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# Diffuse Disciplining:

## On the pervasive nature of autonomous systems and its consequences

**By James B. Cuffe**

Keywords: Diffuse Discipling, Techno-social Control, Automated Systems, Efficacious Justice, Human Factors, Design

Abstract

This chapter introduces the term *diffuse disciplining* as a means to articulate the increasingly ubiquitous and pervasive nature of technologies of social control. In particular the term *diffuse* draws attention to how borders become porous, legal mechanisms ineffective, and accountability and responsibility obfuscated. Three proto-case studies are presented that highlight different aspects in how diffuse disciplining can be observed. These case studies (USA, China, Ireland) show how the use of mediative technologies can discipline thoughtlessly without regard to intentions by proponents, and, how technical systems can discipline and influence social action without regard to political or cultural systems. This chapter calls us to question what unintended disciplinary effects such systems may have and where, if anywhere, we might locate agents of responsibility. The chapter concludes that criminological research needs to expand in both scope and area to cope with technological innovation in an area marked by learning algorithms, autonomous systems and diffuse discipling. If focusing solely on traditional areas of criminal justice and criminology we can miss the wider effects of technological deployment in the age of connectivity, big data, and augmented intelligences.

## Introduction

This chapter identifies *diffuse disciplining* as an emergent phenomenon in contemporary modern societies and outlines some of the new challenges and issues this presents. By diffuse disciplining is meant the diverse and diffuse recursive effects of mediated actions on human behaviour and/or mental and physical condition. The term diffuse disciplining seeks to articulate

(1) how deployed technologies can discipline thoughtlessly without regard to conscious motivations or intentions by designers, users, or, recipients,

(2) how technical systems can discipline and influence social action without regard to political (governance norms & accountability) or cultural systems (social norms and values),

(3) how systems of social disciplining now occur outside the traditional realms of policing and state authority and, simultaneously, blur or conceal those boundaries.

Across each of these strands is the precept that diffuse disciplining occurs as an emergent phenomenon rather than imposed or construed. That is to say, a disciplinary effect arises from the patterns at work within techno-social systems rather than being an effect targeted by design. The rather reductive idea that we act *upon* the world as an external objective thing is a misstep in certain pursuits of knowledge evident in Plato and subsequently many times after.[1] As the third element on blurring of public and private boundaries is well covered generally (Cohen 1985) this chapter will focus on themes one and two and provides an exploratory illustration of three examples of automating technical systems from the U.S., China, and Ireland.

Given the impact of CoVid-19 and the wide adoption of surveillance apps as epidemiological tools, such thoughts and concerns are prudent. This chapter aims to show how diffuse disciplining can have effects far beyond idealised loci of control and therefore are implicitly devoid of responsible agents and accountability. Autonomous technologies risk curtailing the socially mediated body by severing it from interpretative experiences and ultimately what might constitute the 'good' or the 'right'.

Naturally, the disciplines and professions involved in social justice/order look to new techniques and technologies that can instil 'greater' justice, but we must challenge the notion of an *efficient* justice if this is what 'greater' means. Increasingly criminologists will need to broaden their remit and query the technical systems at work in the name of those same systems particularly as new modes of operation will not generate from within criminal justice but from outside (state or private sector).

We see this problem in New York's police department having incorporated algorithmic learning for predictive policing, in China's efforts to 'harmonise' its populace for efficiency in social control, and another in how Irish Gardaí are idealising a 'connected' police force. In each of these cases we are witness to deployment of innovative technologies at an increasing rate of speed. Of gravest concern is the implementation of technologies that are novel and therefore unproven with unknown consequences. It is this concern we explore as political and cultural systems lose direct control over the effects of technical systems and subsequently bring about diffuse forms of disciplining with obfuscated means of accountability.

This chapter will demonstrate how criminological research needs to expand its remit to cope with technological innovation in an area marked by learning algorithms, autonomous systems and diffuse discipling. To begin the two aforementioned themes are given a preliminary outline before then developing the theoretical context and subsequently establishing three potential cases where empirical research under this framework could provide insight.

## Disciplining without regard to intent or result

There is an internal, manifest response to techno-social modalities that gives rise to self-regulatory and disciplinary behaviours akin to, and taking inspiration from, Foucault's conception of governmentality (1991) and the disciplinary society (1995). This inherent reaction or auto-response must not be understood as autopoiesis (Luhmann 1982), nor am I

[1] For elaboration on this point please see Ingold, T. 'Beyond Art and Technology' in *Anthropological Perspectives on Technology* Ed. Michael Brian Schiffer University of New Mexico Press: 2001

proposing some fatalistic determinism. While power, transgression and the subject are at the forefront of Foucault's disciplinary model, the transformation from a social network that we might now call 'traditional' to a highly networked many-to-many social model sets the stage for diffuse disciplining as an articulation of network responses (Latour 2005) to pre-emptive, 'data driven decision-making processes that prioritize correlation over explanation' (Andrejevic 2018, p. 102). The increasing ubiquity and pervasiveness of autonomous systems – fuelled by big data – call us to question what unintended disciplinary effects such systems may have, over and above original design and policy intentions. It is a mistake to think any design or policy intention gives rise to the final, actualised, and, lived experience of the product of that design/policy intention. This is because environment and lived engagement produce a dynamic context within which the designed product or intended policy must adapt in order to be realised. The relationship is dialogical (*vis-à-vis* Bakhtin 1981) not dialectical and thus responses are contextual *and* emergent. The end-context has a real effect in the unfolding of product/policy workings which will never achieve a *finished* state. Ideally, those upon whom policies propose to act *should* have input into those same policies. Specific localised accounts – that comparatively can generate understanding of effects in changing techno-social patterns of behaviour – are vitally important as we move towards increasingly automated societies.

