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Towards better policing: achieving norm internalization and compliance with persuasively designed technology

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1 Introduction

This chapter outlines the essential problem that this thesis seeks to address – that of law enforcement officers’ discriminatory behaviour on the basis of race¹ and sex, which are not in compliance with applicable rules and standards of conduct yet not easily addressed through traditional methods of behaviour regulation. This encompasses racially prejudicial and sexist behaviour that is not necessarily egregious on its own but has knock on or ripple effects, substantially affecting the delivery of justice. This chapter reviews the various particularities and unique aspects of policing that give rise to the behaviour under scrutiny. Such behaviour occurs not simply on its own, but also as the unintended side effects of measures meant to constrain that behaviour.

S. 1.1 describes the factors that drive or cause the problematic behaviour and advances the initial stages of an argument as to why technology could be a potential game changer in addressing this issue. S. 1.2 encapsulates the issue to be resolved in a set of research questions and sub-questions. S. 1.3 describes the methodology adopted in this thesis. S. 1.4 concludes with a roadmap for the steps proposed to be followed in addressing the problem highlighted, through approaches to compliance not reliant on the power of sanctions and technologies that can effectuate such methods of achieving compliance.

1.1 NON-COMPLIANCE BY LAW ENFORCEMENT

It is a fundamental principle of a democratic society that the police should be held to account for their actions. Individual-level accountability in policing assesses the conduct of police officers with respect to lawful, respectful, and

1 It is submitted that the researcher is cognizant of the fact that ‘race’ is not a biological concept, and it is not an accurate descriptor of different population groups. Rather it is more accurate to describe human populations as being comprised of different ethnicities with varying physical characteristics, and not as various races. Megan Gannon, ‘Race Is a Social Construct, Scientists Argue’ *Scientific American* <<https://www.scientificamerican.com/article/race-is-a-social-construct-scientists-argue/>> accessed 20 September 2023. However, due to the overwhelming prevalence of the term in literature relating to discriminatory policing, and because international legal prohibitions on discrimination still use the term ‘race’, it is used in this thesis to describe prejudice and bias directed towards ethnically different population groups.

equal treatment of citizens.² Ensuring this is easier said than done, and several realities of policing, either inherent or imposed, result in conduct that is inimical to the freedom and rights of individual citizens, as explained below. S. 1.1.1 provides a brief picture of factors, generally common to public service organisations (like law enforcement) that causes racist and sexist behaviour and highlights why, for such behaviour to be effectively addressed, a creative approach may be warranted. S. 1.1.2 briefly elaborates on factors unique to policing that also engender such discriminatory behaviour, further strengthening the justification for exploring an alternative approach. S. 1.1.3 describes a few instances of technology being used to address problematic behaviour, to further indicate the potential of exploring technological solutions, and advances tentative suggestions as to technologies that will be explored later in this thesis.

1.1.1 Defining The Misconduct Under Scrutiny: Problematic Deviations From Expected Conduct

S. 1.1.1 describes three conditions in society and public sector organisations (of which policing is a quintessential example) that give rise to behaviour that is discriminatory on the basis of race and sex to establish background to the research question. It highlights *firstly*, how the realities of functioning in public sector organisations and *secondly*, how demands made in regard to their performance engender discriminatory behaviour, demanding creative solutions. *Thirdly*, it describes how prejudices and biases of general society influence the functioning and behaviour of law enforcement personnel, which may lead to miscarriages of justice.

i. Consequences Of Constraints Placed On Police Organisations

Police organizations are typically characterised as ‘street level bureaucracies’ in that they are ‘people processing’ organizations – handling the daily interactions that make public life possible and typically have to contend with chronically inadequate resources. Hence, they adopt tactics that may be dysfunctional but are necessary to cope – such as husbanding of resources, routine processing, reconceptualising some tasks,³ and ‘rationing’ services by differentiating among the people they serve, through stereotyping, screening, and rubberstamping. Over time, these mental perceptions that such public

2 Samuel Walker, ‘Police Accountability: Current Issues and Research Needs’, *National Institute of Justice (NIJ) policing research workshop: Planning for the future*, Washington, DC (2006) 1.

