

**THE FORCED EXPERIMENT OF HOME ELECTRONIC INCARCERATION IN
POST-PANDEMIC CHARLOTTESVILLE: A CASE STUDY**

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On my honor as a University Student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments

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THE RISE OF HOME ELECTRONIC INCARCERATION IN CHARLOTTESVILLE

It goes without saying that the Covid-19 pandemic caused many changes to American society. However, many citizens may not be aware of the specific effects the pandemic had on the criminal justice system. After the start of the pandemic, those in the criminal justice system quickly realized that jails were at particularly high risk of outbreak both for inmates and employees (Akiyama, Spaulding, & Rich, 2020). This applied immediate pressure to promote social distancing for employees and inmates, leading jails across the nation to turn to different means of diverting offenders from taking up space in jail (L.-B. Eisen, A. Grawert, & T. Merkl, April 6, 2020). One of these methods was Home Electronic Incarceration (HEI), commonly referred to as “house arrest”. As a method of in-person diversion to lower the inmate population and limit the spread of Covid, Albemarle County Regional Jail (ACRJ) in Charlottesville, VA turned to HEI, purchasing more monitoring units and redirecting more offenders to house arrest, increasing the number of inmates on HEI over tenfold (Cleary, 2021). Many jails across the nation adopted a similar policy with Covid-19 (Kumer, personal communication, 2022).

Using HEI as a method of incarceration has its pros and cons, and so too does it have its supporters and detractors. Ramping up the use of HEI to divert inmates from ACRJ served a practical purpose during the pandemic, and the Social Construction of Technology (SCOT) framework can help analyze how the jails, courts, and inmates of the Charlottesville criminal justice system affected the use of HEI in the unique social landscape that formed around Covid-19.

THE SOCIAL CONSTRUCTION OF TECHNOLOGY

The study of Science, Technology, and Society (STS) focuses on the relationship between science, technology, and other technical ideas/systems and politics, power, sociology

and other societal factors, accepting that technical and social systems exist together. Technical and social systems are not independent, with both affecting each other. Scholars of STS have several main sets of ideas used to analyze the relationships between science, technology, and society that they call frameworks. SCOT is one of such frameworks.

Bijker (2017) summarizes the idea of SCOT by stating that technologies result from the interactions between various social groups. To understand why a technology exists in its current form, one must first identify the relevant social groups. Different social groups have different understandings of –and needs from—technology, and by analyzing how these different groups fit technology to their needs, researchers can begin to understand why a technology exists in its state as constructed by different social groups (*ibid*). This general understanding of SCOT comes from its four main tenets: interpretive flexibility – the shape a technology takes is dependent on the social environment it is formed in; relevant social groups – all those that share the same interpretation of a technological artifact are lumped into the same relevant social group; closure and stabilization – when all relevant social groups are satisfied by the technology’s design and it then stabilizes to its completed form; wider context – there is a wider cultural, political, and social context that the technology and social groups exist in (Klein 2002). Focusing on the social environment, social groups, design process, and wider context surrounding an artifact, looking at an artifact with SCOT can shed light on the broader social implications of technology.

THE SOCIAL CONSTRUCTION OF CHARLOTTESVILLE HEI

Covid-19 drastically affected life in Charlottesville, with operations in the local jail, ACRJ, as changed as anything else. ACRJ Superintendent Col. Martin Kumer’s account of the mass implementation of HEI and Charlottesville Criminal Justice Planner Neal Goodloe’s curiosity into the wider context of this systematic change made me realize the complex

interaction between technology and social/power structures in the criminal justice system, inspiring me to analyze the social construction of Home Electronic Incarceration in the Charlottesville area. I will begin with a case study on how the Charlottesville criminal justice system has used HEI before and after the pandemic using the SCOT framework, then out scope to discuss the implications of this practice for incarceration in the United States. My main focus with the case study will be on the degree to which circumstances in the criminal justice system changed as a result of Covid, the involvement of various groups in the decision to use HEI, the way in which the current HEI solution affects stakeholders on all sides of the criminal justice system, and the vast externalities of punishing offenders with HEI.

