
Tracking the Trackers: An Examination of Electronic Monitoring of Youth in Practice

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Although vast numbers of young people in the juvenile justice system are subject to electronic monitoring, its rise has occurred with little reflection or evaluation by anyone, including the probation departments that implement it. As a result, we know surprisingly little about electronic monitoring's practical effects. This Article fills that gap by presenting three findings about juvenile electronic monitoring, grounded in the results of hundreds of Public Records Act requests I filed with probation departments across California. First, while many have hailed electronic monitoring as a potential alternative to incarceration, available evidence suggests it is instead "net widening," expanding control over young people who would otherwise have received less burdensome terms of release. Second, the technological innovation of GPS, instead of inspiring penological innovation in the form of new types of electronic monitoring programs, has instead merely been used by probation departments to enforce house arrest. But house arrest rules were already too burdensome for many youths to follow

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consistently, and electronic monitoring that detects every violation, no matter how minor, risks further over-enforcement. Third, three converging trends may lead probation departments to adopt even more intrusive forms of electronic monitoring in the future: (1) advances in technology to allow monitoring of a broader range of behaviors; (2) the evolution of social norms to permit more extensive monitoring of individuals' bodies and movements; and (3) the intervention of private contractors eager to force enhanced electronic monitoring's adoption. The Article closes by presenting recommendations for policymakers that flow from these findings. To push back against net widening, county governments — not the families of young people — should have to pay for the technology. To avoid young people “failing out” of electronic monitoring too frequently, probation departments should adopt guidelines to distinguish serious violations from trivial ones and mete out consequences accordingly. Finally, given the possibility of more invasive monitoring, probation departments should adopt policies that articulate a clear vision of what they wish to accomplish through the technology, and how they will manage the data that it generates.

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INTRODUCTION

Since its introduction into the juvenile system in the mid-1980s, electronic monitoring has quietly become institutionalized.¹ With the help of electronic monitoring, juvenile probation departments across the country now track the location of young people released into the community using an ankle bracelet that cannot be removed.² Indeed, every state except New Hampshire now deploys electronic monitoring on youth.³ In California specifically, over ninety percent of counties use the technology,⁴ tracking approximately 10,000 young people in the juvenile system in 2017 alone.⁵ Those 10,000 youths were among the

¹ See Sudipto Roy, *Five Years of Electronic Monitoring of Adults and Juveniles in Lake County, Indiana: A Comparative Study on Factors Related to Failure*, 20 J. CRIME & JUST. 141, 141 (1997) (pinpointing the first probation-run juvenile electronic monitoring program as developing in Forsyth County, North Carolina in 1986); Kate Weisburd, *Monitoring Youth: The Collision of Rights and Rehabilitation*, 101 IOWA L. REV. 297, 299 (2015) (describing the ubiquitous nature of electronic monitoring today).

² PEW CHARITABLE TRS., *USE OF ELECTRONIC OFFENDER-TRACKING DEVICES EXPANDS SHARPLY* 2 (2016), https://www.pewtrusts.org/-/media/assets/2016/10/use_of_electronic_offender_tracking_devices_expands_sharply.pdf (describing the major electronic monitoring technologies).

³ Weisburd, *supra* note 1, at 299.

⁴ See ELECTRONIC MONITORING PROGRAM RULES: A COMPILATION OF CALIFORNIA COUNTY JUVENILE JUSTICE SYSTEM RULES RELATING TO ELECTRONIC MONITORING PROGRAMS FOR YOUTH (2018) (Catherine Crump & Amisha Gandhi eds., 2018), <https://n2t.net/ark:/85779/j4mq0n> [hereinafter EM RULES]. These rules were compiled from county responses to a request pursuant to the Public Records Act, Cal. Gov't Code §§ 6250-6276.48, and, for simplicity, will be referred to in this Article by the citation “[County Name], in EM RULES, *supra* note 4, at [page number(s)].”

⁵ This total is derived from figures provided via email correspondence between the author and/or research assistants and probation office personnel in each of the fifty-three California counties that deploy electronic monitoring on youth. See *generally* Number of Youth on EM (unpublished Excel spreadsheet) (on file with author) (compiling the number of youth on electronic monitoring in the California juvenile system).

approximately 72,000 referrals of youths California probation departments received that year.⁶

Meanwhile, a debate over electronic monitoring's effects has begun in earnest. Proponents hail electronic monitoring as an alternative to custody. Detractors fear that it is instead "net widening," because they believe it is applied in cases where young people would otherwise have received more lenient terms of release.⁷ Scholars have contributed to this debate as well, although most have focused on its use in criminal, not juvenile, court.⁸ Some argue for electronic monitoring's wide adoption.⁹ Others express concern over electronic monitoring's net widening effects as a social control mechanism,¹⁰ its unsuitability for

⁶ CAL. DEP'T OF JUSTICE, JUVENILE JUSTICE IN CALIFORNIA 14 (2017), <https://data-openjustice.doj.ca.gov/sites/default/files/2019-06/jj17.pdf>.

⁷ See, e.g., Weisburd, *supra* note 1, at 303 (describing electronic monitoring as "net-widening and net-deepening").

⁸ Marc Renzema, a professor of criminal justice, compiled a bibliography of nearly 900 electronic monitoring articles — and that was in 2010. Marc Renzema, *Evaluative Research on Electronic Monitoring*, in ELECTRONICALLY MONITORED PUNISHMENT 247, 256 (Mike Nellis et al. eds., 2013). In the bibliography of electronic monitoring studies formerly available on Renzema's now-defunct website, about thirty articles addressed electronic monitoring of juveniles. Marc Renzema, Marc Renzema's Electronic Monitoring Bibliography (July 8, 2008) (on file with author). Some scholars have examined the use of electronic monitoring in narrow contexts or with respect to particular classes of people. See, e.g., Eric M. Dante, Comment, *Tracking the Constitution — The Proliferation and Legality of Sex-Offender GPS-Tracking Statutes*, 42 SETON HALL L. REV. 1169, 1170 (2012) (sex offenders); Pamela Foohey, *Applying the Lessons of GPS Monitoring of Batterers to Sex Offenders*, 43 HARV. C.R.-C.L. L. REV. 281, 284 (2008) (comparing application of GPS monitoring to domestic violence offenders and to sex offenders); Natalie Fox Malone, Note, *GPS Monitoring of Domestic Violence Offenders in Tennessee: Generating Problems Surreptitiously*, 43 U. MEM. L. REV. 171, 173 (2012) (domestic violence offenders); Ben A. McJunkin & J.J. Prescott, *Fourth Amendment Constraints on the Technological Monitoring of Convicted Sex Offenders*, 21 NEW CRIM. L. REV. 379, 379 (2018) (sex offenders); Sarah Shekhter, Note, *Every Step You Take, They'll Be Watching You: The Legal and Practical Implications of Lifetime GPS Monitoring of Sex Offenders*, 38 HASTINGS CONST. L.Q. 1085, 1088 (2011) (sex offenders); Samuel R. Wiseman, *Pretrial Detention and the Right to Be Monitored*, 123 YALE L.J. 1344, 1344 (2014) (pretrial); Natasha Alladina, Note, *The Use of Electronic Monitoring in the Alaska Criminal Justice System*, 28 ALASKA L. REV. 125, 128 (2011) (focusing specifically on the use of electronic monitoring in the Alaska state criminal system).

⁹ See, e.g., Mirko Bagaric, Dan Hunter & Gabrielle Wolf, *Technological Incarceration and the End of the Prison Crisis*, 108 J. CRIM. L. & CRIMINOLOGY 73, 75-80 (2018) (proposing to shut down virtually all brick-and-mortar prisons and replacing them with "technological incarceration" heavily reliant on electronic monitoring).

¹⁰ See, e.g., Molly Carney, Note, *Correction Through Omniscience: Electronic Monitoring and the Escalation of Crime Control*, 40 WASH. U. J.L. & POL'Y 279, 293-94 (2012). Avlana K. Eisenberg has argued that, at least as it is currently implemented in the United States, electronic monitoring should be characterized as a punitive sanction

youths as compared to adults;¹¹ its ineffectiveness due to systemic dysfunction;¹² and its intersection with the influence privateers hold over criminal justice policymaking.¹³

As these scholars have lamented, however, scant empirical evidence exists about the impact of electronic monitoring on young people.¹⁴ And, indeed, data on important questions — such as whether electronic monitoring reduces recidivism, and whether it functions as a true alternative to incarceration — are very limited in the criminal system and nearly non-existent in the juvenile system.¹⁵ To be sure, at least one legal scholar, Kate Weisburd, has drawn on interviews with juvenile defenders and her own experience as a juvenile defender to support her conclusion that electronic monitoring is not age appropriate and likely widens the net of social control.¹⁶ But data from probation departments themselves on these questions have remained elusive. The challenges to gathering such evidence are myriad.¹⁷ For one, it is hard to generalize

and that its use can be justified only when it is deployed as an alternative to incarceration. Avlana K. Eisenberg, *Mass Monitoring*, 90 S. CAL. L. REV. 123, 127-31 (2017) (contending that electronic monitoring can be justified when it is used as a substitute for incarceration, but that it likely constitutes excessive punishment when it is adopted as an added sanction). Erin Murphy has examined electronic monitoring as one of a number of technologies used to grant the government control over an individual without exerting physical control. Erin Murphy, *Paradigms of Restraint*, 57 DUKE L.J. 1321, 1321-22 (2008). And Gabriel J. Chin has discussed electronic monitoring as one example of the collateral consequences of committing certain crimes. Gabriel J. Chin, *The New Civil Death: Rethinking Punishment in the Era of Mass Conviction*, 160 U. PA. L. REV. 1789, 1811-14 (2012).

¹¹ See Chaz Arnett, *Virtual Shackles: Electronic Surveillance and the Adulthoodification of Juvenile Courts*, 108 J. CRIM. L. & CRIMINOLOGY 399, 399-401 (2018) (contextualizing deployment of electronic monitoring in juvenile courts as one aspect of the tendency of juvenile courts to import practices from the criminal system); Weisburd, *supra* note 1, at 302 (arguing that electronic monitoring is inappropriate for juveniles).

¹² See Malcolm M. Feeley, *How to Think About Criminal Court Reform*, 98 B.U. L. REV. 673, 698-702 (2018) (contending that electronic monitoring is just one of the most recent examples of so-called incarceration alternatives to instead expand the justice system's reach).

¹³ See Malcolm M. Feeley, *Entrepreneurs of Punishment: How Private Contractor Made and Are Remaking the Modern Criminal Justice System — An Account of Convict Transportation and Electronic Monitoring*, 17 CRIMINOLOGY, CRIM. JUST. L. & SOC'Y 1, 22 (2016) [hereinafter *Entrepreneurs of Punishment*] (using electronic monitoring as an example of the role of private contractors in bringing innovations to the criminal justice system, and the way these innovations can expand and deepen the justice system's reach).

¹⁴ Arnett, *supra* note 11, at 437; Weisburd, *supra* note 1, at 306.

¹⁵ See Feeley, *Entrepreneurs of Punishment*, *supra* note 13, at 16.

¹⁶ Weisburd, *supra* note 1, at 303, 305.

¹⁷ See Feeley, *Entrepreneurs of Punishment*, *supra* note 13, at 16.

about electronic monitoring programs because they are usually run at the county level, and there are thousands of counties in the country.¹⁸ Moreover, county probation departments lack research and development arms or personnel skilled in experimental testing.¹⁹

This Article helps to fill this empirical gap through new information collected primarily from probation departments themselves. In particular, it describes and explores the implications of data I have collected through hundreds of California Public Records Act requests with county probation departments across the state, as well as through email correspondence with state and local officials.

