracking including civil liberty concerns, net-widening and up-tariffing.

Reduction in Police Attention

A reduction in adversarial police contact in terms of curfew checks and being routinely stopped and questioned was one of the clearest benefits of the GPS tracker from the

viewpoint of offenders. In fact, this was one of the key 'selling points' which offender managers used to encourage offenders to voluntarily consent to wearing a GPS tracker. Consequently, 16 of the 21 offenders interviewed cited a reduction of curfew checks as the main reason for participating in the pilot. The following comment was typical in response to being asked why they had agreed to wear the tracker:

I was going to be on a curfew when I got out anyway because I was a PPO but I could either have a curfew where they come in the nights and do physical checks or I could have a Buddi on and they'd know where I was so they wouldn't have to come and wake me up in the middle of the night and stuff. (Oliver)

Accordingly, all the offenders who were subject to curfew restrictions reported positively on this aspect of the tracker for themselves and where relevant, their families, and felt that it had delivered what they hoped in this regard:

Since it's been on, no police has called, no nothing it's just everything is done. (Thomas)

I didn't want what was going on in my life like to negatively have an effect on my children's lives like so you know I was quite happy to have it on . . . oh much better because the police were waking up the baby and stuff like that that so like when I was answering the door but then with the tag I didn't . . . (Harry)

While it was not possible to get a precise estimate of how frequently each offender would have been visited by police officers in this way, it was implied that this could happen at least once nightly, sometimes more in response to assessed level of risk prior to the participant wearing the tracker. This suggests that there is a substantial saving in police time by

deploying the tracker in cases where curfew conditions have been applied. For example, according to the IOMU estimates, the unit cost to deploy police officers to physically check on an individual would amount to an average cost of £30 per visit (including a proportion to transport and administration costs). The majority, if not all, of the 43 offenders wearing the tracker would have been subject to physical police checks in the absence of GPS tracking. On average, tracked clients wore the tracker for a period of 40 days. Thus, based on the modest assumption of one curfew check per client per day, 40 days of physical curfew checks would cost approximately £1,200 per offender, compared with £350, which is the estimated cost of the GPS tracker and oncosts. This would amount to a saving per offender of £850, which amounts to a total cost saving in relation to police time (for 43 clients) of over £36,500.

There was also a general consensus among the offender group that wearing the tracker protected them from coming under routine suspicion from the police when crimes took place in their area. This, too, could result in potential cost savings arising from the tracker enabling the police to eliminate these offenders from enquiries:

It does help in my situation because I'm known for certain offences like street robberies and violent offences so if a street robbery did happen now and the description of the offender matched me I'm basically in the clear if I didn't commit that crime I'm in the clear, there's no way they can say I've done it because I wasn't around that area and I can prove that with this tag so I think it's a massive help to be honest with you. (Will)

Another good thing about it as well in the past I've been arrested for things that wasn't me so and I've been convicted of something that wasn't me as well and I went to prison for something that wasn't me, do you know what I mean? But they can eliminate you quickly

from, if they think that you might have been involved in something and you really wasn't, then they can eliminate you, you know with the click of a button or whatever. (Neil)

As the quotations above highlight, a number of the offenders interviewed believed that they were routinely stopped and searched, and recalled to prison on the ground of being arrested and charged for something they had not done. While we had no evidence to support their claims, this strong perception of being targeted unfairly by the police was a forceful motivation for participating in the pilot. For these offenders, wearing the tracker provided them with a secure 'alibi' to protect them from such accusations:

Basically my tag's my alibi basically so if I haven't committed a crime they'll know about it, I've got proof to prove it whilst being on this tag. (Will)

It's saved me once or twice as well . . . Where they've, something's happened somewhere, they've phoned them and it's like 'where's Mr [name]' and I was nowhere near the area so it's a good thing. (Paul)

The offenders' hostility towards the police is, perhaps, not that surprising given that all the offenders wearing a GPS tracker who took part in the pilot were known PPOs. They would, therefore, have experienced regular adversarial contact with the police, even when not on licence or under penal supervision of any kind. Whatever the grounds for these views, any reduction in police contact as a result of wearing the GPS tracker can only help to alleviate such tensions. In addition, the IOM approach of the Cardiff IOMU enabled these offenders to come into contact with police officers working within the unit on a regular basis and in a different context. This interaction in a different environment made a positive impact on the

way police were viewed and indeed changed some offenders' perceptions of the police, for the better:

I don't like the police, can't stand them but then I see a different side to someone like you got [name] who works in here, you got . . . [name] they're alright, all they've done really is help me so I can't really say nothing bad about them. (Paul)

A related benefit cited by all those engaged with the pilot, was that a reduction of this source of tension could help to enhance offender engagement, reform and resettlement in the community. Most notably, it was seen to have a positive impact upon offenders finding a stable place of residence, which was considered key to increasing their chances of successful reintegration and resettlement on release from prison. Evidence gathered from the practitioner interviews suggested that both the families of offenders and housing providers were more likely to offer accommodation if they could be assured that they would not have their door knocked on, possibly at very unsocial hours, by the police undertaking curfew checks. At the same time the GPS tracker offered housing providers the assurance that the appropriate checking of compliance with curfew conditions was in place. Similarly, it was regarded as a signal to family members that the individual was motivated and trying to desist from offending:

If it's a housing provider and they know that somebody who has been a bit wayward in the past is on a tag, they are on a curfew, sometimes they don't necessarily like the police calling all the time, so again that can impact on that person getting a residence. (OM5)

Their families tend not to like [the curfew check] so we kind of had the backing on a few occasions of their families saying 'we'll have them stay here but we don't want the police calling' and they've agreed, so they tend to do the motivational stuff almost for us. (OM7)

Desistance and Motivation to Change

Following on from above, there was some evidence that wearing the tracker helped to increase the offenders' self-esteem and motivation to change:

It can help with your own self-esteem like you know because you know that you know that you're not doing nothing and you know then nobody's going to come kick your door off or no police for something that you haven't done because that can be a worry when you're a PPO and you're coming out and things that are happening in the area, police will come in and look at you anyway. (Evan)

Yet not surprisingly, given the voluntary nature of the pilot, the majority of offenders claimed that they were determined to go straight in any case, and that participation in the pilot simply reflected a deeper commitment to change (rather than exerting a significant causal effect in itself). This was explained in terms of the GPS tracker being a symptom, rather than a cause, of a motivation to change. However, as the quotation below demonstrates, to argue that the tracker was not the primary cause of compliance is not to say that it had no positive effect on desistance. Indeed, there was evidence that the trackers provided an important degree of psychological reinforcement for those who were motivated to engage and to avoid offending:

I think it is a good thing what they're trying to do yeah because it definitely made me not, well it didn't make me not reoffend but I didn't reoffend do you know what I mean? I don't

think I would have anyway even if I didn't have a tracker, I was in fulltime employment and stuff but you definitely, before you're going to do something, whoa! I got a tracker on my leg if I do this then I'm going to be back in prison before I'm probably even home do you know what I mean? You do the crime you walk round the corner they know where you are, they come to straight where you are and you'll be arrested. (Neil)

There was general consensus among offenders and practitioners that the tracker acted as a deterrent from offending. In contrast to the research on the 2004–06 pilots in England and Wales (Shute 2007), the majority of offenders who we interviewed reported that the GPS tracker had helped them to avoid reoffending, primarily because of the increased risk of detection:

Well obviously when you've got that on your leg you're not going to commit an offence are you? Unless you're stupid like because you're going to get caught like. (Neil)

Other mechanisms of desistance that emerged in the interviews concerned the impact of wearing the tracker in terms of avoiding people and places associated with offending, and thereby reducing their 'anti-social capital' (Hucklesby 2008, 2009). One offender, Harry, felt that although the tracker was not the primary cause of his motivation to change (which he saw as pre-dating his agreement to wear the tracker), it did help him to avoid situations which triggered his offending (such as staying out drinking heavily at night). Another offender, Ian, reported that wearing the tracker had helped him avoid offending because former friends and associates with whom he had got into trouble now knew he was wearing a GPS tracker, and did not want him around them because this made him something of a liability:

Because it's a tracking system people react completely different. If they're doing something wrong and because I've been in jail so many time most of the people I know are criminals but it's where I've kind of changed my attitude about things like now and avoid it all it was good for them to know that I was on tracking system and they didn't want me in their company sort of thing to talk about dodgy business . . . Yeah got rid of people who have like been around me in the past which I was just making money for. (Ian)

It should be noted that this deterrent effect appeared to rest, at least in part, on a misunderstanding of the way in which the GPS tracker was used (incorrectly viewing it as a form of 'active' tracking in real time, rather than the 'passive' system that was actually deployed).