I plan to use SCOT to analyze how the current landscape of HEI in the greater Charlottesville area came to be and discuss its broader social implications. Different people in the criminal justice system, such as criminal offenders, members of the Charlottesville judicial branch, representatives of the jail, public defenders, law enforcement, and even typical citizens, have different views on incarceration and HEI, and therefore can fit into different relevant social groups as outlined in SCOT. I am curious how distinct groups see HEI's purpose to lump them into different relevant social group and then see how each relevant social group has affected the way HEI is now used to supervise citizens. Relevant social groups' interpretations of HEI changed dramatically with Covid-19, and the unique social and cultural environment created by the pandemic presents a clear example of interpretive flexibility that I plan to dive into. The sudden onset of the pandemic and its immediate potential effects in jails required immediate action to solve overcrowding (L.-B. Eisen, A. Grawert, & T. Merkl, April 6, 2020). This time sensitivity presents an interesting opportunity to look at the accelerated closure and stabilization window for fixing the problems apparent in the non-HEI incarceration system that led to HEI's

adoption. Lastly, there is clearly a wider context (locally and nationally) around HEI, a system involving the morality/efficacy of incarceration, personal development for inmates, family relationships, community safety, labor division, and government contracting, to name just some. The four main tenets of the SCOT framework are quite apparent in the Charlottesville are HEI system.

THE BACKGROUND AND BOOM OF HOME ELECTRONIC INCARCERATION

To give context to the extent and importance of HEI implementation, it is necessary to understand the scope and current state of the American corrections system. Corrections in the United States is a massive and costly system. The United States has the largest correctional system in the world, with nearly 2 million incarcerated individuals (Sawyer & Wagner, n.d.). The government spends over \$89 billion dollars on corrections per year, and the true cost of corrections – including the costs to individuals and families affected by incarceration – is believed to be much higher (Bureau of Justice Statistics, 2017). With more people per capita locked up than any other nation and the monetary cost so high, it is no wonder many would like to turn away from traditional incarceration methods (Sawyer & Wagner, n.d.). These efforts to reduce the number of incarcerated individuals and social issues related to incarceration is known as decarceration. Optimal decarceration strategies aim to decrease the total number of incarcerated individuals, the total population in jails/prisons, racial disparity in incarceration, and total spending on incarceration (Grunwold, 2022). While house arrest as a concept has been in practice since biblical times, and probation, fines, and delayed sentences have always been means to promote the population and spending goals of decarceration, the widespread use of *electronically-monitored* house arrest – releasing offenders to their homes with location-tracking ankle bracelets that contact authorities if they leave the premise – began in 1983. Electronically-

monitored house arrest, or HEI, originally served as a way to support the decarceration goal of decreasing the total population in jail while enforcing a stronger punishment than bail or a fine before the pandemic introduced a unique practical reason for it (Lilly & Ball, 1987).

Before analyzing how different groups transformed HEI into the technological/social system in use today, it is important to acknowledge its pros and cons to different stakeholders, and the various tradeoffs for those on either side of the electronic fence. Well before the pandemic, there were scholars that studied the morality and effectiveness of HEI rather than just its practicality. Supporters cite multiple benefits of the practice. Chicknavorian (1990) argues that it promotes public safety by keeping the offender off the streets and under surveillance, saves money with a 50% lower cost per inmate, and gives offenders the ability to stay at home with their family (*ibid*). Chicknavorian's arguments sum up the main supporting arguments: less cost to the government, safer than bail, and less disruptive to relationships which some argue keeps inmates from returning to custody. While HEI has its supporters, there are plenty who are weary of its mass use. Detractors are concerned that HEI can be used to reduce offenders' liberties by issuing house arrest instead of punishments like probation. In these situations, house arrest undermines personal liberty through decreasing personal and family autonomy by radically changing life at home, violating privacy by giving information to private companies, and putting unfair costs on users who must pay fees to use the service (Bhadha et al., 2021). The main arguments against HEI mirror the arguments for it, citing less cost to the *individual*, and worse *punishment* than bail. Expanding the use of HEI means weighing these tradeoffs, and the arguments for and against HEI above explain the sentiments of relevant social groups in the Charlottesville criminal justice system.

ANALYZING CHARLOTTESVILLE'S HEI SYSTEM WITH SCOT

To analyze the case of HEI in the Charlottesville area, I will first paint a picture of the pre and post environment around HEI, then present different stakeholders and sort them into relevant social groups, next discuss the closure of HEI as a tool used at a much higher volume after the pandemic, and finally describe some of the externalities this practice has created. Most information concerning the state of the Charlottesville criminal justice system comes from various meetings with ACRJ Superintendent Martin Kumer, supplemented by academic articles and local news.