3 Michael Lipsky, *Street-Level Bureaucracy: Dilemmas of the Individual in Public Services* (Russell Sage Foundation 2010) 36.

servants form in order to cope⁴ may result in citizens (particularly those belonging to racial minorities or marginalized groups) being treated pejoratively rather than neutrally. Another ‘coping’ mechanism is costs imposed on these individuals needing public services, in order to limit demand and depress participation – e.g., where people with minor complaints may be treated dismissively or are required to wait a long time.⁵ These coping actions can frequently result in the violation of human rights and hence, it is submitted, any attempt to improve accountability in policing must adequately respond to its unique pressures and conflicting priorities, as a purely rule based framework fails to attend to these complexities.

ii. *Effects Of Culturally Rooted Biases And Prejudices*

Even in the absence of direct malice or corruption, however, cultural issues, particularly existing racial and sexist biases influence police interaction with victims. Thus, for instance, with regard to sex-based crimes, the traditional police response has been characterised by suspicion, dismissal and reluctance.⁶ A culture where rape victims are routinely belittled and their cases ignored by law enforcement personnel (irrespective of jurisdiction) has been a recurrent theme in the reporting.⁷ Police stereotypes of minority citizens parallel those of wider society and have typically conflated race and violent criminality, generally acknowledged as fostering racist policing.⁸ These issues are intimately connected to cultural presumptions, bias and pervasiveness of cultural myths about women and racial minorities, and any credible attempt to address these problems will therefore require intervention at a normative and value-oriented level.

iii. *Performance Measures Focusing On Case-Clearance Rates Or Crime Rates*

Performance measures to assess police efficacy, far from enhancing civilian protection, tend to increase police harassment and unnecessary charging. Police officers may expend extra effort on the activities targeted by performance measures (e.g., arrest or conviction) which comes at the expense of the activities

4 Eg., assuming that “homeless = potential to scam”. *ibid* 85–86.

5 *ibid* 95.

6 Rachel de Leon, ‘You’re Sexually Assaulted. You Report. And Police Make You the Suspect.’ *Mother Jones* <<https://www.motherjones.com/criminal-justice/2023/09/youre-sexually-assaulted-you-report-and-police-make-you-the-suspect/>> accessed 7 October 2023.

7 Joanna Walters, ‘Investigating Rape in Philadelphia: How One City’s Crisis Stands to Help Others’ *The Guardian* (2013) <<https://www.theguardian.com/world/2013/jul/02/rape-philadelphia-investigation-crisis-crimes>> accessed 29 September 2023.

8 Brad W Smith and Malcolm D Holmes, ‘Police Use of Excessive Force in Minority Communities: A Test of the Minority Threat, Place, and Community Accountability Hypotheses’ (2014) 61 *Social Problems* 83, 87.

not covered by those parameters (e.g., verification of guilt).⁹ This can result in exacerbating the problems in treatment of civilians already discussed, and pressure to increase these metrics has typically had the effect of racial minorities and marginal groups being targeted.¹⁰ The imposition of performance targets thus becomes an additional factor that *could* induce unethical behaviour – police managers, their careers dependent upon performance metrics, focus on these targets rather than necessarily doing what needs to be done.¹¹ Hence, practices such as ‘padding’ of figures with arrests for minor infractions (usually prostitution, mild drug use), become integrated into policing, eroding an already tenuous social contract between citizens and the police¹² with profound implications for human rights and rule-bound law enforcement.

1.1.2 Reducing Non-Compliance: Unique Complications Due To The Nature Of Policing

S. 1.1.2 deals with three particular aspects of policing organisations and their work in particular that produce and facilitate discriminatory behaviour on the basis of race and sex by personnel, to provide additional context to the research question that this thesis seeks to address. This includes the fact that police officers have a relatively high level of discretion in how to handle their tasks,¹³ the demands and pressures unique to police work and the influence of police culture, a sub-culture that arises due to the occupational nature of policing.

i. High Levels of Discretion in Policing

Whether police officers see their role as primarily servicing the population, in terms of assistance and occasional peacekeeping¹⁴ or see themselves primar-

9 Dhammika Dharmapala, Nuno Garoupa and Richard H McAdams, ‘Punitive Police? Agency Costs, Law Enforcement, and Criminal Procedure’ (2016) 45 *The Journal of Legal Studies* 105, 107.

10 Joscha Legewie and Jeffrey Fagan, ‘Aggressive Policing and the Educational Performance of Minority Youth’ (2019) 84 *American Sociological Review* 220, 2.