Based on the data I gathered, this Article presents three findings about the use of electronic monitoring in the juvenile system. First, my research suggests that electronic monitoring is net widening, although the exact scope remains unknown.²⁰ Net widening is a particularly salient concern in the juvenile system because the juvenile system is heavily diversionary.²¹ Most young people have their cases dropped outright or dismissed in the early stages. Therefore, the pool of people for whom time on electronic monitoring would constitute a more severe penalty is very large.²²

Second, the Article explores the ramifications of the introduction of Global Positioning System (“GPS”) technology into the juvenile system. Older forms of electronic monitoring could only detect a person’s distance from a home-based receiver, and therefore could only be used to enforce house arrest. That is how electronic monitoring was used when it was introduced in the 1980s.²³

GPS, by contrast, can track people wherever they go.²⁴ In theory, probation departments could use GPS tracking to customize the geographic restrictions they place on youth, including by imposing restrictions that are less burdensome than house arrest (e.g., a requirement not to leave the county, or to stay away from a victim’s residence).²⁵

However, the records I obtained show that, for the most part, that has not happened. Probation departments still use electronic monitoring

¹⁸ *Id.*

¹⁹ *Id.*

²⁰ *See infra* Part I.B.

²¹ *See infra* Part I.A.

²² *See infra* Part I.A.

²³ *See infra* Part II.A.

²⁴ *See infra* Part II.A.

²⁵ *See infra* Part II.A.

exactly as they did in the 1980s. Even though most counties now use GPS, the overwhelming majority still use it to enforce house arrest.²⁶

It is not clear whether it is preferable for probation departments to impose a broader range of geographic restrictions. If the availability of “lighter weight” electronic monitoring options results in probation departments deciding to impose electronic monitoring on young people who would otherwise have received more lenient terms of release, the overall effect might be net widening and detrimental to the juvenile system’s goals. At the same time, house arrest has always been a poor fit for youth, who cannot consistently follow its stringent rules.²⁷ Moreover, these rules are usually written at well above the grade level of the young people expected to follow them.²⁸ Electronic monitoring, when used simply as a more powerful means of enforcing existing house arrest rules, has the potential to exacerbate challenges youths face on house arrest because it automatically and comprehensively records all violations, no matter how minor.²⁹

Third, while probation departments generally have not yet deployed electronic monitoring technology in more expansive ways, there are several reasons to think they will eventually do so.³⁰ The increasingly widespread use and resultant normalization of geolocation tracking and other surveillance of the body in non-penological contexts may pressure probation departments to adopt more extensive tracking.³¹ In addition, like other private technology companies, electronic monitoring companies are constantly iterating, releasing version upon version of their products. The clear trajectory is towards facilitating greater control over monitoring subjects through collection of larger quantities of data of more varied types.³² These expanded capabilities may prove tempting to some probation departments.³³ Further, even if probation departments are reluctant to innovate, private contractors, whose profit motive incentivizes them to offer counties an ever-increasing number of services, might successfully lobby to do it for them.³⁴

Parts I, II, and III of this Article present these findings. In each part, I explain what I have found, the extent to which existing literature makes

²⁶ See *infra* Part II.A.

²⁷ See *infra* Part II.B.

²⁸ See *infra* Part II.C.

²⁹ See *infra* Part II.D.

³⁰ See *infra* Part III.

³¹ See *infra* Part III.B

³² See *infra* Part III.A.

³³ See *infra* Part III.A.

³⁴ See *infra* Part III.C.

assumptions about the facts on the ground, and what the data from departments actually show thus far.

In turn, Part IV of the Article offers policy proposals that flow from these findings. First, today the families of system-involved youths are sometimes required to help pay for electronic monitoring. To help push back against net widening, county governments — not families — should bear the cost of the technology.³⁵ This financial arrangement would help incentivize counties to monitor only those young people who would otherwise have been held in custody, and to do so only for reasonable lengths of time.³⁶ Second, to combat the possibility that young people will face overly harsh sanctions for electronic monitoring violations, probation leadership should put policies and procedures in place to discourage punishing young people for technical or minor violations.³⁷ Finally, to prevent the scope of monitoring from being driven by what is technologically possible rather than by what is penologically appropriate, probation departments should develop, *ex ante*, clear guidelines setting out the purpose of electronic monitoring.³⁸ Departments can then use these initial guidelines as benchmarks when evaluating proposed new uses of the technology. Departments also must come to recognize that they possess a substantial volume of sensitive data about individuals. They need to develop use policies that comprehensively address how the data they maintain will be handled.

I. ELECTRONIC MONITORING IS LIKELY NET WIDENING

This Part first situates electronic monitoring within the juvenile system to give context to the debate over whether the practice is net widening. As described in greater detail below, the juvenile system is heavily diversionary: most young people who are arrested have their cases resolved at early stages with few to no consequences. Thus, the pool of people for whom electronic monitoring would be a more severe penalty, rather than an alternative to incarceration, is vast. Drawing on the data I gathered, the Part contends that electronic monitoring is likely net widening, although the extent of net widening remains unknown.

³⁵ See *infra* Part IV.A.

³⁶ See *infra* Part IV.A.

³⁷ See *infra* Part IV.B.

³⁸ See *infra* Part IV.C.

A. *The Role of Diversion in the Juvenile System*

Franklin E. Zimring and Máximo Langer have explained that the juvenile system's distinguishing feature is the sheer number of young people it diverts from custody.³⁹ Comparing juvenile to criminal court, they explain, "[t]he real contrast is that secure confinement is used less in juvenile court and terms of confinement, when given, are much shorter. The strong preference in modern juvenile courts is to keep kids in community settings, on probation rather than in jails or training schools."⁴⁰

The numbers bear out the idea that the juvenile court is a diversionary court. For example, in 2017, California probation departments received 71,791 referrals of youth.⁴¹ Probation departments closed a third of the referrals they received at intake, and roughly ten percent more either resulted in informal probation or assignment to a diversion program prior to any court filings.⁴² Only about half (38,232) resulted in a petition being filed in juvenile court.⁴³ And even then many cases were diverted. Roughly half of filed cases were dismissed altogether or else resulted in some course of action likely to result in an eventual dismissal, such as a deferred entry of judgment or informal probation.⁴⁴

What is the logic underlying diverting so many youths from the juvenile system? Why create a separate court for kids, and then in essence do nothing regarding the vast majority of the young people who go through it? Zimring and Langer have theorized that the primary purpose of juvenile courts is to give young people time to mature into law-abiding adults.⁴⁵ As they elaborate:

The maturational juvenile court understands high rates of adolescent law violation as a usually transitional phenomenon. Whenever possible, the court's task is to balance the need to condemn harmful acts and to create some punitive consequences for them with continuity in the offender's home life and in the community-based educational and work experiences of normal maturation. The strategic ambition is to

³⁹ Franklin E. Zimring & Máximo Langer, *One Theme or Many? The Search for a Deep Structure in Global Juvenile Justice*, in *JUVENILE JUSTICE IN GLOBAL PERSPECTIVE* 383, 389 (Franklin E. Zimring, Máximo Langer & David S. Tanenhaus eds., 2015).

⁴⁰ *Id.*

⁴¹ See CAL. DEP'T OF JUSTICE, *supra* note 6, at iv.

⁴² See *id.*

⁴³ See *id.*

⁴⁴ See *id.* at v.

⁴⁵ Zimring & Langer, *supra* note 39, at 383-84.

wait out a difficult transitional period with the minimum necessary intervention.⁴⁶

This view of the juvenile system's proper role draws support from criminologists' observations regarding the unique patterns of youth crime. In general, the rate of criminal activity increases until age sixteen and then drops back down.⁴⁷ While some system-involved youths do go on to lives of crime, most do not reoffend once they reach adulthood.⁴⁸

The maturational theory of the juvenile court also lines up with research in neuroscience and developmental psychology.⁴⁹ Researchers in these fields have found that children and young adolescents may not yet be able to apply moral rules to specific situations.⁵⁰ They also have found that adolescents are substantially more susceptible to peer pressure than adults,⁵¹ and lack adult-level capacity to control their impulses.⁵²

Given that many young people commit crimes not because they are inherently prone to criminality but because they are young, it can make sense to tolerate a certain amount of criminal conduct as the maturation process occurs.⁵³ To be sure, the approach is not costless. Young people commit real crimes, some violent, and there are real victims.

But the data suggest a lack of viable alternatives to this "wait and see" approach. Holding youths in custody has been shown to increase — not decrease — recidivism.⁵⁴ Allowing young people to continue their

⁴⁶ *Id.* at 393.

⁴⁷ Elizabeth S. Scott, *The Legal Construction of Childhood*, in *A CENTURY OF JUVENILE JUSTICE* 113, 138 (Margaret K. Rosenheim et al. eds., 2002).

⁴⁸ *See id.*

⁴⁹ *See* BARRY C. FELD, *THE EVOLUTION OF THE JUVENILE COURT 14-15* (2017); *see also* Terry A. Maroney, *The Once and Future Juvenile Brain*, in *CHOOSING THE FUTURE FOR AMERICAN JUVENILE JUSTICE* 189, 189-215 (Franklin E. Zimring & David S. Tanenhaus eds., 2014) (discussing progress in developmental psychology and neuroscience research relevant to juvenile justice).

⁵⁰ FRANKLIN E. ZIMRING, *AMERICAN JUVENILE JUSTICE* 58 (2005).

⁵¹ FELD, *supra* note 49, at 205-06; ZIMRING, *supra* note 50, at 60. Criminologists have known for at least 80 years that adolescents commit crimes in groups. *See id.* at 73.

⁵² *See* FELD, *supra* note 49, at 200-03; ZIMRING, *supra* note 50, at 58.

⁵³ *See* Zimring & Langer, *supra* note 39, at 393.

⁵⁴ FELD, *supra* note 49, at 118; ANNIE E. CASEY FOUND., *JUVENILE DETENTION ALTERNATIVES INITIATIVE: PROGRESS REPORT 2014*, 5-6 (2014); Anna Aizer & Joseph J. Doyle, Jr., *Juvenile Incarceration, Human Capital and Future Crime: Evidence from Randomly-Assigned Judges* 3 (Nat'l Bureau of Econ. Research, Working Paper No. 19102, 2013), <http://www.nber.org/papers/w19102.pdf> ("We find that juvenile incarceration reduces the probability of high school completion and increases the probability of incarceration later in life.").

education,⁵⁵ maintain ties to family,⁵⁶ and participate in after-school activities can help facilitate a successful transition to adulthood.⁵⁷ That successful transition appears to be the best means we have of minimizing later antisocial behavior.

B. *Electronic Monitoring's Net Widening Effect*

If the benefit of the juvenile system is that it diverts the vast majority of young people who have contact with it, then the primary question to ask about any intervention into the system is whether it will undermine the system's diversionary nature.

My findings suggest that electronic monitoring is likely net widening. As discussed above, California counties reported enrolling around 10,000 young people in electronic monitoring programs in a time period roughly corresponding with 2017.⁵⁸ By contrast, the California Department of Justice reports that California juvenile court dispositions resulted in 7,318 instances of young people being placed in secure county or state facilities in 2017.⁵⁹

To believe that electronic monitoring works purely as an alternative to incarceration, one would necessarily have to accept that California's secure confinement rates would vastly increase in the absence of electronic monitoring. That conclusion is not plausible, particularly given my conversations with juvenile defenders regarding their view of the technology's impact, which I describe below.

To find some means of illuminating the degree of net widening, I asked juvenile defenders what percentage of the young people placed

⁵⁵ See Bernardine Dohrn, *The School, the Child, and the Court*, in A CENTURY OF JUVENILE JUSTICE, *supra* note 47, at 295-96 ("There is virtually total verbal agreement that schooling is a key element, perhaps second only to strong families, in preventing juvenile crime and developing future productive citizens."); Stephen J. Ceci & Wendy M. Williams, *Schooling, Intelligence, and Income*, 52 AM. PSYCHOLOGIST 1051, 1051 (1997) ("School attendance is associated with lower rates of teen pregnancy, welfare dependency, and criminality proneness, to name only a few of the myriad advantages of staying in school." (citation omitted)).