### Disciplining without regard to political or cultural systems

Winner's argument that technology *is* legislation is illustrative of how technologies shape behaviours in a controlled and regulated manner- preformed and prejudged 'technologies constitute a world that either sustains us physically and spiritually, or imposes conditions that vex us and endanger our freedom and wellbeing' (Winner 2017, p. 205). If communities do not have a voice in the design of technologies that influence their lives then they are effectively being legislated against whether paternalistic or otherwise. While this is clear in authoritarian China the same occurs in the USA and in Ireland, both traditionally presented as liberal democracies. While in China the responsibility of shaping technology lies legitimately with the state (according to Chinese governance norms) it is not clear whether the same is true in Ireland or the US. Should communities not hold some responsibility for shaping technology over and above the responsibility they pass to public servants? Currently, private companies interested in market share, rather than public good, use all kinds of crafty research tricks and mechanisms (such as nudge theory, lobby groups, media saturation) to assuage concerns about the location of responsibility or the impact of novel technologies. The transnational footprint of technology producers points to a need for a collective responsibility of the design as well as the end-use. However, in the face of weak enforcement possibilities borders shudder at the thought, if just to make their presence felt. Despite wider effects and consequences across geopolitical boundaries the need for responsibility to be co-located is met by equal and opposite desires to carve out loci of power and control e.g. environmental damage on regional versus global scales.

## Controlling Design and Designing Control

Foucault identified the panopticon as symptomatic of the manner in which modern nation-states started to subjugate its citizens (1977). He traces the rise of the disciplinary society through the development and pervasive spread of disciplinary techniques exemplified in the panopticon model of Samuel Bentham developed further by his brother Jeremy. The design of the panopticon designates those who are watched and those who watch, there is a clear hierarchy and power resides in centralised arrangement of space and vision thereby coordinating the gaze of participants. Foucault refers to the panopticon as a 'machine' for disassembling the continuum between being seen and seeing such that in the design of panoptic

prison (or any panoptic institution) those in the visible periphery are seen but without being able to see the observer (Foucault 1977, pp. 201-2)

Design choices are not driven by some neutral efficiency but rather by existing cultural and social relations based on particular norms and values. Pre-existing power relations mould design choices that serve to replicate the structures that facilitate those same power relations in a dialogical fashion. Therefore, in the panopticon, the existing social dynamic of a sovereignty over a defined territory, and subsequently, over the subjects that reside inside this territory is replayed at an institutional level manifesting in factories, schools, hospitals and prisons.

The digital realm – and I do not mean solely the internet but the ubiquitous interpenetration of digital processes in social life – forces us to rethink what is characterised by sovereign, territory and subject rather than simply adding the prefix cyber- or digi- to those concepts. Mathesien's *synopticon* (1997) goes some way in identifying the techniques of surveillance in an era dominated by CCTV and other mediative devices where surveillance re-orientates so the many survey the few. Yet the means for observation may be visual as is the case for CCTV but it can also be behavioural or experiential through use of cookies, GPS and so on. The physical body is no longer the sole target of an authoritative gaze; it appears now that personas inherently include the prospect of being gazed upon (unauthoritatively) and the aim is no longer the internalisation of the gaze in the mind of the subject so they self-discipline but the malleability of the persona so they are open to being feasted upon by unknown appetites. The panoptic gaze is morphing into an increased general expectation to be able to perceive others at will through a variety of means and due to increased visibility of the self a general expectation to be seen or at least see-able. Whether increased visibility is the same as transparency we wait to see but certainly Jeremy Bentham sought transparency to ward off the potential oppressive ills of his brother's panopticon.

## Engaging technology

Kranzberg's adage that *technology is neither good nor bad; nor is it neutral* (1986) is a decisive contribution to the philosophy of technology that has been dogged by debates between technological utopianists and technological dystopianists. With one approach we hear technology will solve our problems, or with the other that technology will create unsurmountable problems to the detriment of human society (see Borgmann 1984 Pg7f-11 for an overview of the approaches summarised here). The instrumentalist perspective tends towards utopian visions. The substantivist approach – that technology holds within itself its own force – to technology tends towards dystopian futures: digital and technological inequality become exacerbated while power trickles upward to an unassailable technocratic elite or potentially even out of their control. The problem with the latter account is it decontextualizes the technological to its own universalizing realm and reduces the ambition of human agency to facilitating technological progress. Both instrumentalist and substantivist perspectives are mainstream and give rise to visions of the future on a positive or negative side of some technocratic ideal. We need to find a path with which to better approach the study of technology and social control to avoid the dichotomous nature of these debates and the subsequent fallacies that impede our understanding (Cuffe 2020). Social change emanates from everyday life and is under-researched as everyday life is naturally often mundane. If innovative technologies cause social change – which we assume as tautologous – and social change occurs in the minutiae of everyday life, then one of the most radical forces acting on social relations today is radically and perpetually misjudged (see Borgmann 1984, p.3). We cannot know the consequences of new technologies because they are both novel and their uses and effects under-