11 John Grieve, Clive Harfield and Allyson MacVean, *Policing* (Sage 2007) 109–110.

12 Andrew Faull, ‘Missing the Target: When Measuring Performance Undermines Police Effectiveness’ [2010] *SA Crime Quarterly* 19, 19.

13 Ben Bradford and others, ‘Why Do “the Law” Comply? Procedural Justice, Group Identification and Officer Motivation in Police Organizations’ (2014) 11 *European Journal of Criminology* 110, 111.

14 Peter Anthony James Waddington, *Policing Citizens: Police, Power and the State* (Routledge 2002) 13–14.

ily as warriors fighting criminal elements¹⁵ they are generally operating in a space where they are not under direct supervisory control. Law enforcement organisations have been validly described as ‘coping organisations’ in that due to the nature of their work, managers cannot easily observe the day to day operations of their subordinates or assess the value of those operations for achieving desired outcomes.¹⁶ Hence, supervisors are sharply constrained in directing their subordinates and police officers generally work with little oversight, in environments that require discretion and adaptability, responsible for recording their own actions and the conditions under which they act. That the exercise of police discretion can result in selective law enforcement based on the race and ethnicity of the victims and alleged assailants has been acknowledged for a long time in literature on race and policing.¹⁷ Overly detailed and complex systems to monitor also have great potential to backfire and fail to achieve the intended effect. Supervisors have attributed the tendency to fudge paperwork to the complexity of such new monitoring systems introduced, as opposed to the use of simpler systems that prompted correct entries.¹⁸ This high level of discretion causes difficulty in ensuring accountability in policing and hence, the very *nature of policing* itself, necessitates methods that do not rely purely on supervisory environments. Improving accountability cannot, therefore, rely purely on a top-down approach, as direct management has limited impact on how the work is done. The hierarchical dynamics being quite complex, interventions at other levels, and in multi-pronged ways may be called for.

ii. *Inherent Nature of Police Work*

Even with regulation and supervision, police work has been found to be generally open to distortion even without intentional corruption.¹⁹ Assessments of systems that depended on paperwork by police officials to painstakingly record their actions revealed that personnel would often make choices in entering data that was easy, and would entail less work later,

15 Sue Rahr and Stephen K Rice, ‘From Warriors to Guardians: Recommitting American Police Culture to Democratic Ideals’, *New Perspectives in Policing* (US Department of Justice, Office of Justice Programs, National Institute of Justice 2015) 1–2.

16 Robert E Worden and Sarah J McLean, ‘Police Departments as Institutionalized Organizations’, *Mirage of Police Reform: Procedural Justice and Police Legitimacy* (2017) 15. Citing the work of James Q. Wilson (1989).

17 Cynthia Lum, ‘Does the “Race of Places” Influence Police Officer Decision Making’ (National Institute of Justice 2010) 2007-2008 DuBois Fellowship, Award 2007-IJ-CX-0032 54–56.

18 AV McCormick and others, ‘Challenges Associated with Interpreting and Using Police Clearance Rates, University of the Fraser Valley’ [2012] School of Criminology and Criminal Justice: Centre for Public Safety and Criminal Justice Research 12.

19 Martin Innes, *Investigating Murder: Detective Work and the Police Response to Criminal Homicide* (Oxford University Press 2003) 256–259.

prioritising ease of work and reduced hassle, rather than being accurate.²⁰ Such actions tend to have a detrimental effect on the policing of crimes such as domestic violence that in turn have a negative impact on women, resulting in sexist policing.²¹ Under both internal and external pressure for results, police work intertwines public duty with officers' personal ambitions and prestige.²² As a result, informal rule bending becomes an easy avenue to realize the mandate of policing within the restrictive environment, and becomes part and parcel of police culture. Although such informal rule bending practices develop beyond the public gaze and remain informal,²³ they nevertheless have pernicious consequences.²⁴ Such behaviour by police forces to achieve their targets is also disproportionately targeted at racial minorities, and there is a differential impact of such 'informal' rule bending on racial minorities.²⁵ Both malpractice and human error thus can be viewed as continuums in police work, where ethical boundaries can become blurred due to over zealotry, and principles and practicalities can be conflicting.