⁵⁶ Maintaining a secure relationship with a parent or other primary caregiver is important to youth development. See, e.g., Marlene M. Moretti & Maya Peled, *Adolescent-Parent Attachment: Bonds that Support Healthy Development*, 9 PEDIATRICS & CHILD HEALTH 551, 553 (2004).

⁵⁷ See Kathleen M. Morrissey & Ronald Jay Werner-Wilson, *The Relationship Between Out-of-School Activities and Positive Youth Development: An Investigation of the Influences of Communities and Family*, 40 ADOLESCENCE 67, 73 (2005).

⁵⁸ See generally Number of Youth on EM, *supra* note 5 (compiling the number of youth on electronic monitoring in the California juvenile system).

⁵⁹ CAL. DEP'T OF JUSTICE, *supra* note 6, at 42.

on electronic monitoring would likely have been released anyway without it. Juvenile defenders have a basis for expertise because they must reason through this question regularly as part of advising their clients. When they believe their clients will otherwise be held in custody, they argue in favor of imposition of electronic monitoring. When they believe their clients should be released without electronic monitoring, they must decide whether to advise their clients to resist its imposition.

The juvenile defenders unanimously agreed that a considerable number of young people who would have been released anyway are also placed on electronic monitoring. Estimates of this proportion varied from twenty-five to sixty percent of the young people placed on electronic monitoring would have been released even if the technology was unavailable.⁶⁰

In short, if the primary virtue of the juvenile system is its diversionary nature, then introducing electronic monitoring into this system is problematic when it is imposed on young people as a more severe penalty than they would otherwise have faced. The reports of juvenile defenders suggest this occurs to some extent. Those whose alleged crimes were relatively minor are generally those who experience this effect. Part IV explores one possible way to push back against electronic monitoring's net widening effects: making county governments, rather than the families of young people, bear the cost of the technology.

II. PROBATION DEPARTMENTS STILL PRIMARILY USE ELECTRONIC MONITORING TO ENFORCE ONEROUS HOUSE ARREST RESTRICTIONS

My second finding from the data I collected is that probation departments still use electronic monitoring primarily to enforce existing house arrest rules, rather than to harness GPS technology to have more choices for what geographic restrictions to place on young people. Existing house arrest rules are unrealistic for most young people to follow. Moreover, they are often written in difficult-to-comprehend language. And yet, a primary consequence of electronic monitoring as currently used by probation departments is simply to vastly increase detection of violations of house arrest, no matter how minor or technical.

⁶⁰ See generally Email between Catherine Crump and Juvenile Defenders (on file with author) (estimating how many young people would have been released even in the absence of electronic monitoring).

A. *Most Counties Still Use Electronic Monitoring to Enforce House Arrest*

One might have imagined that GPS, in particular, would lead to electronic monitoring program innovation. As discussed below, it is a much more advanced technology than the radio frequency systems that were the only option when probation departments first introduced electronic monitoring. Yet innovation did not follow. This Section first sets out why one might have thought that the arrival of GPS would lead to program innovation, and then draws on public records to show that, in California at least, electronic monitoring is still primarily used to enforce house arrest.

1. The possibility of change

In the 1980s, the only technology available for electronic monitoring was radio-frequency monitoring.⁶¹ Radio-frequency devices pair an ankle bracelet with a receiver and send an alert to authorities when the bracelet moves out of receiver range, with the receiver typically placed in the home of the monitored individual.⁶² Radio-frequency devices cannot track a person once he or she leaves the proximity of the receiver.⁶³ Its only practical use is to verify compliance with house arrest.

In the 1990s, however, GPS ankle bracelets became available for criminal justice purposes.⁶⁴ This technology has substantially different capabilities than radio-frequency devices. Specifically, GPS devices utilize satellites and cell phone towers to track an individual's movement continuously.⁶⁵ Thus, instead of merely generating a binary record of whether a person is home or not, they can create a detailed

⁶¹ Feeley, *Entrepreneurs of Punishment*, *supra* note 13, at 12.

⁶² PEW CHARITABLE TRS., *supra* note 2, at 2.

⁶³ *See id.*

⁶⁴ *See* J. Robert Lilly & Mike Nellis, *The Limits of Techno-Utopianism*, in ELECTRONICALLY MONITORED PUNISHMENT 21, 32 (Mike Nellis et. al eds., 2013).

⁶⁵ PEW CHARITABLE TRS., *supra* note 2, at 2. GPS devices can be active or passive. *See, e.g.,* Fredericks v. Koehn, No. 06-CV-00957-MSK-KLM, 2007 WL 2890466, at *2 (D. Colo. Sept. 28, 2007), *adhered to on reconsideration sub nom.* Fredericks v. Rocky Mountain Offenders Mgmt. Sys., Inc., No. 06-CV-00957-MSK-KLM, 2008 WL 3833775 (D. Colo. Aug. 13, 2008) (explaining the distinction between active and passive GPS monitoring). Active GPS devices continually track an individual's location in real time and report violations as they occur. *Id.* Passive devices, on the other hand, transmit the location of the individual only at certain, pre-set intervals, and do not provide contemporaneous reporting of violations. *See id.*

record of everywhere a person travels.⁶⁶ The software programs that accompany the GPS bracelets then display the person's movements on a graphical interface similar to Google Maps.⁶⁷

This new capacity to generate a continuous stream of geolocation data that can be readily displayed and analyzed should, in theory, offer probation departments an entirely new range of options regarding how to supervise people being electronically monitored. I detail three such options here, which could be implemented by departments immediately with existing GPS technology.

First, probation departments wishing to create a record of a person's location no longer have to confine the person to his or her home.⁶⁸ The continuous tracking of GPS has decoupled confinement and location verification. For example, a probation department could require an individual to submit to tracking without placing any restrictions on where he or she went. A probation department might do this if it believed such tracking would deter criminal conduct by alerting the department to the youth's activities, while still allowing the young person the freedom to leave an abusive home or go to legitimate activities such as sports or social events.

Second, probation departments that do want to restrict probationers' movements now have options other than house arrest. Thanks to the GPS software's graphical map display, a probation officer can establish "inclusion zones."⁶⁹ Inclusion zones designate clearly marked areas where a person is allowed to be, based on GPS location. Accordingly, they are much broader than the permissible zone of movement allowed by the old radio-frequency technology requiring a person to stay within a certain distance of their ankle bracelet's "home base." To establish an inclusion zone, a probation officer would need only use the software's interface tools to draw a line designating the range of where the probationer is permitted to go.⁷⁰ An inclusion zone can encompass a

⁶⁶ See PEW CHARITABLE TRS., *supra* note 2, at 2.

⁶⁷ See, e.g., *BI ExacuTrack One*, RELIANT MONITORING SERVICES, <http://reliantmonitoring.com/work/bi-exacutrack-one/> (last visited Aug. 22, 2019) (describing the graphical map display options available to those deploying a particular GPS ankle monitor).

⁶⁸ PEW CHARITABLE TRS., *supra* note 2, at 2.

⁶⁹ See, e.g., IND. DEP'T OF CORR., POLICY AND ADMINISTRATIVE PROCEDURES: GPS MONITORING OF SEX OFFENDERS 1 (2012), https://secure.in.gov/idoc/files/03-03-103_AP_GPS_Monitoring_of_Sex_Offenders_3-1-2012.pdf (defining inclusion zone as "[a] place where an offender is approved to be on a regular basis").

⁷⁰ SAMUELSON LAW, TECH. & PUB. POLICY CLINIC & E. BAY CMTY. LAW CTR., ELECTRONIC MONITORING OF YOUTH IN THE CALIFORNIA JUVENILE JUSTICE SYSTEM: COMPLETE APPENDIX 360 (2017), <https://berkeley.app.box.com/v/completeappendix>.

whole county or city, a specific neighborhood, or an area of just a few blocks.⁷¹

Third, and conversely, probation officers can use the mapping software's functionality to designate "exclusion zones" from which probationers are forbidden.⁷² For example, a probation officer might establish an exclusion zone around a victim's home or a park with high levels of criminal activity. Use of such zones would allow youths to leave the house to attend legitimate activities and avoid dysfunction in the home, while still ensuring they abide by narrowly tailored common-sense restrictions on movement.

It is hard to say whether the juvenile system's goals would be best served by implementing innovations such as these. There are several possible advantages to more flexible and tailored supervision options. First, young people might find it easier to succeed on electronic monitoring and exit the juvenile system. Second, it might avoid unnecessary technical violations that do not correspond to truly antisocial behavior. Third, it might help probation officers focus on enforcing restrictions that the court and prosecutor actually care about, such as a stay-away order from a victim's home.

However, there is one enormous potential downside to electronic monitoring: net widening. It is possible that if probation departments begin to offer more flexible electronic monitoring terms, they will begin to apply the technology to young people who previously would have been released pursuant to more lenient conditions. This would cut against the diversionary goal of the juvenile court. Without more detailed information on electronic monitoring's net widening effect, it is hard to say whether the benefits of more flexible electronic monitoring would win out overall.

2. The lack of change

While GPS could lead to program innovation, such innovation has generally not occurred, at least in California. As described below, although GPS is now the dominant monitoring technology, virtually all counties use it as they have always used less sophisticated iterations of monitoring technology: to enforce house arrest.

To determine the extent of innovative use of GPS, I asked all fifty-eight California counties whether they use electronic monitoring in

⁷¹ *Id.* at 364 ("Zones can be created in any size from 150 feet to 2,000 miles in diameter.").

⁷² *Id.* at 1871 (defining exclusion zone as "an area in which the monitored individual is not allowed to travel").

their juvenile justice systems. Fifty-three counties reported doing so.⁷³ I then asked counties what technology they rely on for monitoring. Of the fifty-three counties with electronic monitoring programs, thirty-five use GPS exclusively, nine use only radio-frequency technology, and nine counties use both technologies.⁷⁴ Thus, roughly eighty-three percent of counties using electronic monitoring already have access to the potential benefits of GPS technology.

Finally, I obtained the counties' electronic monitoring program rules to understand how they deploy the technology. Of the forty-four counties using GPS exclusively or in combination with radio-frequency monitoring, thirty-six (eighty-four percent) use GPS solely to enforce house arrest.⁷⁵ This state of affairs indicates little divergence from past practices, when radio-frequency devices made up the traditional model of electronic monitoring and were used mainly to enforce confinement at home.

Seven counties at least do something with GPS other than enforce house arrest, but most use it to implement modest innovations.⁷⁶ One county, for example, primarily uses GPS to enforce house arrest before disposition, and to verify a young person's compliance with curfew after disposition.⁷⁷ It also occasionally uses GPS to enforce exclusion zones, but seems to do so mostly in specific categories of cases.⁷⁸ For example, that same county's chief probation officer explained that it might create an exclusion zone in "a domestic violence case and the offender has to stay away from the home of the victim. We use it to verify where an offender has been."⁷⁹

On the other hand, two counties have departed more significantly from the house arrest model and described their practices in some detail. One has used GPS to create an electronic monitoring program

⁷³ See generally EM RULES, *supra* note 4 (compiling California counties' rules governing juvenile electronic monitoring programs).

⁷⁴ See Catherine Crump & Amisha Gandhi, Type of EM Used (Oct. 9, 2019) (unpublished Excel spreadsheet) (on file with author).

⁷⁵ See Catherine Crump & Amisha Gandhi, EM Used to Exclusively Enforce House Arrest (Oct. 9, 2019) (unpublished Excel Spreadsheet) (on file with author).

⁷⁶ These are Marin, Napa, San Francisco, Santa Barbara, Shasta, Sonoma, and Sutter. *Id.* Sierra, a very low-population county (fewer than 3,000 people), did not have a clear policy on how it would use GPS because it so rarely uses EM to monitor juveniles. *Id.*

⁷⁷ Telephone Interview with Alex Northcutt, Deputy Pub. Def., Napa Cty. (Jan. 29, 2019) (interview notes on file with author).