ACRJ has used HEI in a limited capacity, at most a handful of inmates on the program at one time, for over a decade before the pandemic struck in 2020. Before the pandemic, it was only used for rare and extenuating circumstances, such as a pregnant mother, or other odd cases. Offering HEI was completely up to the judge's discretion, and, in general, judges felt it was not punishment enough for convicts to remain at home, so it was rarely used. Additionally, while the published cost of incarceration – the total cost spent on an inmate per day to keep them in jail – at ACRJ is just over \$100 per day per inmate, like the national average of \$107.85, most of that cost is fixed (Bureau of Prisons 2019). Almost all that cost is to keep the jail's lights on and pay employees' salaries, as ACRJ calculated the actual variable cost per inmate per day (meals, medicine, etc.) to be less than \$5. Thus, with the jail's budget and operations being a massive infrastructure dictated by the long, complicated status quo of corrections in the United States, there was little economic or punitive incentive for the county to put inmates on HEI. This all changed with the pandemic.

For those in the jail, inmates incoming or already serving time and employees, ACRJ was no different than a typical jail, and the risk of Covid was high as established earlier. Walking

through the halls of ACRJ built in 1974, one can immediately feel the lack of ventilation and see how a virus would spread so easily. Kumer mentioned anecdotally that if one inmate on a block coughs, the rest of the block will be coughing soon after. With this risk of a deadly disease threatening both inmates and employees, the County was hit with immediate pressure to decrease the influx of individuals into the jail and spread out the population in the jail. This presented a situation of interpretive flexibility around HEI for those in the criminal justice system. When before judges saw it supporting public safety to keep inmates in the jail, the risk of Covid in jails made diverting individuals back home with HEI a safer alternative to avoid spreading the virus. Additionally, as Charlottesville Criminal Justice Planner Neal Goodloe pointed out, crime and arrests in the area decreased substantially, almost half the prior level, almost immediately after April 2020. This decrease in bookings gave judges and the jail more time to assess alternatives and work on the logistics of ramping up the HEI program. Less booking also allowed the jail to shut down physical wings of the jail and staff less employees, cutting down on overhead costs and allowing them to comp the \$12 per day fee that was originally charged to inmates on HEI. This all shows that the novel environment around crime and incarceration in the Charlottesville area with Covid incentivized the criminal justice system to implement a larger scale use of HEI by making it easier and more practical.

Considering the closure and stabilization of HEI over two years after the start of the pandemic helps group stakeholders into relevant social groups. One big change was the elimination of the fee on inmates for serving time on HEI, seriously changing the way in which subjects serve on HEI – this change was made by the jail and eliminates one of the major problems with HEI for the population of convicted individuals. With the scaling up of HEI, the county now has different ways of offering it. Judges, the jail, inmates, and the Commonwealth

Attorney are all involved. HEI can be offered in two ways: court order (the norm before Covid) or an application for HEI. For a court order, the judge makes the executive decision to put an accused individual on HEI for some qualifying reasons. An application for HEI, however, has multiple different process flows. One, the judge can request for HEI which is then approved by the jail or Commonwealth, two, an individual can apply for HEI with the jail superintendent, and three, a bond decision can be made to use HEI instead of bond which must be approved by the judge. An interesting result of the bond decision is that some defendants on trial opt for HEI rather than bond, as time spent on HEI pre-trial can count towards the individuals sentence, while time on bail does not. This new practice shows a new way in which the incarceration system has changed with the implementation of this technology. Changing the HEI offering process to include more ways for individuals convicted or on trial to enter the program demonstrates the closure of this artifact, and this system being fine tuned over the two years its been built up shows its stabilization. Court ordered/requested HEI and bond decision HEI are, according to Kumer, the primary manners in which HEI is approved and point toward the relevant social groups that affected its adoption.

While I originally thought the overall local population and law enforcement would be relevant social groups, the final closed form of HEI shows that these groups were hardly influential and points towards the asymmetry of power that was dominated by the true relevant social groups of the jail, the court, and a less powerful one that has affected the use of HEI in an interesting way, the defendants. The jail interprets HEI as a means of optimizing their operations as their primary Covid goals were to limit the population to keep costs down and divert inmates to keep the premise safer. The court interprets HEI as a means of increasing public safety as their goals were to decrease the overall risk of Covid while still presenting a punitive form of

punishment. The defendants, individuals on trial or convicted, exist as a group quite involved with HEI and the way it is used now, but less powerful in the design of the system today. They interpret HEI in an as an alternative to spending time in jail which has its tradeoffs. Before ACRJ made HEI free, the biggest disadvantage was its \$12 daily cost, and the most immediate benefits the comfort of home, potential to keep working (some inmates are allowed to continue working on HEI), and ability to better maintain relationships. For this reason, the current system has made HEI much more attractive for defendants, with the one notable disadvantage is that time spent on HEI is not subject to “good-time”, so a sentence on HEI must be served in full. Overall, though, defendants interpret HEI as a nearly completely beneficial technology, and they have affected the way in which the technology is used rather than how the system is structured.