iii. Police Culture Is Rarely Accounted For

The importance of the occupational culture in addition to the formal rule system in shaping police practice has also been heavily explored in research into policing.²⁶ The occupational culture in policing is formed as a reaction to the external strains and challenges from citizens, spontaneously created by front-line officers, and reinforced by socialisation through a long period of time. Experts point out that the powerful police subculture has an effect that is largely negative with respect to accountability,²⁷ and is characterised by internal cohesion, suspiciousness and cynicism, etc.²⁸ Because of the unique

20 McCormick and others (n 18) 12.

21 Ben Quinn, 'Police Force Criticised for Downgrading Crimes to Ease Pressure' *The Guardian* (25 July 2018) <<https://www.theguardian.com/uk-news/2018/jul/26/northamptonshire-police-criticised-for-downgrading-crimes-to-ease-pressure-on-response-teams>> accessed 15 September 2023; Andy Myhill, 'The Police Response to Domestic Violence: Risk, Discretion, and the Context of Coercive Control' (City University of London 2018) 151.

22 Innes (n 19) 16.

23 Faulk (n 12) 19.

24 See J Parkinson, 'Managing Police Performance in England and Wales: Intended and Unintended Consequences' [2012] Unpublished dissertation for M. St.). Cambridge, England: Institute of Criminology, University of Cambridge 72–75.

25 Malcolm D Holmes and Brad W Smith, 'Intergroup Dynamics of Extra-Legal Police Aggression: An Integrated Theory of Race and Place' (2012) 17 *Aggression and Violent Behavior* 344, 344.

26 Carol Cox and Stuart Kirby, 'Can Higher Education Reduce the Negative Consequences of Police Occupational Culture Amongst New Recruits?' (2018) 41 *Policing: An International Journal* 550, 560.

27 Jerome H Skolnick, *Justice without Trial: Law Enforcement in Democratic Society* (Quid pro books 2011) 91–94.

28 Worden and McLean (n 16) 16.

demands that are placed on it, policing²⁹ remains best represented as a close-knit subculture wherein police officers are reinforced in their beliefs by the realities of their work and colleagues³⁰ which cement racial and sexist beliefs. The beliefs fostered by police culture, in turn, manifest as institutional racism and sexism,³¹ and have been acknowledged as leading to discriminatory policing.³² This has to be sensitively dealt with in order to achieve change while respecting ongoing efforts and hence achieving accountability in policing needs a multi-faceted and flexible approach.

The very nature of police work, therefore, brings into play conflicting and highly influential factors that, even without ‘malice’ can be seriously damaging to the wellbeing of citizens or to public safety. Two important implications flow from this – *one*, that even if actuated by good intentions or merely a desire to reduce burden, such actions can nevertheless have detrimental effects, and *two*, that regulation and processes alone cannot resolve these issues – since such conduct sometimes arises from trying to reduce regulatory burden. Addressing these issues requires not treating police organizations as deserving of blame or censure but finding ways to ease the burden without compromising on public safety.

1.1.3 Why and How Persuasively Designed Technology Can Help

S. 1.1.3 briefly explains *firstly*, how technology is currently being used to change behaviour to be more in line with social norms in non-policing contexts, and *secondly*, provides a snapshot of technologies already being used to regulate policing behaviour. Together, the two explanations establish why the potential of technology to address discriminatory behaviour should be explored and justifies the main research question.

i. Technology’s Potential To Change Behaviour

Currently, decision making in street level bureaucracies like policing organizations has become highly structured through case management systems, turning them into system level bureaucracies translating legal rules into algorithms and decision trees. This transformation offers unique opportunities to design

29 Literature recounting this phenomenon has been limited to scholarship in the US and UK for the sake of scope limitation.

30 Smith and Holmes (n 8) 87.

31 Rick Muir, ‘Police Culture Has Been Called out. It’s Time for Change’ (*The Police Foundation*, 3 November 2022) <<https://www.police-foundation.org.uk/2022/11/police-culture-has-been-called-out-its-time-for-change/>> accessed 11 September 2023.