⁷⁸ *Id.*

⁷⁹ Email from Mary Butler, Chief Prob. Officer, Napa Cty., to author (Jan. 28, 2019) (on file with author).

with two increasingly restrictive tiers.⁸⁰ At the more lenient level, electronic monitoring restrictions are built around the young person's schedule.⁸¹ The young person is allowed freedom of movement to attend school, counseling, sports, and other regular activities. The young person might also have to avoid exclusion zones based on where the crime was committed.⁸² But for the most part, the young person is allowed to go where he or she pleases provided that the probation department is informed in advance.⁸³ Level two for this county is standard house arrest.⁸⁴ This level requires young people to stay home at all times unless they are attending school or a treatment program.⁸⁵ Yet it is used very rarely, and only for high-risk youth who would ordinarily be in custody but are released for a specific reason, most often medical.⁸⁶

A second county also uses GPS to give it more flexibility in the restrictions it places on young people. The county still uses radio-frequency monitoring to enforce house arrest, and the majority of young people are monitored by radio frequency technology.⁸⁷ But it also uses GPS to implement tailored, individual-specific restrictions for young people. Its Chief Probation Officer explains:

We use electronic monitoring basically in varying degrees from least restrictive to more restrictive fashion depending on the court's orders or the youth's behavioral issues. To accomplish this, we use both inclusion and exclusion zones to address their level of supervision and their risk factors. For example, we can use inclusion zones around their home or school to ensure they are there when required or we can use exclusion zones to ensure they stay away from someone or someplace that is a risk factor for them. For example, we may put an exclusion zone around their victim's home to ensure they follow any stay away orders. We have some youth that in lieu of incarceration we utilize GPS to allow them to move around the community freely until

⁸⁰ Interview with Brad Michnevich et al., Juvenile Div. Dir., Sonoma City, in Santa Rosa, Cal. (Feb. 4, 2019) (interview notes on file with author).

⁸¹ *Id.*

⁸² *Id.*

⁸³ *Id.*

⁸⁴ *Id.*

⁸⁵ *Id.*

⁸⁶ *Id.*

⁸⁷ Telephone Interview with Sara Elturk, Deputy Pub. Def., Santa Barbara Cty., (Feb. 1, 2019) (interview notes on file with author); Email from Sara Elturk, Deputy Pub. Def., Santa Barbara Cty., to author (Feb. 6, 2019) (on file with author).

7 p.m. as long as they attend school and treatment. Then we put an inclusion zone around their home from 7 p.m. (or other curfew time) until the next morning to ensure they maintain any court-imposed curfew.⁸⁸

These examples show that probation departments can, in practice, use GPS to enforce restrictions on young people that are more flexible than house arrest. Moreover, as the quote from the Chief Probation Officer above notes, the ability to enforce customized geographical restrictions on movement could enable more effective deterrence of certain troubling movements that courts and prosecutors actually care about. This might better ensure that electronic monitoring is truly an alternative to incarceration for some youths who would otherwise be locked up to protect a victim or deter gang affiliations. Nonetheless, most counties currently do not pursue such innovations. House arrest is still the norm.

B. House Arrest Rules Are Difficult to Follow

Given that the vast majority of counties use electronic monitoring exclusively to enforce house arrest, it is impossible to understand electronic monitoring's practical effects without knowing something about the rules young people live under while on house arrest. Based on county responses to California Public Records Act requests, I compiled the fullest descriptive account to date of electronic monitoring program rules.

The structure of house arrest rules varies from county to county, though some rules appear universal. The foundational rule of house arrest is, of course, that young people must remain at home. As one county's rules put it, "You may not leave the inside of your home, except to attend school, work, court, or appointments."⁸⁹ The universal exception to the stay-at-home requirement is a mandate that young people attend school. As a typical county rule provides, "You will go directly to school and attend school regularly, abide by all school rules, and return immediately to your home at the conclusion of the school

⁸⁸ Email from Tanja Heitman, Chief Prob. Officer, Santa Barbara Cty., to author (Jan. 28, 2019) (on file with author).

⁸⁹ Contra Costa, in EM RULES, *supra* note 4, at 21-22; see also Sacramento, in EM RULES, *supra* note 4, at 129-30 ("While on electronic monitoring, I will remain inside my approved residence at all times, except for school attendance or other activities approved in advance by my probation officer."); San Mateo, in EM RULES, *supra* note 4, at 155-56 ("Remain at home at all times except to attend school, counseling or church.").

day.”⁹⁰ The other common, although not universal, exceptions to the requirement that young people stay at home are work,⁹¹ counseling,⁹² religious services,⁹³ and court.⁹⁴

Beyond these near-universal rules, virtually all house arrest rules contain some catch-all exception for occasional, important needs to leave home (e.g., medical appointments or major family events).⁹⁵ These provisions require the young person to seek special advance permission from their probation officer to deviate from their usual

⁹⁰ Monterey, in EM RULES, *supra* note 4, at 110-11; *see also* Contra Costa, in EM RULES, *supra* note 4, at 21-22 (“You will leave home and go directly to and from school. Unexcused absences and tardies are violation of [home supervision] rules and may result in your arrest and return to court.”); Fresno, in EM RULES, *supra* note 4, at 34-35 (“I agree . . . [t]o attend school regularly”); Sacramento, in EM RULES, *supra* note 4, at 129-30 (“I will regularly attend school and any absence must be verified in writing by a parent/guardian or medical doctor.”).

⁹¹ Glenn, in EM RULES, *supra* note 4, at 37-38 (authorizing leaving home “[t]o attend work as pre-approved by the EMP staff”); Inyo, in EM RULES, *supra* note 4, at 48-49 (authorizing leaving home “[t]o attend work as pre-approved by the Probation Officer”); Madera, in EM RULES, *supra* note 4, at 76, 78 (“I understand if employed locally I may be allowed to continue my employment upon approval by the Probation Officials. I understand changes in my work schedule must be verified in advance by my employer and approved my [sic] Probation Officials.”). *But see* San Mateo, in EM RULES, *supra* note 4, at 155-56 (“The Minor is not allowed to be employed during the term of his/her detention on Electronic Monitoring.”).

⁹² Many counties reserve the right to require minors to attend counseling. San Mateo County’s contract provides a typical example: “The Minor is to attend counseling or programming as directed by the Probation Officer.” San Mateo, in EM RULES, *supra* note 4, at 155, 157; *see also* Mariposa, in EM RULES, *supra* note 4, at 92-93 (“If directed, I agree to continue any counseling or rehabilitation programs ordered by the courts or probation.”); Santa Cruz, in EM RULES, *supra* note 4, at 165-66 (“Attend counseling as directed.”); Ventura, in EM RULES, *supra* note 4, at 214-15 (requiring attendance at scheduled therapy appointments). Other counties, such as Mono County, take a more permissive approach: “I understand that I may continue to attend counseling (including AA or NA meetings or Probation Groups) and must provide my Probation Officer with a schedule in advance of these sessions.” Mono, in EM RULES, *supra* note 4, at 104, 107.

⁹³ For example, Stanislaus County provides that youth “[m]ay attend church services once a week for 2 hours or less.” Stanislaus, in EM RULES, *supra* note 4, at 190-91. Many of these counties use the word “church,” but some use more neutral language. *See, e.g.*, Mono, in EM RULES, *supra* note 4, at 104, 107 (“I understand that I may attend religious/spiritual services and must provide my Probation Officer with a schedule in advance of these services.”).

⁹⁴ Contra Costa, in EM RULES, *supra* note 4, at 21-22.

⁹⁵ *See, e.g.*, Fresno, in EM RULES, *supra* note 4, at 34-35; Placer, in EM RULES, *supra* note 4, at 121-23; Santa Cruz, in EM RULES, *supra* note 4, at 165-66. *See generally* EM RULES, *supra* note 4 (compiling California counties’ rules governing juvenile electronic monitoring programs).

schedule.⁹⁶ Counties vary in how far in advance they require young people to request a schedule change, but it is commonly between twenty-four hours⁹⁷ and a week.⁹⁸

Finally, all counties impose certain rules necessary for electronic monitoring devices to function, such as:

- Youths must continually wear their devices;⁹⁹
- Youths are required to keep their devices charged (requiring them to sit or stand adjacent to a power outlet for about two hours a day);¹⁰⁰

⁹⁶ See, e.g., Fresno, in EM RULES, *supra* note 4, at 34-35; Placer, in EM RULES, *supra* note 4, at 121, 123; Santa Cruz, in EM RULES, *supra* note 4, at 165-66. See generally EM RULES, *supra* note 4 (compiling California counties' rules governing juvenile electronic monitoring programs).

⁹⁷ See, e.g., Fresno, in EM RULES, *supra* note 4, at 34-35; Lake, in EM RULES, *supra* note 4, at 59-60; Placer, in EM RULES, *supra* note 4, at 121, 123; Santa Cruz, in EM RULES, *supra* note 4, at 165-66; Siskiyou, in EM RULES, *supra* note 4, at 180-81; Stanislaus, in EM RULES, *supra* note 4, at 190, 193; Tulare, in EM RULES, *supra* note 4, at 204, 206; Tuolumne, in EM RULES, *supra* note 4, at 210, 212; Ventura, in EM RULES, *supra* note 4, at 214-15.

⁹⁸ Inyo, in EM RULES, *supra* note 4, at 48, 50.

⁹⁹ See, e.g., Humboldt, in EM RULES, *supra* note 4, at 41, 44 ("To ensure the minor's compliance with the terms and conditions of the Home Detention Electronic Monitoring program s/he agrees to wear a waterproof, tamper-proof, non-removable ankle bracelet/transmitter twenty-four (24) hours a day during the entire period of home detention."); Kern, in EM RULES, *supra* note 4, at 52-53 ("You will be monitored by an ankle module, which you agree to wear on your ankle 24 hours a day."); Kings, in EM RULES, *supra* note 4, at 54, 56 ("I agree to wear the transmitter on my ankle twenty-four hours a day for the duration of time I am on the GPS."); Sacramento, in EM RULES, *supra* note 4, at 129-30 ("I agree to wear a non-removable ankle bracelet that I will not remove or tamper with.").

¹⁰⁰ See, e.g., Alameda, in EM RULES, *supra* note 4, at 1-2 ("Minors on GPS will maintain and recharge their battery system daily."); Contra Costa, in EM RULES, *supra* note 4, at 21, 23 ("The GPS unit must be charged for two continuous hours each day, or until the GPS unit gives you an audible alert 'battery charged,' indicating that the battery is fully charged."); Orange, in EM RULES, *supra* note 4, at 118-19 ("I am responsible for maintaining the battery charge of the CEM equipment at all times. I will charge the GPS device twice a day, every 12 hours, for 60 minutes each time."); San Francisco, in EM RULES, *supra* note 4, at 146, 149 ("I understand that I am required to charge my SCRAM GPS bracelet for 3 hours each day. I will charge the device for 1 ½ hours in the morning, and 1 ½ hours in the evening."); Ventura, in EM RULES, *supra* note 4, at 214-15 ("You will charge the unit daily and/or as directed and follow the directives of the unit.").

- Youths are forbidden from breaking their devices or interfering with their operation;¹⁰¹
- Youths are prohibited from submerging their devices in water, by bathing, for example, or swimming;¹⁰²
- Youths must have electricity at home;¹⁰³
- Youths are prohibited from wearing certain kinds of footwear;¹⁰⁴
- For radio frequency monitoring, youths must have landline telephones installed at home;¹⁰⁵ and

¹⁰¹ See, e.g., Orange, in EM RULES, *supra* note 4, at 118-19 (“I will not nor will I allow others to tamper with or remove the CEM equipment, other than representatives of the Orange County Probation Department”); Sacramento, in EM RULES, *supra* note 4, at 129-30 (“I agree to wear a non-removable ankle bracelet that I will not remove or tamper with.”); San Benito, in EM RULES, *supra* note 4, at 131-32 (“That I will not tamper with, remove, disconnect, or attempt to repair or allow anyone to tamper with or attempt to repair any electronic monitoring equipment.”); San Bernardino, in EM RULES, *supra* note 4, at 136-37 (“Do not remove/tamper with electronic ankle monitor.”); Santa Barbara, in EM RULES, *supra* note 4, at 158-59 (“You will not remove or tamper with any Global Positioning Satellite (GPS) equipment assigned to you.”).