researched so we will always be found lagging in terms of understanding, regulation, enforcement and policy: sleepwalking into new futures that feature intrusive mediative technologies because we already take them for granted. Indeed, this is already happening with platforms such as Facebook & Google in now forming an almost necessary part of social life. The metrification of everyday life has us counting steps, calories and hours of productivity, even pseudo-managing the 'productivity' of our sleep. The benefits, of course, are many as such intimate and interlinked systems allow fridges to order food for you, geolocation tags can find children missing from school or remotely monitor electricity usage to identify faults, monitor blood sugar levels and so on.

Bateson (1979) writes how all our knowledge depends on our perception and there are natural limits to what we can perceive. Therefore, what we can know is limited by this threshold. Knowing more by increasing the threshold is not equal to gaining greater truth, clarity or understanding. This *threshold fallacy* means our efforts in the main are directed to pushing the threshold farther and farther to gain more and more information to remedy the 'deficiencies of transition' (Završnik 2018, p.10). Without frames or guides we can observe the threshold fallacy at work in what Završnik describes as a 'concealing gesture' that operates at the heart of our contemporary epistemology (2018, p.11). On the one hand this concealing gesture offers solutions to our predicaments through technological solutionism but on the other hand – faced with contradictions and errors – calls for more information, more data, more time: we are in transition, be patient! Yet this only succeeds in perpetuating our transitoriness. This theme of transitoriness is gaining widespread purchase and rightly so; we can recognise it in what Andrejevic (2018) addresses as *framelessness* and its obliteration of the subject and in what Szakolczai (2014) articulates as *permanent liminality* and the institutionalisation of liminal space and time (Turner 1969, p.107). From anthropology, the term liminality traditionally referred to the transition phase in a ritual through which an individual or cohort leaves one social status and adopts a new social status – thus there was a temporary period during which the participants are neither one nor the other, the liminal phase. Of course, the liminal phase in a ritual setting is carefully bounded by proper protocols and procedures; participants are guided through these by a master of ceremonies. What we are witnessing at the contemporary societal level is the removal of proper protocols and procedures in everyday life and the absence of any guides with a knowledge of how to move us through this transitory phase. The dangers as we shall see come in the form of diffuse effects whereby the subject adopts behavioural change (consciously or not) influenced by the threshold fallacy that with greater self-knowledge (in this case data rather than wisdom or spiritual attainment) one will gain greater success (as measured by the prevailing ideology).[2] We are permanently at the threshold and its features are all the more exasperated during the pandemic times of CoVid-19. Existing inequalities are locally exacerbated and/or regionally displaced, injustices prolonged and the angel of history is blown backwards into the future once more (Benjamin 1940).

## Utopian Dreams

In striving towards our imagined futures, we equip our police forces to help facilitate these futures. The kind of police force we want largely depends on what kind of society we imagine we are in *and* its' disconnect with our utopian vision. Subsequently the demands we place on our policing informs the choice architecture for technology adoption. The term 'choice

[2] For an excellent account of the psychological processes at work see Salecl, R., 'Big Data: Big ignorance' in *Big Data, Crime and Social Control* (2008) Ed. Završnik pp. 58-74

architecture' is adapted here from behavioural economics (coined by Thaler & Sunstein 2008) but by which I mean those 'choices' that are in fact prompted by particular contexts and environments to include ideology and forms of bias, ethnocentrism and prejudice: certain choices can only appear in certain settings.

States and state systems employ reality-creating means of social control through processes of criminalisation. The more automated social systems become then far from society becoming less dangerous and increasingly safe it will become less humane and increasingly sterile. In the use of algorithms to aid in policing strategies the factors of implicit bias are again well understood amongst advocates but we also need to highlight the effect of their use on those who use such tools. That bias can form part of any device is a growing concern and not just in relation to criminal justice but in any area where technology might play a role in socialisation:

> It is one thing for societal perceptions to carry gender stereotypes, but another to have such stereotypes perpetuated by the gendering of AI services … A new feature designed for Alexa to apologise for not understanding provides early learning that female voices should apologise when they do not understand regardless of the clarity of instruction or context (Phelan & Cuffe 2020).

Digital mediation is an intriguing feature of modern social life as discourse in contemporary society becomes embedded and intertwined with the technological. Technological solutionism in criminal justice and indeed wider society is not new and the desire to find solutions to social problems is one of the driving forces behind developing new techniques and new technologies. The idea that technology can give rise to our imagined future in a coherent way, (i.e. that technology adoption is akin to using a tool) is outdated and epistemologically flawed. By turning to look at the three different examples of automating technical systems in three different regions each with a different political structure we can highlight some of the problems of the pervasive nature of autonomous systems and how such systems are actively reshaping social relations and ultimately redefining our social environments.