32 Raekha Prasad, ‘I Can’t Breathe: Race, Death & British Policing’ (Inquest 2023) 25 <<https://www.inquest.org.uk/Handlers/Download.ashx?IDMF=edfc7c01-e7bb-4a17-9c33-8628905460e6>>.

interventions more suited to the desired goals. A comparison with other persuasive systems is instructive in how this is possible. Software to address cyberbullying, for example, prompts users to reconsider language based on context and has shown promising success.³³ The ubiquitous use of software in daily policing offers an avenue for the integrations of such technologies with ‘nudging’ or ‘persuasion’ capabilities.

ii. *Persuasive Technology Can Enhance Police Compliance*

Increasing use of technology, whether directly used to record interactions, actions, and decisions for posterity or indirectly to prompt reflection over choices, has the effect of changing police behaviour itself in the long run. For instance, a 12-month study of one department found that officer-mounted cameras, reduced use of force by 65 percent and complaints against officers by nearly 10 times.³⁴ The mere presence of the technology, therefore, irrespective of whether the recordings are used, has operated as a restraint. Similarly, a mandate to track race of drivers during stops while maintaining digital records of conversations facilitated spotting of bias in officers’ stops, allowed supervisors to take action, and made drivers less vulnerable to being unfairly treated.³⁵ The above examples highlight technology currently in use to enhance accountability in police functioning, albeit through direct *monitoring* on the one hand (Category 1), and by subtly *altering behavioural choices* and thinking processes on the other (Category 2). This thesis will use the insights gleaned from the responses to the technologies in Category 1 and utilize them to inform how technologies that would fall within Category 2 can be designed for the policing environment. Current technologies that will be considered therefore include chatbots, feedback systems, reminders as well as incorporation of persuasive design principles into systems already in use. The potential of all these persuasively designed technological features to be assistive in the process of norm compliance, therefore will be further explored.

33 Emily Matchar, ‘New Software Makes Cyberbullies Think Twice’ [2015] *Smithsonian Mag* <<https://www.smithsonianmag.com/innovation/new-software-makes-cyberbullies-think-twice-180956948/>>. Last accessed Nov 2020.

34 Tony Farrar, ‘Self-Awareness to Being Watched and Socially-Desirable Behavior: A Field Experiment on the Effect of Body-Worn Cameras on Police Use-of-Force’ (Police Foundation 2013) 9.

35 Michael Boren and Jonathan Lai, ‘Patrolling for Bias’ *The Inquirer* (2017) <<https://www.inquirer.com/news/inq/racial-profiling-traffic-stop-philadelphia-police-pa-nj-20170705.html>>. Last Accessed September 2023. It highlights that “Tracking the race of stopped drivers helps protect both drivers and police officers”.

1.2 RESEARCH QUESTION

It is clear that there are factors inherent in policing that lead to ethical or legal 'excesses', particularly with regard to race and sex that can, even if they seem minor, nevertheless have profound consequences. The nature of police work as well as aspects unique to policing complicate these problems in subtle ways that current approaches seem incapable of confronting or handling. This calls for a norm-oriented approach that treads a fine path between influencing the culture and processes, and thereby indirectly and directly, work on the internal normative compulsions of the individual. This begs the question of how such an approach could be 'implemented' or 'operationalized', particularly in light of limited resources, and that is the problem that this thesis seeks to make a contribution to resolving.

Thus, the central question of this thesis is:

Can persuasively designed technology improve compliance of law enforcement officers with legal and ethical norms, particularly with regard to racist or sexist behaviour?

In order to answer this question, the following sub-questions will be addressed in this thesis:

1. *What is persuasively designed technology and in what way can it help in improving compliance?*
2. *How does racist and sexist behaviour occur in law enforcement and how has it been sought to be dealt with?*
3. *Which legal and ethical norms dealing with racist or sexist behaviour should law enforcement officers adhere to, and how can norm internalisation assist them in complying?*
4. *Which technologies, by assisting with norm internalisation, thereby contribute to adhering to these norms, and how can they be implemented to improve compliance of law enforcement officers?*

At the outset, it is noted that for the purposes of the problem under scrutiny, i.e., enabling compliance with overarching norms to ensure justice, 'compliance' refers only to avoiding infractions and excesses that are not a flagrant abuse of power or due to deliberate corruption. Rather, the problems to be addressed are seemingly minor violations that are found to be a consequence of the nature and demands of policing itself and can have significant effects on the maintenance of law and order. This thesis will only seek to address the non-compliant behaviour and infractions that result either due to the inherent nature of police work, performance goals, or due to the expression of society-wide stereotypes, prejudices, and biases.