¹⁰² See, e.g., Alameda, in EM RULES, *supra* note 4, at 1, 3 (“Do not expose the device to extreme temperatures or submerge in any body of water (swimming pools, hot tubs, bath tubs, lakes, rivers).”); Kings, in EM RULES, *supra* note 4, at 54, 58 (“No baths (showers are okay), no swimming”); Napa, in EM RULES, *supra* note 4, at 112-13 (“I will not submerge the device, battery, or charger in water (i.e., bathtub, pool, hot-tub, lake, etc.)”); Orange, in EM RULES, *supra* note 4, at 118, 120 (“You can shower; however, do not submerge GPS device in water (bath, spa, pool, lake, ocean, sauna, steam room)”); Santa Barbara, in EM RULES, *supra* note 4, at 158-59 (“You may shower normally. However, the GPS device is not waterproof. You may not submerge it in water such as baths, pools, hot tubs, or the ocean.”) (emphasis omitted).

¹⁰³ See, e.g., Glenn, in EM RULES, *supra* note 4, at 37-38 (“I understand and agree that if either my electricity or telephone service is disconnected or turned off due to non-payment I may be removed from the program and returned to full custody.”); Sacramento, in EM RULES, *supra* note 4, at 129-30 (“I agree to provide and maintain electrical service at my residence at my own expense.”); Santa Barbara, in EM RULES, *supra* note 4, at 158-59 (“Electricity must be operational at all times at your residence.”); Siskiyou, in EM RULES, *supra* note 4, at 180-81 (“Maintain electricity and a telephone line”); Stanislaus, in EM RULES, *supra* note 4, at 190, 193 (“Shall provide and maintain electricity”).

¹⁰⁴ See, e.g., Mariposa, in EM RULES, *supra* note 4, at 92, 94 (“I will not wear cowboy/cowgirl boots or any boots that cover the ankle bracelet while on Electronic/GPS Monitoring”); Orange, in EM RULES, *supra* note 4, at 118, 120 (“Do not force a boot over the tag.”).

¹⁰⁵ See, e.g., Madera, in EM RULES, *supra* note 4, at 76, 78 (“I agree to maintain a working telephone in my residence”); Santa Cruz, in EM RULES, *supra* note 4, at 165-66 (“If telephone service is turned off or disconnected, you will be removed from the program.”).

- For radio-frequency monitoring, telephone equipment is required to be configured in specific ways,¹⁰⁶ and its use is limited in specific ways.¹⁰⁷

Young people might have difficulties complying with these rules for several reasons. First, the tedium of being home at all times and the appeal of leaving home to socialize are ever-present for the typical young person. These challenges are likely to be particularly severe for adolescents who, as discussed above, are particularly susceptible to peer pressure and do not yet have fully developed impulse control.¹⁰⁸ Second, the home environment may itself be stressful, perhaps due to overcrowding or poor relationships with other residents.¹⁰⁹ Third, young people do not have full control over their environments and may not in some cases be able to meet program requirements, such as the requirement that the home have electricity.¹¹⁰ Fourth, young people may need to leave home for unapproved reasons, such as to obtain basic necessities, engage in informal work, or care for relatives.

Moreover, the challenges of complying with the house arrest rules depend not only on the content of the rules themselves but also on the length of time young people must follow them. Although probation departments do not report comprehensive data on how long young people spend on house arrest, anecdotal reports from probation officers

¹⁰⁶ See e.g., Santa Cruz, in EM RULES, *supra* note 4, at 165-66 (“Telephones cannot have special features, such as call waiting, call forwarding, phone blocks or a computer modem.”); Stanislaus, in EM RULES, *supra* note 4, at 190, 192-93 (describing the need to disable special services, and the need to hang up when the monitoring equipment begins dialing).

¹⁰⁷ See e.g., Madera, in EM RULES, *supra* note 4, at 76, 79 (“I agree to limit all phone conversations on my phone line to 5 minutes or less. If I hear a ‘beep’ while talking on the phone, I am to hang up and allow the equipment to operate, approximately 10 minutes.”); Stanislaus, in EM RULES, *supra* note 4, at 190, 192 (“Shall hang up the telephone immediately when a computerized sound caused by the receiver/dialer is heard.”).

¹⁰⁸ See *supra* notes 51–52 and accompanying text.

¹⁰⁹ Claudia D. Solari & Robert D. Mare, *Housing Crowding Effects on Children’s Wellbeing*, 41 SOC. SCI. RES. 464, 464 (2012).

¹¹⁰ See GABRIELA SANDOVAL & MARK TONEY, TURN, LIVING WITHOUT POWER: HEALTH IMPACTS OF UTILITY SHUTOFFS IN CALIFORNIA 7 (2018), http://www.turn.org/wp-content/uploads/2018/05/2018_TURN_Shut-Off-Report_FINAL.pdf (“There were 886,000 households in California shut off by PG&E, Edison, SDG&E and SoCal Gas in 2017, impacting more than 2.5 million people, most of whom are children.”); *id.* at 9 (estimating that roughly a quarter of Californians are “energy insecure”).

and juvenile defenders suggest that terms ranging from thirty to sixty days are common.¹¹¹

To be sure, some reasons young people might violate house arrest are more sympathetic than others. Leaving to avoid an abusive parent or to pick up medication for an ill parent is likely to generate more sympathy than leaving to visit friends. But blunt and perfectly enforced house arrest rules make no distinction between sympathetic and unsympathetic reasons for noncompliance.

In the end, perfect compliance with house arrest rules would be unlikely even if young people were capable of fully understanding them, due to the onerous nature of house arrest restrictions, the existence of sympathetic if not wholly legitimate reasons for technically violating overly broad house arrest rules, the length of time young people must comply with these restrictions, and the realities of adolescent development.

C. House Arrest Rules Are Difficult to Understand

Are young people likely to understand the rules they are required to follow when participating in electronic monitoring programs? Kate Weisburd raised the issue of readability of rules in her article on juvenile electronic monitoring, noting that in the California county where she practiced the rules were written at the tenth to eleventh grade level.¹¹² Yet more comprehensive county-level information on the language of rules has thus far been unavailable to scholars. As it turns out, the data from probation departments themselves largely confirm that Weisburd is right: rules are often written in language that young people will find difficult to understand.

To tell whether program participants will find electronic monitoring rules readable, we first need to know how well young people subject to juvenile supervision are able to read. At the least, program rules should be written at the grade level of the youngest children expected to understand them. California does not have a minimum statutory age of

¹¹¹ Interview with Nick Birchard, Deputy Chief Prob. Officer, Santa Clara Prob. (June 12, 2018) (on file with author); Email from Kate Weisburd to author (Aug. 26, 2019) (on file with author); Email from author to Kate Weisburd (Aug. 26, 2019).

¹¹² Weisburd, *supra* note 1, at 326. The National Juvenile Defender Center has taken the position that “probation orders should be written and explained in the youth’s primary language, using simplified words and phrases, taking into account adolescent development and the prevalence of language and literacy-related disabilities among youth in the juvenile justice system.” NAT’L JUVENILE DEF. CTR., PROMOTING POSITIVE DEVELOPMENT: THE CRITICAL NEED TO REFORM YOUTH PROBATION ORDERS 4 (2016), http://www.njjn.org/uploads/digital-library/Promoting_Positive_Development.pdf.

jurisdiction for its juvenile system.¹¹³ Nevertheless, statistics on system-involved youth indicate that only a small number of children under twelve are processed by the juvenile system.¹¹⁴ Two juvenile defenders told me that some of their clients on electronic monitoring have been as young as thirteen.¹¹⁵ As a more general benchmark, substantial numbers of twelve-to-fourteen-year-olds are entering the system, suggesting that at minimum a twelve-year-old should be able to read and understand the rules.¹¹⁶ This means they should be written at a seventh-grade level, at least presuming that a twelve-year-old in the system reads at grade level. But of course, many system-involved youths do not read at expected grade level — a fact that supports the argument that these rules should be written at a grade level even lower than seventh.¹¹⁷

We need not quibble about appropriate grade levels, however, because my review of program rules reveals that California counties fail to meet even the most generous projection of the reading abilities of a twelve-year-old. As discussed below, the average levels are geared more toward the late high school student, with a significant minority of counties using language more appropriate for college students.¹¹⁸

One way to gauge the readability of a text is to deploy a readability formula.¹¹⁹ Such formulas analyze sentence structure to approximate the ease or difficulty of reading a text.¹²⁰ As one leading scholar of

¹¹³ Elizabeth S. Barnert et al., *Setting a Minimum Age for Juvenile Justice Jurisdiction in California*, 13 INT'L J. PRISON HEALTH 49, 50 (2017).

¹¹⁴ CAL. DEP'T OF JUSTICE, *supra* note 6, at 64 (noting that children under age twelve were referred to probation 637 times in 2017); *id.* at 71 (noting that fifty-six petitions to juvenile court involved young people under age twelve in 2017).

¹¹⁵ Email from Tony Cheng, Dir., Youth Def. Clinic, E. Bay Cmty. Law Ctr., to author (Nov. 13, 2018, 02:07 PST) (on file with author); Email from Laurel Arroyo, Deputy Public Defender, Alameda County, to author (Nov. 15, 2018, 14:02 PST) (on file with author).

¹¹⁶ *See, e.g.*, CAL. DEP'T OF JUSTICE, *supra* note 6, at 64 tbl.9 (showing that in 2017, of juvenile referrals, 13,386 were for children ages twelve to fourteen); *id.* at 71 tbl.14 (showing that in 2017, of petitions filed, 5,291 were for juveniles between the ages of twelve and fourteen).

¹¹⁷ Regina M. Foley, *Academic Characteristics of Incarcerated Youth and Correctional Educational Programs: A Literature Review*, 9 J. EMOTIONAL & BEHAV. DISORDERS 248, 249 (2001) (“The academic achievement of incarcerated youth has been consistently reported as 1 year to several years below expected grade levels.” (internal citation omitted)).

¹¹⁸ *See* Catherine Crump, Flesch-Kincaid Readability Spreadsheet (Nov. 15, 2018) (unpublished Excel spreadsheet) (on file with author) [hereinafter Readability Spreadsheet].

¹¹⁹ WILLIAM H. DUBAY, THE PRINCIPLES OF READABILITY 2 (2004).

¹²⁰ *Id.*

readability put it, “[u]sed as rough guides, . . . scores derived from readability formulas provide quick, easy help in the analysis and placement of educational material.”¹²¹ The “Flesch-Kincaid Grade Level readability formula,” which produces a grade-level readability score, is one of the most popular readability formulas overall and is particularly helpful to educators seeking to evaluate the suitability of reading materials for school-aged children.¹²² The formula bases its determination on sentence length and the number of syllables per word.¹²³

Applying the Flesch-Kincaid Grade Level readability formula to the language of the electronic monitoring rules in the counties responding to my public records requests,¹²⁴ I found that the average set of electronic monitoring program rules is written at the eleventh- to twelfth-grade level. The most readable rules are written at the eighth-grade level, with four counties’ rules scoring in this range.¹²⁵ Nine counties have rules written at the college level.¹²⁶

But the legal terminology and legal concepts described in many rules raise the possibility that the formula is underestimating the challenges of comprehension. To give a few examples, one county provides that “if the equipment is damaged, lost, destroyed, or unreturned you may be criminally prosecuted under Section(s) 594 (Vandalism) and/or 484/488 (Petty Theft) or 487 (Grand Theft) of the California Penal Code.”¹²⁷ Another informs program participants that “any violations of this agreement will constitute a violation of the program and may cause immediate adverse legal action to be taken against me.”¹²⁸ Two small counties with very similar program rules warn participants that “loss of a receiving signal or the receipt of a tamper signal by the monitoring device shall constitute prima facie evidence” of either a curfew or probation violation.¹²⁹

If we expect young people to comply with these rules, basic fairness dictates that they be written such that young people can understand

¹²¹ *Id.* at 19.