## America

The rapid adoption of new technologies in local U.S. police forces continues as it moves towards information-based policing. The most famous, or even infamous example of this is in the New York policing strategy called CompStat. CompStat draws on statistics to highlight potential crime hotspots and relays this information into policing patrols and strategies in a predictive approach to policing crime. In straight numbers the introduction of CompStat saw a reduction in overall crime and has seen the system adopted in other police departments and indeed in other countries. However, it has also been argued that reductions in crime came about due to the convergence of a number of wider changes in policing including improved education of police officers, better training, improved social welfare and return to work schemes (Levitt 2004). We might also ask what *kind* of crimes are being policed and what *types* of behaviour are understood to *need* policing. Such issues are highlighted by the Black Lives Matter movement in the US.

As CompStat deals with collated statistics over time it lends itself to an audit culture (Shore and Wright 2015) establishing trends by area and productivity by precinct for managing crime. Due to institutional pressures to *succeed* in crime reduction rather than to 'merely' police it also lends itself to manipulation by massaging numbers in reports prior to input. In 2016 the

New York Police Department adopted a new system called 'Patternizr' to aid in recognition of potential crime patterns – the problematic words being *recognition* and *potential*. Predictive and machine derived policing strategies are aimed at reducing crime but also increasing efficiency (*economically*). These may not be the aims of policing in every country, community policing for example may not be 'efficient' but commands wide recognition in how it fosters community engagement and trust and thus cooperation; unlike predictive tools which can target particular neighbourhoods and generate an 'us' v 'them' mentality. Researchers commonly raise concerns including racial bias, confirmation bias, lack of transparency where automated or semi-automated predictive algorithms are utilised in any part of the judicial process (for example see Završnik 2018, Eubank 2018, Vanderklippe 2018). As Freidman has written, that algorithms to have racist impacts can occur even if algorithms do not explicitly look at race (2018). If algorithms focus on lower socio-economic areas in a region with ethnic inequality then the algorithms will reinforce targeted policing of the disadvantaged ethnic groups (Friedman 2018).

Technology not only 'reforms' the subject but reshapes the user and the manner of engagement between user and subject: a 2011 study by Alpert et al. shows how conducted energy devices [CEDs] have changed the perception of threat and are being used to control individuals who would not previously have been perceived as a threat (2011, p.16). Simplistically put as the adage goes- when all you have is a hammer, anything resembling or perceived to be a nail could be treated as if it were; the sense of control over a nail with a hammer can lead to repeat and widened usage of the hammer despite other mechanisms being more effective, or, suitable. As such they argue that this can lead to an overreliance on the CEDs rather than relying on conflict resolution skills or even hands on efforts when necessary which in turn can result in a lack of developmental experience for conflict resolution across a police force over time. This in turn suggests the demise of different techniques for police control while simultaneously effecting a widening of *potential* control - efficient albeit cruder, and not better. We now hear in the news complaints of excessive force and excessive Taser use by police forces. This may not be a lack of training or judgement on the part of police but a consequence of the manner in which over the longer-term technology reshapes engagements, users, and subjects in situations that are already tense. It is worth pointing out another study by Ready and White (2011) in which they surveyed police officers about Taser use and found within their cohort nearly 50% had never deployed their Taser over more than a two-year average. They found the highest frequency users to be younger, have less experience in the field and work in areas with a high crime rate amongst other characteristics. While there appears to be a correlation in practice, the empirical work does not yet meet the threshold to carry the argument over the line, yet at least the rationale for more research on how technology reshapes its users should be clear. Surely it was never a design intention to reduce the experiential value of conflict negotiation in tense situations. Algorithmic strategies for predictive policing are only one element in the vast multitude of techniques now possible for deployment for a variety of different purposes: biometric data, RFID tags, video surveillance and cookies etc. Proponents may well argue that such an array of increasingly affordable technologies could shift the dynamic of power from those who control to those whom are controlled but more likely the situation will simply become increasingly variegated and diffuse in our *manifest social complexity* (Winner 1977).

As Brin writes, technologies may well empower people rather than simply focusing on the negative aspects of new technical developments all the time (2018, p. 24), but critique must not be confused with pessimism particularly in the face of a dearth of empirical research. Byrne and Marx's overview of technology adoption in police forces found that innovations in police technology have not resulted in significantly improved police performance (2011). Such

findings are not unique yet clash with the commonly held view of a need to stay-up-date and use cutting-edge technology in the fight against crime. Byrne and Marx stress that actual evidence is incredibly thin on the ground and the evidence that is there either shows poor support for proponents of fast technological upgrading and innovation or tends towards quantitative methods that favour financial rather than practical concerns (2011, p.28). They conclude that such widespread adoption of unproven technologies is curious and where research exists it actually plays little role in the decision-making process; the more fundamental problem lies in our misappropriation of technology as ailment to societal woes. Technological solutionism is the basic techno-fallacy of our age: a faith that increasing technological complexity is synonymous with social progress and if we do not have progress, then we are backward, outmoded, regressive. This opposition is not helpful but the question remains why are we so enamoured with such innovations when proof of its effectiveness is absent and particularly when so many issues are being raised? (Byrne and Marx 2011, p. 26). Additionally, if there is a risk that technology does not empower the 'common folk' and 'highly informed citizens' then the consequences could be stark indeed. I have mentioned elsewhere that one solution might be to actively encode ethical principles into software programmes (Cuffe and Phelan 2020) which – though fraught with difficulties – would at least force us to tackle social consequences directly. Then we are faced with more questions such as whose ethics? And whether the ethical dimension can actually capture the whole gamut of social effects in technological deployment.