As any social and political system has externalities and a wider societal context, I will save discussion of the wider context of Charlottesville’s use of HEI for the next section that focuses on the insights this case provides for HEI as a technology and incarceration in general.

LESSONS FROM CHARLOTTESVILLE’S HEI EXPERIMENT

Covid-19 forced Charlottesville to enter an experiment in alternative incarceration methods. Understanding the results of inmates on HEI could help inform decision making and offer evidence to drastically change the way that the massive American corrections system operates, but little is known about the actual efficacy of HEI as an alternative incarceration method. Instead, looking at the way relevant social groups shaped the HEI system in Charlottesville after Covid-19 and ended up applying this technology can give insight into how the criminal justice system may change moving forward. Jails have operated in the same old-fashioned way for decades, but Covid forced an experiment that has shown this old infrastructure is capable of adopting new technologies and changing their operations. Could virtual monitoring

of inmates replace detainment in jail for most non-violent criminals sometime in the future? With the cost of keeping an inmate on HEI less than keeping them detained in-person, shifting to a virtual-heavy corrections system would be economically viable. Charlottesville has shown that the courts, state, and jail know how to scale up HEI systems and have the knowledge to successfully run these programs. This evidence indicates that a virtual-heavy system is logistically viable. So then, the remaining issue is its effectiveness as a punishment. If time shows that those under HEI have similar or better outcomes than those in traditional custody, counties could expand the program by relaxing the discretion used to select HEI candidates. This would work towards an optimal decarceration strategy, decrease corrections spending, and create a more humane environment for minor criminal offenders. If, however, HEI is shown to be less effective overall or in certain cases, counties should weigh the cost and safety benefits but likely increase the discretion used to put offenders on HEI or even return to the pre-Covid status quo.

ADDRESSING ARGUMENTS FOR MAINTAINING THE STATUS QUO

While the Charlottesville criminal justice system has demonstrated that increasing the use of HEI can be economically and logistically feasible, there are logical arguments against doing so. There is inherent pressure against decreasing the use of jails as counties have invested so much money in jails, their construction, maintenance, and renovation, and investing in HEI technologies could be seen as “wasting” this investment. For example, in 2019 “more than a third of Indiana’s 92 counties were actively building new jails” (Mai et al., n.d.). With all of that new investment, there is certainly political pressure to make use of the new beds rather than spending even more money on a new technology. This sentiment, however, represents the fallacy of sunk costs. The money has already been spent, and if adopting HEI would save money moving forward, it would be more economical to adopt or expand HEI rather than continue to

funnel money into physical jails. Politicians and others in charge would need to overcome this logical fallacy in order to make changes to the system, as the American jail system is a massive infrastructure and thus takes time and coordination to update. As Star outlines in her theory on the ethnography of infrastructure, infrastructure like the jail system is “fixed in modular increments” and “changes take time and negotiation” with adjustments of other parts of the system (Star 1999). If HEI is found to be an effective alternative to traditional incarceration, years may be required to convince leaders of its value and incrementally alter the jail infrastructure that exists across this nation.

CONCLUSION

Covid presented a unique circumstance that pressured counties like Charlottesville to experiment with alternative forms of incarceration. This experiment with HEI has shown that expanding this technology is logistically feasible and can reasonably be used on a larger scale to decrease the number of inmates in American jails, offering the potential to save money and on corrections spending for years moving forward. However, concern over the efficacy of HEI should limit the rate at which HEI is expanded, as little is known about how punishing with HEI decreases return to custody or discourages crime to start with. While some may be concerned about disrupting the status quo, social progress takes time and energy, and improving any infrastructure is a long, complicated task, so we should not be wary of taking on this challenge. Charlottesville has shown how different relevant social groups surrounding the criminal justice system can work together to improve how America incarcerates individuals. Even if HEI turns out to not be a large-scale, long-term solution to some of the issues in the American criminal justice system, this Covid forced experiment has shown that the criminal justice system can adapt new technologies and make systematic changes moving forward.

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