The practitioners interviewed suggested that the GPS tracker provided a good deterrent, particularly in terms of avoidance of breach and recall. For example, it was felt that the offenders had largely complied with the conditions of their licence. Consequently, the GPS tracker compared favourably with existing static tags. Offender managers also referred to a number of specific cases where the tracker had enabled them to avoid recall or other formal breach action in cases of apparent non-compliance with conditions, because the GPS data enabled confirmation of the client's explanation.

At the same time, and sometimes paradoxically, strong doubts were expressed about whether the tracker would prevent somebody determined to offend from doing so. A key reason for this was the fact that the offender has responsibility for charging the equipment. Both the offenders and practitioners argued that if an individual wearing a GPS tracker wanted to offend, then they could simply allow the battery charge to run out before committing their offence, claiming then that they had forgotten to charge up the equipment. Interestingly, of those offenders involved in the pilot that had reoffended ($n = 4$), all were

wearing the GPS tracker at the time. Their cases, arguably, reflect the complexities of offending behaviour rather than signalling any underlining limitations and/or failures of GPS tracking.

Furthermore, the importance placed on the offender for taking personal responsibility for keeping the equipment safe and for regular charging was, in fact, seen as part of a broader demonstration of offender engagement and compliance. Almost all the offender managers and police officers stressed the importance of trusting offenders, and providing them with opportunities to demonstrate responsibility and engagement as part of a broader learning process:

Well I mean it gives them ownership over it, which I think can be a positive thing . . . it shows that we're putting that level of trust in them to be responsible which is a good buy-in for them in terms of community integration and involvement. (OM4) I think maybe just giving them a small amount of responsibility as in the equipment and charging something, you know can have a positive effect. (PO1)

Some of the offenders recognised this aspect of the pilot, reflecting on their responsibility for charging the tracker as a further indication that they were prepared to take responsibility for their behaviour and the changes that they made to their lives:

Well if I just keep, how do you put it? Something to look after for yourself isn't it? So don't rely on other people all the time. (Ian)

The police sergeant in charge of the police team in the IOMU strongly supported this notion of the tracker enhancing responsibility and trust, and was in favour of developing some kind

of formal qualification, perhaps leading to an NVQ, for compliance and effective management of the kit, as an important indicator of trust and responsibility for future employers.

This broader rehabilitative aspect of the GPS tracker is, of course, closely related to the voluntary nature of the participation. The majority of offender managers wished to maintain this as a targeted and voluntary scheme, stressing the issue of enhancing personal responsibility, as outlined above, but also how it could contribute to intelligence gathering and ongoing risk assessments. It was, for example, noted by a number of offender managers how an offender's refusal to wear the tracker, or, indeed, a sudden request for it to be removed, provided important intelligence to the police and offender managers that there were possible problems that needed to be addressed:

You know it's a good intelligence piece for us to know who's turning them down and we've all had people come in . . . all of a sudden one day 'I want it taken off', and then three days later they're back in going 'I'll have it back on now' so that's interesting for us to know . . . even knowing they're not wearing it, it's a piece of intelligence that we can use. (OM4)

We might say this person is not charging, they're starting not to attend their appointments, so we might lift their profile with the police and the other agencies we work with so we can look at different tactical options . . . maybe looking at different treatment options etc. (OM5)

However, the voluntary nature of the pilot was considered problematic in that it risked tracking only the motivated individuals who were showing compliance and willingness to change already. Consequently, the police respondents were more enthusiastic about extending the trackers to be a mandatory condition of licence or sentence of the court. Similarly,

magistrates expressed the view that GPS tracking would be a useful addition to their repertoire of non-custodial sanctions.

Crime Detection

All of the practitioners in the IOMU emphasised the importance of the tracker as an aid to effective deployment of police resources and rapid crime detection. This is, of course, closely related to the practical and day-to-day use of the GPS data. To reiterate, GPS tracking does enable officials to follow case movements in real time, and instigate immediate interventions when the system indicates a breach of conditions. This form of ‘active’ tracking clearly requires a considerable investment in terms of monitoring staff. By contrast, passive tracking involves the system uploading GPS data about offender movements at regular intervals so that it is available for retrospective review if necessary (Shute 2007; Bales *et al.* 2010). It was made clear in a number of the interviews that the IOMU simply did not have the staff resources to deliver active GPS tracking. Instead, data for each offender wearing a GPS tracker were reviewed once a day and any evidence of non-compliance was shared at the morning briefing. As one offender manager put it: ‘we would check it once a day, we wouldn’t necessarily be sat there watching somebody move up the streets’ (OM5). Once again, we should note that those wearing the trackers did not always appear to understand that they were not subject to active real-time monitoring, and so to a degree any effects on deterrence and compliance might well be dependent on the persistence of such misunderstandings.