¹²² *See id.* at 22.

¹²³ *See id.* at 50.

¹²⁴ I analyzed the rules of the counties using the Word implementation of the Flesch-Kincaid Grade Level readability formula.

¹²⁵ *See Crump, Readability Spreadsheet, supra* note 118.

¹²⁶ *See id.*

¹²⁷ Orange, *in EM RULES, supra* note 4, at 118, 120.

¹²⁸ San Francisco, *in EM RULES, supra* note 4, at 146, 149.

¹²⁹ Glenn, *in EM RULES, supra* note 4, at 37, 40; Inyo, *in EM RULES, supra* note 4, at 48, 50.

them. Also, as a policy matter, we want young people to succeed in out-of-custody settings, a goal we can best facilitate by making program rules comprehensible.

D. Strict Rules and Perfect Detection of Violations Risks Over-Enforcement

The preceding Sections demonstrate that, contrary to what one might expect, the technological innovation of GPS has not led to penological innovation. Most counties still use electronic monitoring to enforce house arrest. The house arrest rules are difficult to follow consistently, and written in language that many young people are unlikely to understand.

What, then, can we say about the interaction of electronic monitoring and house arrest? It is probably the case that line probation officers have always known that youth compliance with house arrest rules was imperfect. Imperfect compliance will not surprise anyone who has experience with teenagers. And it is also probable that probation officers have exercised their discretion to ignore many violations provided that they did not involve new crimes or troubling patterns of behavior.

Yet such equitable discretion is challenging to wield under a system in which electronic monitoring automatically records all violations and makes knowledge of these violations widely available. This system of perfect detection is likely to change the dynamic of the probation officer response. When only probation officers knew of the violations, they could exercise their discretion as to how to respond. But when notice of violations is available broadly, probation officers may be risk averse and more inclined to punish youths for violations or even return them to custody.

This system of perfect detection and enforcement is neither an intended nor desirable outcome of technological innovations in the juvenile probation arena. If our goal is to help young people exit the system, because we think diversion is the best penological outcome, then we do not actually want young people to fail out of electronic monitoring programs and face harsher sanctions for minor infractions. I explore a potential solution in Part IV.B.

III. ELECTRONIC MONITORING IS LIKELY TO BECOME EVEN MORE
INTRUSIVE

As discussed, county probation departments have largely failed to use GPS to create more tailored and flexible supervision options for youth. Meanwhile, three converging trends may pressure probation

departments to adopt extremely invasive forms of electronic monitoring that should concern us.

First, broader societal trends outside the penological context are normalizing collection of data about individuals' activities. Second, electronic monitoring technology is evolving to collect greater volumes of more diverse types of data. Third, even if probation departments do not willingly deploy more intrusive forms of monitoring, private contractors may seek to force it upon them. This Part will discuss these trends in turn.

A. *Broader Societal Trends Could Favor More Invasive Tracking*

Today location tracking technology is ubiquitous, and individuals collect increasing quantities and varieties of information about themselves and loved ones. Counties that have not yet switched to GPS tracking may face pressure to do so given how widespread this technology has become. In addition, the degree to which individuals now routinely record the minutia of their everyday lives may normalize the collection of such information about others. This may particularly be the case for young people involved in the juvenile system, both because young people are often given less privacy and because individuals in the justice system are often regarded as having reduced expectations of privacy.¹³⁰

To say that GPS technology is everywhere is to point out the obvious. It has become so essential to daily life that GPS phone applications have nearly replaced paper maps as the basis of personal navigation. GPS is now routinely used in employment settings, for example helping to track professional drivers to increase compliance with organizational goals.¹³¹

Moreover, individuals now regularly geolocate themselves and their loved ones. People track their own movements by using driving direction apps or personal fitness devices. Parents increasingly track

¹³⁰ See, e.g., *In re Malik J.*, 193 Cal. Rptr. 3d 370, 373-74 (Cal. Ct. App. 2015) (describing the broad authority of juvenile courts to require young people to submit to searches while on probation); *id.* at 375-76 (describing the “diminished privacy interests” of a young person subject to a search condition).

¹³¹ See generally Karen E. C. Levy, *The Contexts of Control: Information, Power, and Truck-Driving Work*, 31 INFO. SOC'Y 160 (2015) (examining GPS tracking devices in the U.S. trucking industry).

their kids through their kids' cell phones.¹³² We put GPS trackers on those with dementia who have a tendency to wander.¹³³

Beyond this, individuals now routinely log information about themselves that is arguably more revealing than geolocation data. There are now convenient ways for people to track how they spend their time, how much they exercise, what they eat, and how well they sleep.¹³⁴ Those who do so using third-party applications on their cell phones thus regularly share this information with third parties, even if they may not fully appreciate the implications of doing so.¹³⁵

In short, people outside of the justice system are tracking themselves and others in increasing detail. Moreover, they often do so for reasons less important than advancing public safety. These developments may place pressure on probation departments to engage in more electronic monitoring.

This pressure may be particularly acute when it comes to young people going through the juvenile system. Society grants less privacy to young people in general. For example, while the Fourth Amendment does apply to searches of students carried out by public school officials, the government only needs to show that the search was "reasonable . . . , under all the circumstances."¹³⁶ More fundamentally, young people usually live in the homes of their parents or guardians, and have correspondingly less control over their physical space and possessions.

Also, people involved in the justice system are also frequently accorded less privacy. For example, with regard to young people on probation, a California court may "impose and require any and all reasonable conditions that it may determine fitting and proper to the end that justice may be done and the reformation and rehabilitation of

¹³² Monica Anderson, *Parents, Teens, and Digital Monitoring*, PEW RES. CTR. (Jan. 7, 2016), <https://www.pewinternet.org/2016/01/07/parents-teens-and-digital-monitoring/> [<https://perma.cc/YLK6-5LZ9>].

¹³³ See Paula Span, *A Shoe for Wanderers*, N.Y. TIMES (Oct. 14, 2011, 12:59 PM) https://newoldage.blogs.nytimes.com/2011/10/14/a-shoe-for-wanderers/?rref=collection%2Ftimestopic%2FElder%20Care&action=click&contentCollection=timestopics®ion=stream&module=stream_unit&version=search&contentPlacement=1&pgtype=collection [<https://perma.cc/7EZL-KN3K>].

¹³⁴ See Jerry Kang et al., *Self-Surveillance Privacy*, 97 IOWA L. REV. 809, 813-14 (2012) (describing ways in which individuals collect data about their own activities).

¹³⁵ *Id.* at 812.

¹³⁶ *New Jersey v. T.L.O.*, 469 U.S. 325, 341 (1985) (dispensing with the warrant requirement in school settings and holding instead that "the legality of a search of a student should depend simply on the reasonableness, under all the circumstances, of the search").

the ward enhanced.”¹³⁷ This includes searches that infringe privacy, such as searches of a young person’s electronic devices, although only if these searches are “related to the crime of which the defendant was convicted or to future criminality.”¹³⁸

B. *Electronic Monitoring Technology Will Continue to Become More Invasive*

Another reason that probation departments may adopt more invasive forms of tracking is that the technology is evolving to facilitate collection of a greater variety of types of data. Companies that vend electronic monitoring technologies, like other technology companies, pride themselves on their ability to innovate rapidly. They frequently release “new and improved” versions of their products.¹³⁹ There is no reason to think that development of electronic monitoring will stop with today’s GPS enabled bracelets.

Two forms of monitoring are already in widespread use. As discussed above, geolocation tracking is ubiquitous.¹⁴⁰ Although not the focus of this piece, some ankle bracelets can also detect alcohol usage by measuring excretion of alcohol through the skin.¹⁴¹

Probation departments outside of California have additionally experimented with using electronic monitoring bracelets to listen in on, and talk to, monitoring subjects. For example, Chicago briefly experimented with GPS bracelets equipped with microphones and speakers.¹⁴² Public uproar was sufficient that the probation department terminated the program and a judge later ordered it discontinued.¹⁴³

¹³⁷ *In re Ricardo P.*, 446 P.3d 747, 750 (Cal. 2019) (quoting Cal. Welf. & Inst. Code § 730(b) (2019)).

¹³⁸ *Id.* at 751 (quoting *People v. Lent* 541 P.2d 545, 548 (1975)).

¹³⁹ See, e.g., *Product Catalog 2018-19*, BI, <http://www2.bi.com/product-catalog/> (last visited Sept. 1, 2019) [<https://perma.cc/58U3-KHRY>] (describing products and touting the latest advances in its offerings).

¹⁴⁰ See *supra* INTRODUCTION.

¹⁴¹ See, e.g., *Continuous Alcohol Monitoring*, SCRAM SYSTEMS, <https://www.scramsystems.com/products/scram-continuous-alcohol-monitoring/> (last visited June 26, 2019) [<https://perma.cc/XY3L-BETR>].

¹⁴² See Kira Lerner, *Chicago’s Ankle Monitors Can Call and Record Kids Without Their Consent*, CITYLAB (Apr. 8, 2019), <https://www.citylab.com/equity/2019/04/chicago-electronic-monitors-juveniles-can-call-and-record-them-without-consent/586639/>.

¹⁴³ *Id.*; see also Charlie De Mar, *Is Recording Conversations on Electronic Monitoring Ankle Bracelets Going Too Far?*, CBS CHI. (Apr. 12, 2019, 10:48 PM), <https://chicago.cbslocal.com/2019/04/12/electronic-monitoring-ankle-bracelets-recording/> [<https://perma.cc/UBQ2-4RVG>].

Vendor literature gives examples of other capabilities that could be built into electronic monitoring bracelets. Data on heart rates, body movements, and sleep patterns are collected by common personal fitness devices, and electronic monitoring entrepreneurs have contended that these kinds of data could be useful for probation departments as well.¹⁴⁴ One electronic monitoring entrepreneur has identified a number of potential uses for this information: to monitor a substance abuser's compliance with an exercise regime, to determine when a monitored person's unhealthful sleeping patterns suggest a probation officer should pay a visit, and, "[f]or high-risk sex offenders, indications of sexual and related activities can be used as an early warning sign that the offender may be falling back into dangerous patterns."¹⁴⁵

By collecting more types of data, electronic monitoring raises the prospect of making more aspects of probationers' behavior visible to probation departments. This, in turn, will expand the range of behaviors that probation departments can regulate. At some point, this more powerful ability to exert control over monitoring subjects may tempt probation departments into bringing the technology into more extensive use.

C. Private Contractors Are a Potential Driver of More Invasive Electronic Monitoring

To be sure, so far probation departments have not significantly departed from the house arrest model of electronic monitoring. This is so even though GPS technology has been available for justice system use for over twenty years.¹⁴⁶ Given the lack of change over this time, it may seem far-fetched to anticipate change in the future.

The impetus for change need not come from probation departments. Private contractors are an important driver of innovation within the criminal system, fulfilling perceived needs when the government itself cannot meet them.¹⁴⁷ For example, the rise of mass incarceration in the United States led to increasing demand for custodial beds, more than the government could construct itself.¹⁴⁸ The private sector stepped in,

¹⁴⁴ Urs Hunkeler, *New Generation of EM Technology: Soon Too Many Sensors?*, 26 J. OFFENDER MONITORING 6, 6 (2015).

¹⁴⁵ *Id.* at 6-7.

¹⁴⁶ See *supra* INTRODUCTION.

¹⁴⁷ See Feeley, *Entrepreneurs of Punishment*, *supra* note 13, at 1.