## China

Some of the newer techniques now being deployed for policing and social control include augmented eyewear that facilitates facial recognition and information display, augmented intelligence in content tracking and deciphering, increased regulation and licensing of old and new technologies and 'diffuse' surveillance through social media, particular through social media apps such as TikTok. Between the old system of surveillance via man-power and clandestine operations and the new system of direct, if not overt surveillance there was an early recognition in China to develop database technology to reduce costs and improve governance. China has long had to deal with a wealth of information and is very familiar with the problem of trying to discern good information from bad to effect good governance and better control. Apart from large scale, expensive and inefficient manual labour the only other way to do this is via augmented intelligence and automated processes. We are currently seeing a transition from traditional labour-intensive methods of social control to automated and diffuse surveillance. The effect of diffuse surveillance and unclear lines about what is and what is not permissible facilitates self-discipling, peer-disciplining and now diffuse disciplining through an effect of multiple mediative technologies.

Authoritarian rule in China abhors difference and favours indoctrination for ensuring cohesion and stability. Such sentiment gives rise to policies that try to instil such cohesion and stability whether through education, forced labour, imprisonment, economic growth, population movement and more including the roll out of the social credit system in major cities across China. The idea of a *social credit system* is where one's trustworthiness and/or sociability is ranked by other members/entities of society and publicly represented as a score which increases or decreases one's access to services and locations (e.g. transport, financial loans, college education). This has been dramatized by the future looking TV show *Black Mirror* but is already at work in Europe and the United States through platforms such as Amazon, Uber, Tripadvisor. The fullest experiment in social credit systems is the one being implemented in

China (*shèhuì xìnyòng tǐxi,* 社会信用体系) in what might be the world's first totalitarian meritocracy. But as we shall see such systems have unexpected and unforeseen consequences diffuse through the social body. The pursuit of such systems in China is of course to favour *good* subjects and dissuade troublesome or unfavourable subjects (Cuffe 2018). There are benefits to such as system in relation to improved market governance and accountability and some argue that it may even provide the space for real civil liberties to emerge (Huang 2018). However, this new surveillance system rests on large scale face recognition software. The loss or gain of face is an important element in everyday Chinese culture and its' metrification has a radical and serious implication as Ivanhoe (2020) points out: 'the new surveillance culture fundamentally alters the senses and functions of these traditional concepts, eliminating both the internal, moral dimension of face as well as its external, socially constituted dimension. In a very real sense, it constitutes an ultimate and complete loss of face.' These traditional concepts of face – *mianzi* and *lianzi* – refer respectively to the social status and moral character of the individual and are communally immanent. The advance of AI facial recognition on a vast scale overrides the validity of community recognition of its members and displaces it with state imposed, algorithmic sanctioned, technically guided yet obfuscated path to self-improvement. To redirect the public's conceptions of self-*in*-the-community to self-*under*-the-state can only fail to improve social cohesion despite the states' intentions for social harmony. The threat to a state is essentially different to threats to a community and the self-regulation of the latter cannot be replaced with some uniform essentialised state ideal with prior norms for the 'right' language, 'right' behaviour, 'right' face in terms of physical look rather than social status in the eyes of the community (*mianzi*) nor moral character of the individual (*lianzi*).

Over the last few years there are increasing concerns over reports on China's treatment of the Uyghur population in Western China, principally in the province of Xinjiang. The Uyghur's are an officially recognised minority within China. They have a distinct language and cultural practices, religious beliefs as well as a tense history with the Chinese state since before the modern era (1900s). Any grouping within China that demarcates itself historically and in practice as distinct from the ideal of One China poses a difficulty for Chinese leaders to 'manage'. Fear of domestic terrorism, separatism, ideological conflict not only bring about policies targeting ethnic groups but also religious groups such as the Catholic Church, spiritual groups such as the Falun Gong, and of course political movements and leaders such as recently seen in the Umbrella Movement in Hong Kong. Since the United States initiated a global war on terror, China has adopted a proactive approach to tackling domestic terrorism by would be extremists. This has made Uyghurs a target for increased surveillance due to xenophobia, aforementioned cultural differences as well as their being predominantly Sunni Muslim (Trédaniel and Lee 2017). This increased surveillance brought about higher police numbers, army patrols and a concurrent heightened tension between the Uyghur population and newer Han population arriving seeking economic opportunities. These tensions have broken out into street brawls and used to further legitimate the need for security presence to combat terrorism and separatism in Urumqi and major cities around Xinjiang. There have been major events including riots in 2009 that resulted in over 100 deaths (Yan *et al.* 2009).