In seeking to answer the first sub-question it is recalled here that with the pervasive presence of technology in everyday functions, there are various ways of exploring technology's potential in enabling legal compliance. In this thesis, three typologies of technology will be explored – (i) technology which by design limits choices or decisions, (ii) technology which by design and manner of presentation influences decisions and inclinations and (iii) technology which influences mindsets and values and thereby shapes actual decisions or actions.

The infractions in police work that end up victimising innocent civilians is most often typified by a racial or sex-oriented bias. Racism and sexism, therefore, although forbidden by all applicable codes and laws, end up colouring even well intended actions and decisions, particularly of the sort under scrutiny in this thesis. This thesis focuses on these two aspects because racial and ethnic minorities, as well as groups disadvantaged by sexual and gender inequalities suffer the 'effects' of non-compliant behaviour to a greater extent.³⁶

To analyse how this behaviour occurs, is sustained and how it can be constructively dealt with without resorting to sanctions, as envisioned in the second sub question, conduct and practices limited to two partially similar jurisdictions are explored. This thesis reviews literature relating to police misconduct or excesses only relating to the jurisdictions of the US and the UK. This jurisdictional limitation is helpful for two reasons – 'policing' developed very differently in the UK and US – in the UK, it originated in the idea of community policing,³⁷ i.e., the notion of the police as not just a force to attend to crime but also promote public safety, while in the US, it evolved from a private, politician controlled entity to one meant to serve the public.³⁸ This dichotomy in the purpose of policing, although insignificant today, influenced the development of police organisations and culture itself. Since this thesis adopts an approach towards resolving issues of non-compliant behaviour that relies on norms and socialization, the unique aspects of police culture in these jurisdictions merit focus so as to enhance the robustness and widespread relevance of the overall conclusions. Analysing the experiences and issues with these two systems provides a comprehensive sample set for the purpose of this thesis, and enhances the utility of the final conclusions across a wider context.

Since this thesis only analyses norms, practices, processes, and cultural tendencies relevant to addressing conduct that can be racially prejudicial, discriminatory, or sexist, resulting in profoundly disadvantaging certain groups from accessing the protection of the police forces, as far as the issues raised

36 Ben Bowling and others, 'Policing: Past, Present and Future' [2016] What is to Be Done About Crime and Punishment? Towards a 'Public Criminology' 123, 19–20.

37 A Beckley, 'The Evolution of Community Policing from Its Origins in the UK' [1994] Understanding Community Policing 1.

38 Carol A Archbold, *Policing: A Text/Reader* (Sage 2012) 6–10.

by the third sub question are concerned, the norms explored herein will pertain only to racism and sexism, and their treatment in the US and UK. Since this thesis takes an internally incentivizing approach to achieving compliant behaviour, the focus is on how discriminatory tendencies can influence the policing and investigative process itself, an area that has been heavily focused on by authorities in the US³⁹ and the UK.⁴⁰ Literature on the complexities of policing racially divided societies⁴¹ and class-oriented societies⁴² with a continuing experience of bias,⁴³ has therefore been found relevant. Useful insights from societies in which multiculturalism has resulted in a certain social hierarchy has been gleaned from material pertaining to US⁴⁴ and UK⁴⁵ police organisations. The race riots in the USA⁴⁶ also provide fertile ground to analyse and shape policing in a racially charged society, and interest in these issues has remained high. In terms of desirable norms therefore, the experiences recorded and lessons learnt in policing in the US, and, to a lesser degree in the UK, enable a more inclusive and responsive research process.

With regard to the fourth sub question, this thesis considers technologies that law enforcement uses to carry out or ease their daily functions – such as data processing software, word processors, database and filing software, or mobile applications. These should be distinguished from technologies that are developed for the purpose of improving policing, such as face recognition,

39 In the US, among other examples, is the explicit attention given to the phenomenon of bias in reports by the President's Task Force on 21st Century Policing, 2015. Tim Lynch, 'President Obama's Task Force on 21st Century Policing'. Also to be noted are the publications of a Community Relations Services Toolkit for Policing, 'Understanding Bias: A Resource Guide – Bias Policing Overview and Resource Guide' (Department of Justice 2017) <<https://www.justice.gov/file/1437326/download>>. A specific report on addressing potential violations because of bias was also sponsored by the US Department of Justice, in Vera Institute of Justice, 'Bias Crime Assessment: A Tool and Guidelines for Law Enforcement and Concerned Communities' (National Institute of Justice 2018).