In contrast to the GPS technology used in the 2004–06 trials (Shute 2007), trained IOMU staff in Cardiff could access data directly, rather than request information from an independent monitoring company. Data could, therefore, be accessed promptly and used reactively in response to requests from police or offender managers, and in response to

predefined system alerts notifying the IOMU of breach of a specified condition of supervision, for example, exclusion zone, non-association, curfew/inclusion zone.

Consequently, when an offence took place, analysis of the *modus operandi* in relation to the previous record of offenders wearing a GPS tracker would allow innocent individuals who were under suspicion to be discounted quickly from police enquiries, but also check for the whereabouts of other individuals wearing a GPS tracker who may have been placed near the scene. The most often quoted example of rapid crime detection as a result of a GPS tracker related to an incident of serious sexual assault, in which the individual had no previous form and so would not have immediately come under suspicion. However, analysis of their GPS data was able to evidence the fact that the offender followed the victim and also placed him at the scene of the assault. This enabled a rapid detection and conviction, and also had benefits for the traumatised victim in terms of the reduced need for police interviews and court appearances. The advantages of having IOMU staff operating the GPS technology supports criticism of the way that EM has been managed in England and Wales to date. As Geoghegan (2015) states: ‘why would you take the device out of the hands of the people who needed it and could use it most effectively?’ (p.21).

Civil Liberties Concerns

Critics have pointed to civil liberties concerns surrounding the implications of EM, mainly about human rights and up-tariffing. As already stated, these kinds of argument apply with even more force to satellite tracking that offers active tracking. Despite this, while a number of practitioners (offender managers and the police representatives) reported that they had shared these concerns at the outset, the experience of the pilot had changed their views:

Initially I was not in favour of it, I think there's still some areas to be looked at long term in terms of human rights which made me a little bit uncomfortable initially, but my opinion of that has probably changed since having it because of the usefulness of the [tracker]. (OM4)

Me, personally, I don't like Big Brother, the thought of GPS tracking and things like that, to be honest with you I'd say, thanks but no thanks. Because where it all leads, where it's going to end up. But having spent . . . between twelve and 18 months involved in this project it's opened my eyes a little bit to . . . what it can actually do if it's used in the right way. (PO3)

What was even more striking was that few of the offenders expressed any concerns about the notion of being under real-time surveillance via GPS tracking. For most, this was due to the fact that they 'knew they weren't doing anything'. However, one interviewee in particular, delivered quite a striking dismissal of a 'civil liberties' perspective, arguing that high-risk offenders (such as himself) had no basis to argue against effective surveillance:

At the end of the day it's like this yeah, right; . . . if I've done nothing wrong in my life, ever done nothing wrong in my life yeah? No one got no right to see what I'm doing, if I'm doing nothing illegal like no one got no right to follow me around yeah. But I did what I did yeah? And I was a problem to society yeah like I was more of a problem to society than society could ever have been to me yeah? . . . So I think like until I've proved myself again, it's not 'Big Brother', I brought it on myself, I'm being monitored. (Evan)

For those who did express some initial reservations – such as 'feeling a bit weird' about being under GPS surveillance – these feelings soon subsided, and the benefits of the tracker were seen to overcome any initial concerns.

Most of the respondents did, however, express some initial concern about the public stigma relating to wearing a tracker, exacerbated due to its large size. However, few of the offenders perceived the tracker as an additional punishment, although this is not that surprising as they had volunteered to wear it. Nonetheless, it is fair to say that almost all the offenders interviewed, despite expressing irritation with this aspect of the equipment, did go on to downplay its significance and present it as a relatively minor inconvenience rather than a major difficulty. One participant, Stuart, was also able to see this as positive, and described the GPS tracker as a 'symbol' that he was sorting his life out:

Don't get me wrong if I went to somewhere public like my daughter asked me to go swimming the other day, I went with her, you do get the odd person looks and that you know but I don't really care at the end of the day to me that's a symbol of me sorting myself out do you know what I mean? (Stuart)

Overall, a reduction in adversarial contact with the police related to curfew checks, stop and search and arrest, meant that wearing the GPS tracker was generally perceived as an extension to the clients' freedom rather than a further restriction upon it. Comparably, most practitioners also saw the broader rehabilitative uses of the tracker as a way of keeping PPOs in the community rather than them being recalled to prison.