What then might the new Social Credit System mean for China's Uyghurs? The activities of Beijing in Xinjiang province have long been built on platform of ensuring and articulating Beijing centralised authority over Xinjiang. In Xinjiang the *Integrated Joint Operations Platform* (体化联合作战平台) brings together information collected on facial recognition, number plate recognition, automated online content surveillance together with police

checkpoints, automated banking checks, and home visits (carried out by *fanghuiju teams* 访惠聚-an acronym which stands for 'Visit the People, Benefit the People, and Get Together the Hearts of the People' [访民情、惠民生、聚民心]) (HRW 2018, Vanderklippe 2018). By way of example, this interlinked system, can highlight a large purchase of food, something that is linked to terrorist activity by Uighurs in Xinjiang due to it possible signifying advance knowledge of a shortage of food from some as yet unknown terrorist attack. As Xinjiang society is culturally Uyghur but Han dominated, perceived threats include the return of terrorist fighters from Syria and Afghanistan. Therefore, policing in Xinjiang targets one community to the benefit of the State idealised community in terms of ethnicity, economic activity and cultural values.

The technology that can parse information over potential state threats is biased and ethnically motivated. Even an 'objective' officer is obliged to respond to threats if algorithms send up a red flag according to perceived deviant behaviour; technology is inherently prejudiced through design and then effects real inequalities in practice. Automation bias exacerbates this effect given that the decision-making processes within programmes are largely hidden, potentially giving rise to unknown errors while the judgements made by programmes are treated as if they were a fail-proof and neutral short-cuts to a decision that would have been reached anyway – *based on available information this is the decision we will make, any mistakes will be the result of incomplete information* – it is one thing for humans to make this argument but to substitute it with code omits the possibility for disagreement and counter-arguments. Taking automatically produced judgements can also lead to confirmation bias where because the red flag was raised you then go and look for evidence/situations to satisfy the red flag thereby instilling conditions on the actions from the outset. Again, whatever the purposes of the social credit system in China and its new means of interlinking databases between forces and sectors we might tentatively suppose that false flags are not a desirable outcome particularly if they go against good judgement and sense. However, automative processes can damper the latter and accentuate a legitimacy in the former. The erosion of community values on such a large scale will have untold damage in the culturally rich and varied communities of China.

## Ireland

Policing in Ireland is moving by increments towards information management. The desire for this change is evident in Ireland with the current strategy document *Modernisation and Renewal Programme* 2016-2021 for the *Gardaí Siochána* (literally: 'Guardians of the Peace') the Irish National Police Force) outlining ambitions for establishing a 'connected' force. Platforms that facilitate such information collection and management however are troublesome not least for the reasons outlined above and this is acknowledged by the *Gardaí* who highlight 'the rapid advancement of new communications technologies will pose a continuing challenge for governments in balancing privacy, security and public safety concerns' (2016, p. 59). As the *Gardaí* propose to develop the forces Digital Intelligence capability with the necessary infrastructure the force must be commended for noting that the conversion of information into intelligence and intelligence into evidence requires professional analysts and intelligence officers, i.e. a human element with capability for judgment, discretion and care. The human interlocutor of instant information is also a subjective interlocutor, and, so is the designer. But automated systems run a real risk of reducing the human officer to mere automaton, absentmindedly reacting to pre-manufactured decisions or reports.

The Gardaí strategy document illustrates the ambition for a connected police officer:

> From the minute the Garda signs on at the beginning of their shift to the Garda Information System they will be connected to a wealth of real-time data and information.
>
> The system will tell them what their duties are for the day, the key areas for patrolling, and the crime patterns in their area.
>
> This information will be available on their mobile device when they leave the station. Throughout their shift they will get real-time updates on reported crimes in their area and whether they need to change their patrolling pattern to prevent further crimes.
>
> The Garda will be able to view details on key targets, their patterns of criminal behaviour, and warrants outstanding, as well as vehicle registration details.
>
> Before they deal with an incident, the Garda will know if the individual or group involved has a previous history of violence.
>
> As they are permanently connected, supervisors will know exactly where the Garda is, in case they require additional support to deal with an emergency situation.
>
> Throughout their shift, the Garda will be able to update information on the system and file reports either by contacting GISC or through the mobile device so they no longer have to devote so much time at the end of their day filling paper forms, which will increase the time they spend among the community. (*An Garda Siochána* 2016, p. 103)

There are many elements here that can be critiqued- knowing an individual has a previous history of violence not only prepares the officer but *preps* the officer to expect a more dangerous situation, this in itself can alter the context and thought process of any engagement. The 'always on' element portrayed here reduces the thinking, judging officer to a reactant – information coming through the device in a process that at once conceals and adjudicates facts on the ground and one might predict poorer community engagement under such real time access to information. Of course, it is not mutually exclusive to have good community policing with help from access to large databases of information but the degree to which technology intrudes into our social relations and to what extent technology becomes automated may widen or limit the depths of technological inequality and will not remove it. The concealment of ideology, prejudice and bias in technology comes with a reduction in the role of agency and judgement in social relations. There are implicit threats to a democratic society with increasingly pervasive technologies that mediate our judgement and agency. As Corbett and Marx wrote "there is no soul in the new machine" (1991). But whereas in China we can point accusations towards loci of agency and responsibility, can we really do the same in Ireland or other democratic states as we slowly cede control over important interpersonal relations to automated processes.