¹⁴⁸ See Sharon Dolovich, *State Punishment and Private Prisons*, 55 DUKE L.J. 437, 455-58 (2005).

in some cases to arrange financing for prison construction and in others to offer to take over day-to-day operation of prisons themselves.¹⁴⁹

Electronic monitoring would seem particularly susceptible to being completely taken over by private contractors in part because it has happened elsewhere. In Great Britain in the 1980s and 1990s, the government pushed the National Probation Service, the agency that oversees probationers, to adopt electronic monitoring.¹⁵⁰ Probation officers strongly opposed the use of electronic monitoring, which they saw as overly oppressive and controlling, and out of step with the traditional social work ethos of probation.¹⁵¹ In response, the government simply outsourced the job to private contractors.¹⁵²

My conversations with juvenile probation officials in California do not necessarily suggest that probation departments in the state are ideologically opposed to invasive uses of electronic monitoring. Rather, probation departments generally appeared to be under-resourced and therefore overwhelmingly focused on keeping up with day-to-day operations. This state of affairs leaves them little to no time for policy analysis or innovation.

Electronic monitoring companies in the United States are ready and willing to fill the void. For example, one major vendor offers to take over “data entry, messaging services, alert management and investigation, officer dispatch to violations, fee collection, warrant processing, report generation, and more.”¹⁵³

It is not desirable for probation departments’ adoption of technology to be driven by what is technologically possible, rather than what is penologically appropriate. I discuss strategies to keep electronic monitoring usage in line with the juvenile system’s diversionary purpose in Part IV.C.

IV. REFORM RECOMMENDATIONS

Drawing on the arguments presented above, this Part describes ways in which electronic monitoring programs should be reformed. To help combat electronic monitoring’s net widening effects, county

¹⁴⁹ *Id.* at 457.

¹⁵⁰ George Mair & Mike Nellis, ‘Parallel Tracks’ Probation and Electronic Monitoring in England, Wales and Scotland, in ELECTRONICALLY MONITORED PUNISHMENT, *supra* note 8, at 64-66.

¹⁵¹ *Id.* at 66.

¹⁵² *Id.* at 71.

¹⁵³ *BI Monitoring Operations*, BI, <https://bi.com/products-and-services/bi-monitoring-ops/> (last visited June 27, 2019) [<https://perma.cc/Z36K-KPSQ>].

governments — not the families of young people — should bear the costs of monitoring. To avoid over enforcement of electronic monitoring program rules, I offer a set of principles for probation departments to follow to distinguish serious violations from trivial ones. Finally, in the face of converging pressures to adopt more intrusive electronic monitoring technology, probation departments should have use policies that clearly articulate what they seek to accomplish through the technology, as well as comprehensive policies addressing how they will manage the data that electronic monitoring creates.

A. County Governments Should Bear the Cost of Electronic Monitoring

In Part I, I found that electronic monitoring is likely net widening, and contended that this is problematic in a system the primary virtue of which is that it is diversionary.

Given that data and juvenile defender interviews suggest that electronic monitoring is likely net widening, what steps can state or local officials take to help ensure that the technology is used only on young people who would otherwise be in custody?

One option worth considering is harnessing economic incentives to rein in the juvenile system's use of the technology, at least where families, rather than county governments, currently bear the costs of monitoring.

To envision how such an incentive structure would work, imagine two different systems of payment for electronic monitoring. In the first system, electronic monitoring is free to the county government (because the families of the monitored young people pay the costs). In the second system, the county government must bear the cost of monitoring.

Prior to California's decision to repeal all juvenile fees statewide,¹⁵⁴ the counties there that chose to charge families for electronic monitoring charged them roughly \$10-\$30 per youth per day.¹⁵⁵ At the time, state law capped what counties could charge families at the actual costs the counties incurred, but counties were free to charge less than that.¹⁵⁶ Thus, the \$10-\$30 per youth per day figure should be regarded as the minimum costs of electronic monitoring. Assuming for

¹⁵⁴ S.B. 190, 2017 Leg. (Cal. 2017).

¹⁵⁵ See UNIV. OF CAL. BERKELEY, POLICY ADVOCACY CLINIC, MAKING FAMILIES PAY: THE HARMFUL, UNLAWFUL, AND COSTLY PRACTICE OF CHARGING JUVENILE ADMINISTRATIVE FEES IN CALIFORNIA 32-33 (2017), <https://www.law.berkeley.edu/wp-content/uploads/2015/12/Making-Families-Pay.pdf>.

¹⁵⁶ See CAL. WELF. & INST. CODE § 903(c) (2019).

hypothetical purposes that electronic monitoring costs \$20 per day, and assuming 10,000 young people are being monitored each year for periods often equaling or exceeding thirty days (a fairly standard length of time for monitoring),¹⁵⁷ the aggregate annual cost borne by counties would be around \$6 million statewide.¹⁵⁸ Of course, the cost of incarceration would be higher, but the cost of supervising them without putting them on electronic monitoring would be less, and the cost of diverting these youths out of supervision entirely would be zero.

The latter system would potentially offer an incentive for counties to monitor only where the alternative would be incarceration. In both cases, county government has some control over who is monitored. Probation officers either make the decision to place young people on electronic monitoring or offer recommendations to judges, which are granted substantial deference in practice. If county governments pay the costs of electronic monitoring, they may more directly feel the increased costs associated with any net widening effect. This is because there is a net savings to the county government only if a youth who is monitored would otherwise have been detained.

Alternatively, if electronic monitoring is free to the probation department because families pay, no restraint exists on overuse. Whether a young person is released into the community unmonitored or is placed on a monitor would make no difference to the county government from a fiscal perspective. Even the slightest possible benefit to the county in terms of public safety would be justified in the eyes of the county. The risk, therefore, under such a system is that electronic monitoring will become overextended, both in terms of which young people are monitored, and the length of time for which they are monitored.

Indeed, a similar distortion occurs in the criminal system, based on the bifurcation of who decides which criminal defendants merit jail time, and who must pay the cost of incarceration. While prosecutors are funded out of county funds, the state pays the costs of incarceration. This means there is no budgetary restraint on the number of people a prosecutor can send to prison.¹⁵⁹ Likewise, a mismatch of who pays for

¹⁵⁷ See *supra* INTRODUCTION.

¹⁵⁸ $10,000 \times 20 \times 30 = 6$ million.

¹⁵⁹ JOHN F. PFAFF, LOCKED IN: THE TRUE CAUSES OF MASS INCARCERATION - AND HOW TO ACHIEVE REAL REFORM 142 (2017); see also FRANKLIN E. ZIMRING & GORDON HAWKINS, THE SCALE OF IMPRISONMENT 140 (1991) (describing this state of affairs as a “correctional free lunch”). See generally W. David Ball, *Why State Prisons?*, 33 YALE L. & POL’Y REV. 75 (2014) (exploring the historical antecedents of state operation of prisons, and arguing against continued state funding for prisons).

monitoring and who decides whether it is used could lead to an overextension of monitoring.

Why should we be concerned that state officials will overextend monitoring absent such fiscal disciplining? One reason for concern is that monitoring allows probation officers to attribute responsibility for failures of supervision to the technology. There are risks associated with allowing a young person who has committed a crime back onto the street. Probation officers can face blame when young people reoffend. Making electronic monitoring costless will make it too tempting to impose monitoring as a way to shift responsibility away from the probation officer.

Moreover, even the assumption that electronic monitoring is less onerous than custody might not be warranted if the duration of the monitoring is long enough. While virtually anyone would presumably prefer one week on electronic monitoring to one week of custody, what about one week of custody versus two months of monitoring? Or three months? The answer to that question is much less clear cut.¹⁶⁰ Similarly, one day of monitoring may be cheaper than one day of custody, but one month of monitoring is more expensive. Properly constructed cost incentives could thus work to deter overly long periods of monitoring.

There are a number of qualifications and limitations I should note about the argument I have sketched out above. First, it is currently unknown how many counties nationwide charge young people for electronic monitoring. In California, about half of counties did so before juvenile fees were repealed statewide.¹⁶¹ The argument that requiring counties to bear costs could rein in net widening only works if counties are not currently bearing costs. However, it also provides a good reason why additional counties should not begin to charge families fees. Their doing so poses a risk of net widening.

Second, in California, even when counties could charge families fees in theory, many families did not pay anything because they could not afford it.¹⁶² Thus, the magnitude of the effect of banning fees across the board might not be as great as anticipated.

Finally, we do not have empirical data about the extent to which charging fees actually influences decision-makers on the ground. In the

¹⁶⁰ Weisburd also makes the point that whether electronic monitoring is preferable to custody may depend on the length of the electronic monitoring term. Weisburd, *supra* note 1, at 323.

¹⁶¹ UNIV. OF CAL. BERKELEY, POLICY ADVOCACY CLINIC, *supra* note 155, at 6 (showing that in March 2017, seven months before juvenile fees were repealed, twenty-eight out of fifty-eight counties charged families for electronic monitoring).

¹⁶² *Id.* at 17-18.

debate over mass incarceration, John Pfaff has questioned whether independently elected county prosecutors care enough about county budgets that requiring counties to pay for incarceration would reduce incarceration rates.¹⁶³ Unlike sheriffs, probation departments are subordinate agencies within county governments, so fiscal disciplining could be more effective. However, we lack a deep understanding of how various county actors think about, and factor in, the costs of their policy choices.

More research into all of this is desirable, but the flow of young people through the juvenile system will continue in the meantime. The risk of net widening is sufficiently important that county governments should not be allowed to shift the cost of electronic monitoring onto families. They should bear the costs themselves.

B. Probation Departments Should Take Steps to Avoid Over Enforcement of Electronic Monitoring Rules

In Part II, I found that most counties use electronic monitoring as they have since the technology was introduced in the 1980s: to enforce house arrest. But the rules associated with this form of monitoring are unrealistic for young people and often difficult to comprehend. This raises the possibility that young people will “fail out” of electronic monitoring programs too frequently, facing a return to custody. Probation leadership should put policies and procedures in place to avoid this outcome. These policies and procedures should draw on the principles described as follows.

First, not all electronic monitoring violations are equally serious. For example, a young person who violates geographic restrictions on movement by going into his or her backyard to avoid a tense home situation has not committed as serious a violation as a young person who travels to a victim’s home.

Second, not all violations merit equally harsh penalties and some may not merit any penalty at all. The young person who spends time in his yard may not merit any penalty. The young person who continues to pursue a victim may merit a substantial penalty.

Third, it should be possible to articulate how imposing the particular sanction at issue benefits the public or the young person. Taking a young person into custody for committing a new offense or failing to stay away from a victim may be appropriate to advance public safety. But taking a person into custody for spending time in his or her yard

¹⁶³ PFAFF, *supra* note 159, at 152.

advances no discernable public purpose, and it will not help the young person, either.

Fourth, given the harms associated with custody, sanctions other than custody should be imposed whenever possible. For example, one California county has a progressive sanctions policy.¹⁶⁴ It mandates that for violations of program rules, “the least restrictive consequences required to change the behavior should be employed.”¹⁶⁵ It then lists several potential consequences other than detention that officers can consider imposing, ranging from issuing a warning to having a young person write an essay to participation in a juvenile court work program.¹⁶⁶

Fifth, a young person’s progress on electronic monitoring should be benchmarked in part against their conduct when they entered the juvenile system. As one county probation department has put it, “small steps of improvement should be appropriately considered within the context of the case in its entirety.”¹⁶⁷ For example, when a young person who has only been attending school once a week begins to attend three times a week, that should be seen as progress.

Sixth, probation management should establish the expectation that the job of the probation officer is to make sure young people succeed on electronic monitoring and exit the system. Part of this could include requiring probation officers to confer with a supervisor prior to returning a youth to custody. The purpose of the consultation could be to establish whether returning a young person to custody is the least restrictive consequence for the young person’s actions.

Through these principles, probation leadership can give line probation officers cover by officially sanctioning the idea that not all electronic monitoring violations deserve punishment, and that a return to custody should only be used as a last resort. In this way, probation leadership can push back against the possibility that electronic monitoring’s perfect detection of program rules violations will lead to the imposition of overly harsh penalties.

¹⁶⁴ SAMUELSON LAW, TECH. & PUB. POLICY CLINIC & E. BAY CMTY. LAW CTR., *supra* note 155, at 159, 163-64.