While the reasons for the positive assessment of the tracker have already been explored, this endorsement of the pilot, was, however, measured in so far as it was tempered by a strong commitment to the need to carefully tailor GPS tracking and use it for appropriate populations (particularly in the interviews with offender managers). As noted in the first section, one of the main concerns with new forms of community sentence (and one which has been repeatedly raised in the past in relation to EM) concerns the danger of 'net-widening'

and ‘up-tariffing’, whereby new penal sanctions introduced to be an alternative to custody, in practice are used for offenders who would have received a lesser sentence. Exploring the degree to which net-widening has occurred has been an important challenge for previous research on EM. However, in the case of the current pilot where GPS tracking was not given as a sentence of the court, there is little evidence of net-widening in this sense. Indeed, although it is not possible to test this statistically, the qualitative evidence suggests that those who wore GPS trackers were offered this as a clear alternative to custody (either via recall through breach or via agreement to the tracker enhancing the probability of release on licence). Thus, at least in the ways in which it was deployed in the Cardiff pilot, there was evidence that GPS tracking did actually keep offenders out of custody (rather than being used for offenders who would have been given less intrusive forms of supervision). A number of the practitioner respondents expressed concerns that this would not necessarily remain the case should GPS tracking become an option for the courts or made more widely available (for example, to the police and/or future CRCs).

Conclusion

This article suggests that when used in a limited and targeted way, GPS tracking can have some positive impacts. There were some expected differences in emphasis between the various respondents about the main benefits of GPS tracking. Police interviewees tended to highlight the potential benefits in terms of control, surveillance and detection. However, both offender managers and the police referred to a range of benefits related to offender-support and rehabilitation, and also with regard to providing enhanced intelligence in relation to the management of risk. Magistrate interviewees saw the tracker as a potentially useful additional option for convicted offenders at risk of custody and something that would enhance the level of control in a community sentence and have credibility with the public. The offenders were

generally more positive about the tracker in terms of reducing the amount of adversarial contact with the police related to curfew checks, stop and search and possible arrest and reconviction. However, notwithstanding these differences in emphasis there was an expectation across those interviewed that GPS tracking had the capacity to simultaneously address all these aims.

The research revealed little explicit concern amongst the offenders in regard to the threat GPS monitoring posed to their civil liberties, though perhaps this was to be expected, given that all participants volunteered to take part. No respondents discussed the tracker in terms of retributive punishment. The findings outlined in this small study can be seen as cautiously positive overall and demonstrate a number of potential benefits of GPS tracking, including deterrence, crime control, as well as broader rehabilitative uses. Few of the offenders, in fact, expressed any concerns about the degree of surveillance they were under. Of course, the offenders' seemingly unconcerned attitude about GPS surveillance is unsurprising given that they would have all had recent (or current) experience of prison, and, as we have outlined, were under the regular surveillance of the police (including visits during the night and in the early morning) when released on licence. The 'choices' available to these offenders were markedly constrained. It is, therefore, not that surprising that for this group of offenders at least, the GPS tracker was generally perceived as an extension, rather than a curtailment, of their freedom.

The positive endorsement of the pilot was, to a large degree, related to the voluntary nature of the scheme and its 'ownership' within the IOMU. Although it has been recognised that voluntary participation itself signals a pre-existing desire on behalf of the offender to comply and engage (and, therefore, the GPS trackers were not being targeted on the more difficult group of PPOs), it was seen to help support broader rehabilitative elements. This includes enhancing responsibility, trust and commitment to change, as well as increasing the

chances of offenders accessing rehabilitation provisions such as employment and accommodation. This view of tracking has been emphasised in earlier studies of static EM, in which it has been argued that as part of a wider package of carefully-designed interventions, EM can provide a degree of structure to the sometimes chaotic lives of offenders and in this sense enhance the possibilities for engagement, reform and resettlement into the community. The Cardiff study did not find evidence to support concerns raised in previous research on GPS tracking (and indeed, EM in general), that tracking will have a negative effect on the face-to-face work undertaken by offender managers to address offending behaviour. Previous work pointed to the use of EM as a technological ‘silver bullet’ that would simply replace the important interpersonal engagement between offenders and probation officers, and turn the latter into straightforward agents of surveillance and control (Nellis 1991). In contrast to earlier research, within this study, the GPS tracker became very much a part of the narrative between offender managers and their offenders, providing useful background information to signal any problems the client might be experiencing, and to help reassure the offender manager (and sometimes other agencies) about the clients’ accounts of events in terms of breach and recalls. Similarly, this research suggests that in some circumstances, GPS tracking can also help to manage strained relationship between this group of offenders and the police.