Since Karl Marx, theories of economic production have observed how increased complexity of technological systems deskills labour (removing risk) whilst increasing managerialism to project manage operational processes (1963). The driving force of 'efficient' production reduces both labour and machine to technical objects for management. Humans become technical objects for technological management; the human becomes part of the technological system. Whilst this may start in the private sector of the economy, it is exported into the public

sector and manifests in education, government, health and policing under neoliberal and new public management regimes. 'The whole life environment of society comes under the rule of technique' writes Feenburg (2005).

The costs in Ireland of acquiring and maintaining high tech devices and software under the premise of efficient policing I propose has two immediate consequences, less money for policing personnel, greater requirement for highly trained technical personnel. Implicitly, due to an efficiency correlational a reduced need for "inefficient" personnel will manifest in a reduction of officers on the street rather than with civilians working in the force as trained civilians are required for technical maintenance. There is therefore a need to better research and capture the actual impacts of technological innovation before deployed nationally. Consider the *Connected Garda* as a terminal being whose agency is reduced to a functional carrying out of routines based on disembodied decontextualized data against the very real embodiment and contextual presence of the Garda on the street. The *Connected Garda* runs the risk of becoming a detached (*alienated* Marx 1844) technical subject legitimised by distant management and legitimizing the process of their own deskilling by utilising and acting upon their new connectivity. We are potentially using numbers to drain meaning from experience, simplifying it into black and white protocols without regard to living context. Nevertheless, technology is not the determinant; the interplay between designer and user mediates the system, and, assigns meaning and values to our technical resources. Bringing civilians – those potential targets of a criminal justice system – in on the design side will reinforce the democratic justice potential for such technological innovation in police forces and for the very reason it is perceivable for this to happen in the Irish political system, it is not in Chinese - nor I would venture in the United States.

## Conclusion

This chapter explored two interrelated themes in this regard: how the technical systems influence social action and how systems of social disciplining now occur outside the traditional realms of policing and state authority i.e. disciplining has become diffuse. While benefits of algorithmic use and information-based policing should not be dismissed out of hand this chapter has shown that the inherent problems are such that automated AI processes can neither be accepted as some neutral, nor 'efficient', arbiter for criminal justice practices. Meredith Whittaker in testifying before the US House Science, Space, and Technology Committee in 2019 clearly highlights the issues raised in this chapter: drawing a comparison with practices in China, she declared particular uses of AI and private technology as

> a model for authoritarian social control that is backstopped by incredibly powerful technology, I think one of the differences between China and the US is that [China's use of] technology is announced as state policy, in the US this is primarily corporate technology that is being secretly threaded through our core infrastructures without that kind of acknowledgement (2019).

This chapter has shown how criminological research could expand in both scope and area to cope with technological innovation in an area marked by learning algorithms, autonomous systems and diffuse discipling. If focusing solely on policing we can miss the wider effects of the technologies we investigate. Most 'innovative' technologies originate outside police forces and will be utilised outside police forces by various interests in the private or state sectors. By focusing on agents as *actors with tools* we miss, or gloss over the reduction of agents to

*functions of information discrimination without cultural/personal/moral characteristics*. The imperfectly known human subject is supplanted by a decodable and perfectly knowable simulacra with a decipherable set of behavioural patterns, predictable and malleable for a supposed common good. This is most worryingly observed in the recent return of phrenological type modus operandi for new identification techniques in both the US, UK and China. Again, in the private sector this is proposed as a means for checking employees suitable personality traits for private companies (Stinson 2020) and is widening out as a means for ascertaining health, beauty, and inevitably criminal proclivity (instead read social docility). As Stinson points out criminality is not an innate characteristic (2020)- it is socially construed through political and legal constructs alongside prevailing social and cultural norms. Stinson raises an idea that should be seriously considered in light of this chapter – any scholar/researcher can, with relative ease, create questionable software: certain elements such as plutonium are heavily regulated due to the potential consequences in the wrong hands- facial recognition software is not, neither are augmented intelligences research where the ramifications are really quite severe through the nature of diffuse disciplining.

Our global technological society is one that marries increasing technological complexity to social development under the guise of increasing knowledge and increasing know-how. Nothing is off limits to our ever-increasing threshold for discovery and information. With the retreat of limitations to human knowledge into the distant horizon, we lose the standards by which we can act and this forms the problematic context in which we find ourselves. Feenberg (2015) characterises as a common theme of radical critics of modernity a serious concern with the rise of technocratic systems that displace social reciprocity and hamper human agency. Feenberg continues, where society is focused/organised on technological grounds, the human experience is narrowed through its engagement with reality via narrow channels in designed systems. This narrowing distorts the very structure of experience and interferes with our sense of meaning (justice/fairness) in everyday life – everyday life becomes perfectly surmountable. Our actual experience of inequality is far from any imagined ideal leading to our modern experience as contradictory, paradoxical and frustrating. The drivers for technological innovation are primarily seeking greater efficiency with the implicit belief that this improves effectiveness and strengthens our (their?) lot. It will therefore – the logic goes – further strengthen the goals of policing and related criminal justice systems. However, as we have seen such beliefs and assumptions are largely mistaken and if we truly take the supposed goals of policing and desire for justice at face value then we need to readdress the pursuit of technologies for the pursuit of justice/freedom/safety.