¹⁶⁵ *Id.* at 163.

¹⁶⁶ *See id.*

¹⁶⁷ Patrick Fiack & Sean Rooney, Santa Clara Cty. Prob. Dep’t, Cmty. Release/Electronic Monitoring Programs 7 (PowerPoint presentation on file with author).

C. *Probation Departments Should Develop Use Policies for Electronic Monitoring*

In Part III, I argued that three converging trends might push probation departments to adopt more intrusive monitoring technology, raising the risk that such technology will be adopted simply because it is available rather than because it advances the juvenile system's purpose.

Given the possibility of more expansive use of electronic monitoring, this Part argues that probation policymakers should implement forward-thinking policies governing electronic monitoring usage now. Effective policies would articulate the purpose of the technology, outline permitted uses, and set guidelines for managing the data generated by the devices. Probation policymakers could draw on models first developed by the federal government for handling large data sets containing information about individuals, as well as adaptations made by local governments to regulate municipal use of surveillance equipment.

The fact that electronic monitoring usage has not yet evolved significantly provides the opportunity to think carefully about how to manage this dynamic technology within the juvenile system. So far, the major foundations working in juvenile justice as well as associations representing major actors in the field have largely ignored electronic monitoring. Given the lack of capacity of individual county probation offices to engage in rigorous policy analysis, it is important that this changes.

Leaders in the probation policy space should take two steps. First, they should have a clearer conception of the ways in which electronic monitoring does (or does not) advance the juvenile system's ends, and they should evaluate new uses against this vision. Second, they should recognize that (1) how data is handled has important policy and civil liberties implications; (2) probation departments have a responsibility to handle the data in their possession competently; and (3) probation departments need to develop policies that comprehensively address how data will be managed.

As discussed above, electronic monitoring has developed into a major component of the juvenile system, but has done so largely under the radar.¹⁶⁸ The technology is so ignored that when the Annie E. Casey Foundation recently released a report on reforming juvenile probation,

¹⁶⁸ See *supra* INTRODUCTION.

it did not contain a single mention of the technology.¹⁶⁹ This omission is striking coming from one of the major foundations active in juvenile justice.

It is not just advocacy organizations that have had little to say about electronic monitoring. Associations representing major actors in juvenile justice have not weighed in, either. For example, California has a well-organized association of probation officers, one that regularly articulates positions on policy matters and provides training throughout the state.¹⁷⁰ Yet it, too, has not issued any best practices for use of electronic monitoring. Nor has the Pacific Juvenile Defender Center, which provides support and training to California's juvenile defenders.¹⁷¹

It is important that advocacy organizations and others think through the policy implications of electronic monitoring because it is unlikely that county probation departments will do it themselves. These departments face significant structural barriers to thoughtful policy development, most notably the lack of resources discussed above.

The first step toward appropriate management of surveillance technology is to have a well-defined purpose in mind for its deployment. While this point may seem obvious, those who adopt surveillance technology do not always have a clear sense of what using it is likely to accomplish.¹⁷²

In the case of electronic monitoring, Part I suggests that the juvenile system is heavily diversionary and also that this is a normatively desirable outcome. As applied to electronic monitoring, this principle leads to the conclusion that those considering a new use of electronic monitoring should ask whether fewer young people will spend time in custody as a result. If more young people will be released because a particular innovation makes probation officers and judges more comfortable releasing young people into the community, its use may be consistent with the juvenile system's purpose. But innovations should not be adopted when they are merely more invasive supplements to

¹⁶⁹ See ANNIE E. CASEY FOUND., *TRANSFORMING JUVENILE PROBATION: A VISION FOR GETTING IT RIGHT* (2018), <https://www.aecf.org/resources/transforming-juvenile-probation/>.

¹⁷⁰ See CHIEF PROB. OFFICERS OF CAL., <https://www.cpoc.org/> (last visited Nov. 14, 2019) [<https://perma.cc/RZ9A-FJRB>].

¹⁷¹ See PAC. JUV. DEF. CTR., <https://www.pjdc.org/> (last visited Nov. 14, 2019) [<https://perma.cc/ML5V-6JR4>].

¹⁷² See Maria Ponomarenko, *Rethinking Police Rulemaking*, 114 NW. U. L. REV. (forthcoming 2019).

probation for young people who would have been released even without them.

Keeping this rule in mind should help distinguish desirable uses of electronic monitoring from undesirable ones. For example, it seems unlikely that collection of data pertaining to heart rate, body movements, and sleep patterns will lead to the release of more young people from custody. None of these types of data shed light on youth compliance with the restrictions young people often face while on probation.

Second, probation departments should develop policies that comprehensively set out how the youth geolocation data in their possession will be managed. This is important because how data is handled has consequences for both individual civil liberties and public policy.

As for civil liberties, geolocation data is sensitive information pertaining to individuals. In *United States v. Jones*, a case involving the attachment of a GPS device to the undercarriage of a vehicle for law enforcement investigative purposes, Justice Sonia Sotomayor wrote in her concurring opinion:

GPS monitoring generates a precise, comprehensive record of a person's public movements that reflects a wealth of detail about her familial, political, professional, religious, and sexual associations. The Government can store such records and efficiently mine them for information years into the future. And because GPS monitoring is cheap in comparison to conventional surveillance techniques and, by design, proceeds surreptitiously, it evades the ordinary checks that constrain abusive law enforcement practices: "limited police resources and community hostility."¹⁷³

In addition, management of geolocation data has public policy implications. To see this, let us consider one data management question: Should probation departments share the youth geolocation data they obtain with law enforcement agencies?

Probation departments have a variety of options regarding whether to share geolocation data with law enforcement agencies and, if so, on what terms. They could decide not to share a young person's geolocation data with a law enforcement agency under any circumstances. This position would reinforce the conception that

¹⁷³ *United States v. Jones*, 565 U.S. 400, 415-16 (2012) (Sotomayor, J., concurring) (citation omitted).

probation officers are “on the side” of the young people they supervise. However, it could also deprive law enforcement agents of data that might be necessary to successfully resolve a criminal investigation.

Another option for probation departments is to grant law enforcement agencies complete access to their databases of youth geolocation data. This kind of access would allow a law enforcement agency to determine whether a particular young person suspected of criminal activity was, in fact, at the scene of a crime. But it would also allow law enforcement agencies to deploy other data analytic approaches. For example, law enforcement agencies can engage in “crime scene correlation,” plugging in the time and location of every crime that occurs and checking to see whether anyone subject to electronic monitoring was on the scene.¹⁷⁴ The cost of this form of access is that it turns probation officers into adjuncts of law enforcement agencies and potentially undermines young people’s trust in them.

A third option is to share data pertaining only to an individual young person and only when they are reasonably suspected of criminal activity. Allowing access to specific young people’s geolocation data when they are already reasonably suspected of criminal activity obtains some but not all of the public safety benefits that can be derived from use of geolocation data. It also provides young people with some reassurance that their geolocation data will not be repeatedly sifted through and examined by law enforcement agents.

Given the civil liberties and policy implications of how departments manage data, probation departments should implement policies that comprehensively set out how they will manage the youth geolocation data in their possession. Today, no California probation department appears to have such a policy. Fortunately, probation departments will not have to start from scratch to develop them. The federal government began developing principles for handling databases of information pertaining to individuals in the 1970s, and government agencies around the world have followed suit.¹⁷⁵ Some models are quite well-suited and

¹⁷⁴ See, e.g., Contract by and Between County of Los Angeles and Satellite Tracking of People, LLC for Comprehensive Electronic Monitoring Services, Contract # 640-18-015, 61 (Apr. 23, 2018) (on file with author) (describing GPS software that “correlates crime and incident report data collected from local law enforcement agency stakeholders, and associates the crime and incident report data with the tracking data of participants”).

¹⁷⁵ See ROBERT GELLMAN, FAIR INFORMATION PRACTICES: A BASIC HISTORY 2-6 (2019), <https://bobgellman.com/rg-docs/rg-FIPshistory.pdf> [<https://perma.cc/2JEW-N6XH>].

adaptable to the sorts of data management issues that come up in probation departments.

As digital technologies have proliferated, probation departments are not the only local governmental entities that must manage substantial amounts of data pertaining to individuals. They are not even the only local governmental entities that collect substantial amounts of geolocation data. For example, municipal transportation agencies seeking to regulate ride sharing companies have sought and obtained substantial amounts of passenger trip data — and come under fire from privacy advocates for mishandling this data in ways that seem basic to those more versed in data management principles.¹⁷⁶ Similarly, police departments have used surveillance technologies ranging from GPS tracking devices to automatic license plate readers to “stingray” cell phone intercept devices to obtain geolocation data pertaining to individuals, sometimes generating controversy as a result.¹⁷⁷

The adoption of surveillance technology by other types of local governmental entities has sometimes led these entities to develop policies to govern the use of these technologies. As a result, probation departments seeking to develop data use policies need not start from scratch.

Although they could turn to a variety of sources for guidance, one particularly useful place to start would be Oakland, California’s Surveillance and Community Safety Ordinance.¹⁷⁸ That ordinance requires all city departments that possess or use surveillance equipment to develop a surveillance use policy.

The ordinance requires that the use policy address certain issues. These issues include, among others:

- Purpose: the specific purpose(s) that the surveillance technology is intended to advance
- Authorized Use: the specific uses that are authorized, and the rules and processes required prior to such use
- Data Collection: the information that can be collected by the surveillance technology

¹⁷⁶ See Joel Reidenberg, *NYC to Collect GPS Data on Car Service Passengers — Good Intentions Gone Awry or Something Else?*, FREEDOM TO TINKER (Jan. 4, 2017), <https://freedom-to-tinker.com/2017/01/04/nyc-to-collect-gps-data-on-car-service-passengers-good-intentions-gone-awry-or-something-else/> [https://perma.cc/Y93K-5BX9].

¹⁷⁷ See Catherine Crump, *Surveillance Policy Making by Procurement*, 91 WASH. L. REV. 1595, 1604-40, 1652 (2016).

¹⁷⁸ OAKLAND, CAL., ORDINANCE 13489 (May 5, 2018).

- Data Access: the category of individuals who can access or use the collected information, and the rules and processes required prior to access or use of the information
- Data Protection: the safeguards that protect information from unauthorized access, including encryption and access control mechanisms
- Data Retention: the time period, if any, for which information collected by the surveillance technology will be routinely retained
- Public Access: how collected information can be accessed or used by members of the public, including criminal defendants
- Third Party Data Sharing: if and how other city departments, bureaus, divisions, or non-city entities can access or use the information, including any required justification or legal standard necessary to do so and any obligations imposed on the recipient of the information
- Training: the training required for any individual authorized to use the surveillance technology or to access information collected by the surveillance technology
- Auditing and Oversight: the mechanisms to ensure that the Surveillance Use Policy is followed¹⁷⁹

A use policy for electronic monitoring that addresses these questions would be both adequate and a substantial improvement over the status quo, in which these policies are entirely lacking.

CONCLUSION

In this Article, I presented new findings about how probation departments are deploying electronic monitoring on young people in the juvenile system. This made it possible to confirm or dispel some of the many legal and policy arguments already made with respect to electronic monitoring usage in the juvenile system. It is likely that electronic monitoring is net widening. While GPS could have led to program innovation, by and large the technology is still used to enforce house arrest. However, trends in technology development, changing social norms, and pressure from private contractors may ultimately help innovation to arrive. These findings lead to concrete policy proposals.

¹⁷⁹ *Id.*

To help avoid net widening, county governments, not families, should bear the cost of electronic monitoring. To avoid the combination of electronic monitoring and house arrest leading to over-revocation of probation, probation leadership should put policies and procedures in place that help avoid this outcome. Finally, to avoid policy outcomes from being dictated by what is technologically possible, probation departments should have a firm understanding of the goals they are pursuing by deploying electronic monitoring technology. Beyond this, it is important that they recognize that they have important data stewardship responsibilities, and adopt clear policies to govern how they will manage the data they collect.