The voluntary nature and the positioning of the pilot within the unit also helped to ensure that concerns about net-widening and up-tariffing were avoided, as trackers were deployed in a targeted and strategic way. There are, of course, further concerns with expanding the use of GPS – including a greater level of damage to equipment and other forms of non-compliance, and major problems with charging (which would have to be made a compulsory and enforceable condition of licence/sentence). Another concern with expanding the use of GPS reflects the impact of public expectation. Most media discussions of GPS tracking in the UK contribute to the mistaken assumption that this is active tracking of

offenders in real time, rather than the passive forms discussed above. Indeed, one might argue that there is a degree of collusion on the part of both politicians arguing for an expansion of such schemes, and local practitioners charged with running them, in promoting (or at least turning a blind eye to) such misunderstandings. Trying to develop such forms of more active tracking would have major resource implications, even in the limited form used by the Cardiff pilot, let alone if there was a major expansion of the use of GPS as a sentence of the court, for example. It is unlikely that such 'active' forms of tracking could ever be introduced on a general scale, as the costs on the public purse would be prohibitive (Geoghegan 2012).

Given the current political support for GPS tracking, it is, perhaps, inevitable that it will at some point become available to the court as a condition of bail, as a sentence, or as an enforceable condition of release on licence from prison. While it seems that Buddi will no longer be involved in the delivery of government-commissioned GPS tracking, at least in the foreseeable future, other commercial organisations will be responsible for its delivery. As Nellis (2014) acknowledges, EM has always been privatised, but this takes on added significance in the context of the reconfiguration and marketisation of probation services for the management of low- to medium-risk offenders. Nellis (2014) notes that although there was no explicit connection between government support for expanded use of GPS tracking in the criminal justice system and its 'Transforming Rehabilitation' agenda, there is a clear consonance between them. As he argued: 'EM technology was being upgraded at the same moment as the professional expertise of the probation service was being downgraded' (p.177). This immediately raises concerns about the degree to which some of the dangers of untrammelled expansion of GPS tracking, and in particular net-widening, can be avoided. It is likely that while PPOs are an obvious focus, GPS tracking may also be used for other offender groups. There are already suggestions that such GPS tracking would be suitable for convicted sexual offenders (for example, in terms of policing exclusion zones around schools

or in playgrounds) and for domestic violence perpetrators (to ensure that they were staying away from their victims' homes).

While the civil liberties concerns have been significantly downplayed within this evaluation, this reflected the voluntary and targeted nature of the pilot. If GPS tracking was to become available as a sentence to the courts, and/or placed under the direction and control of the police, it may prove impossible to maintain the consideration given in the Cardiff pilot to the circumstances of the offender and the offence, and, in particular, spatial and temporal patterns of offending (Hudson, Taylor and Henley 2015). As one of the offender managers argued: 'We've got to be able to argue that the risk [the offender] poses is high enough to warrant that loss of the right in the same way as going to prison is; [that they] pose a risk high enough to lose those civil liberties' (OM3).

Although this was a small study, the findings suggest that when used in a measured and targeted way, GPS tracking *can* contribute effectively to offender rehabilitation and the management of risk, as well as providing enhanced possibilities for prevention and detection of crime. However, such benefits would soon be outweighed by the disadvantages in the event of an uncontrolled expansion of GPS tracking. Given the political attraction of technological 'solutions' in crime control, the marketisation of probation, and the promise of more austerity to come, it may prove impossible to maintain a restrained approach in the future.

Notes

Buddi was founded in 2005 and became known for innovative application of GPS tracking technology in relation to dementia patients and patients on temporary leave from secure psychiatric care. The company used more compact and less expensive tracking equipment than market competitors. Its trackers were attached by steel reinforced ankle straps which

were much more difficult to remove than the plastic straps more widely used in static RF tags (Nellis 2014).

In the interview examples cited, offenders' names have been changed to preserve anonymity, and offender managers and police officers are numbered (OM1, OM2, . . . and PO1, PO2, . . .).

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