On the design side, anthropologists since Lemonnieer have shown that many different configurations of technological instruments are possible whilst still maintaining a core function or functionality, the variation of technologies across cultures reside in the exercise of design choices which themselves are influenced by social relations, hierarchies, values and biographies. So technical choices are limited cultural choices by particular groups of people with particular experiences, and, these design choices reflect a way of life of that particular influential group. Design and technical choices are not actually driven by some neutral efficiency. Yet this is the same efficiency that legitimises the adoption and use of technology in police forces and society-at-large and as Feenburg argues ‘technology can be and is configured in such a way as to reproduce the rule of the few over the many (2004, p. 1). Pre-existing power relations mould design choices that serve to replicate the structures that facilitate those power relations, i.e. China will not adopt technologies that might subvert Chinese CCP power.

At the outset I argued that technologies can discipline without regard to political or cultural systems which will manifest where technologies will be deployed outside their original remit and across geo-political regions as biases and intentions will have already been encoded into those applications; similarly once a technology is used in an alternate setting (or even within its setting) the dynamic nature of social life, the very fecundity of sociality itself ensures that original intentions are realigned with actual circumstances – perfect imposition is not possible. This does not mean we should not strive for social development, quite the contrary but such ambitions need to be focused on critical interrogation of our efforts as much as our deployments.

In China there is direct input by a totalitarian state into techniques of social control with diffuse outputs across a range of technical modalities and devices; in the US the production of devices and systems for social control is far more varied with private sector and commercial interests playing a large role with equally diffuse effects; and then in Ireland, if we are to pursue the Connected Garda strategy where does this technology come from? If is not home grown adopted technologies will bring with them adopted cultural/political/ideological biases from other nations. The diffuse nature of technical applications across national and cultural boundaries will lead to unforeseen issues in policing and disciplining of populations with definite negative consequences for those deemed marginalised or peripheal by the inherent or even overt biases at work within the technologies themselves and in the uses of those same technologies. For all the home grown problems every nation has to contend with, importing them through use of automated technologies created by private interests or totalitarian states does not seem to be a sensible way to go, particularly when there is little evidence that technological adoption provides any marked difference in policing for the better as opposed to more efficiently policing. It would seem that in the triangle of geopolitical cases presented here, no scenario is desirable, and, no solution readily apparent. Each of the cases here are tentative explorations to evidence the need for more empirically and ethnographically grounded research and a widening of the traditional foci of criminology to outside the criminal justice landscape. Within the field of organised crime, it has been noted by Windle and Silke (2019) that criminological research is heavily based on secondary literature coupled with an absence of 'voices' of those whom research purports to talk about. Despite the difficulties of empirical research in the face of ethics committees and adequate resources there is an urgent need to empirically address the topics raised in this book as a whole and to ensure the discipline has one foot on the ground. In doing so, criminologists will increasingly need to step away from the structures of criminal justice and policing and query the technical systems at work in the name of those same systems particularly as technical systems will not generate from within those systems but from outside in private sector interests.

Criminology should aim to act – as it already does – as a feedback loop between those disempowered or disenfranchised by new technical systems in a two-fold manner, one to give substance to hidden voices. Secondly, to contextualise the human factors in technical systems when the technical systems are increasingly thought of as neutral, or efficient yet are implicit in changing the system itself - reducing professional agents to technical objects in a wider technological system not of their making. As Feenburg warns 'technological systems impose technical management on human beings. Some manage, others are managed…' (2005: 55).

Through a comparative use of the different examples of automating technical systems we can see how such systems are actively reshaping social relations and ultimately redefining our social environments. Each of the cases presented here are in a sense preliminary in that each one carries enough weight to require far greater depth and research in order to fully articulate

the techno-social 'ecosystems' at work. Inherently, design and technical choices made in the development and production of technical products and systems are not neutral but socially and culturally derived. Bias, prejudice, experience, ignorance and wisdom all are encoded through technical systems with social ramifications thereafter. This brings about a kind of bypassing in cultural transmission and therefore short-circuits the artillery of political agencies in mitigating the negative effects of technological solutionism. Even further the diffuse nature of contemporary disciplining techniques exacerbates dominant cultural influences of encoded choices on peripheral or marginalised social interactions. They conceal those same relations through autonomous systems with limited public scrutiny. This holds important ramifications for the criminological research agenda and pushes farther afield the space within which criminological research should take place. Therefore, there is an urgent need to investigate such processes ethnographically to provide holistic outlines of the trails of influence technological solutions both within and outside policing hold. The arena for criminological research has widened drastically in an age of technological pastoralism and insecurity masquerading as progress and efficacy.

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