40 College of Policing, 'Police Race Action Plan Improving Policing for Black People' (National Police Chiefs' Council 2022) <<https://www.npcc.police.uk/our-work/police-race-action-plan/>>. Last accessed September 2023.

41 See Anthony A Braga, Rod K Brunson and Kevin M Drakulich, 'Race, Place, and Effective Policing' (2019) 45 *Annual Review of Sociology* 535. Also see, Ronald Weitzer, 'Racialized Policing: Residents' Perception in Three Neighborhoods' (2000) 34 *Law and Society Review* 129.

42 That experiences of racial policing are further influenced by class, and that both factors have to be accounted for in studying racialized behaviour has gained ground in recent years. For eg., see, Ronald Weitzer and Steven A Tuch, 'Perceptions of Racial Profiling: Race, Class, and Personal Experience' (2002) 40 *Criminology* 435.

43 Several examples of racially biased policing are also to be found in Kate Antonovics and Brian G Knight, 'A New Look at Racial Profiling: Evidence from the Boston Police Department' (2009) 91 *The Review of Economics and Statistics* 163.

44 David E Barlow and Melissa Hickman Barlow, *Police in a Multicultural Society: An American Story* (Waveland Press 2018) 71–78, 99–105.

45 Ben Bowling and Coretta Phillips, 'Policing Ethnic Minority Communities' in Tim Newburn (ed), *Handbook of Policing* (Willan Publishing 2003).

46 *Skolnick and Fyfe* 73–77

wiretapping and DNA identification among others and should also be distinguished from technology employed purely to increase oversight, such as body cameras. The essence of persuasive technologies is to integrate elements of persuasion and normative signalling into everyday technologies. They are distinguishable from technologies designed to enhance oversight.

1.3 METHODOLOGY

1.3.1 Research Methods

The type of research question determines the method.⁴⁷ The main research question of this thesis may be properly categorized as being an evaluative question, in that it seeks to evaluate, by an analysis of existing literature and relevant studies if persuasive technologies can achieve the goal of compliance with relevant legal rules. Given the scope of the research question, the research is carried out using desk-based research. Generally, research is done through secondary sources, and empirical research methods have not been used. Only secondary sources and data used by them has been used in the writing of this thesis. The overall method of analysis, therefore, may be properly termed as a critical study of the relevant literature and evidence.⁴⁸

This thesis is exploratory in nature and adopts an interdisciplinary approach to the study of the problem under scrutiny i.e., investigating the potential of persuasively designed technologies, to address discriminatory behaviour by law enforcement. Accordingly, three intersecting disciplines have been investigated in the process of writing this thesis, namely the fields of technology design, law and social psychology. Within the realm of interdisciplinary legal research, this thesis may be properly described as auxiliary in type, in that it uses other disciplines as auxiliary disciplines.⁴⁹ The problem under scrutiny requires input from the related fields of social psychology and technology design, and material (insights, theoretical perspectives and empirical data) contribute to the legal arguments. In the discipline of technology design, there has been an emphasis on literature dealing with interactive and persuasive technology. With respect to interactive technology, literature from the field of human-computer interaction, where relevant to human behaviour, decision making and cognition has been used. In regard to persuasive technology, the thorough research carried out and reported in the proceedings of

47 Wendy Schrama, 'How to Carry out Interdisciplinary Legal Research: Some Experiences with an Interdisciplinary Research Method' (2011) 7 *Utrecht Law Review* 147, 148.

48 Viorela Dan, 'Empirical and Non-Empirical Methods' in Jorge Matthes, Christina Davis and Robert Potter (eds), *International Encyclopedia of Communication Research Methods* (2017) 2.

49 Bart van Klink and Sanne Taekema, *Law and Method: Interdisciplinary Research into Law* (Mohr Siebeck 2011) 11.

the Annual Conference on Persuasive Technology as well as connected literature (cited in conference proceedings or using conference proceedings) has been extensively used to support this thesis' analysis and recommendations regarding persuasive technology. Suitability of the proposed technological solutions for the problem under scrutiny is assessed using a comparative method.

In order to investigate the causes and determinants of discriminatory behaviour and approaches taken to address them, empirical and scholarly literature from the domain of social psychology and behavioural sciences has been used. Particular attention has been paid to literature on bias, and its influence on prejudice and behaviour by social psychologists and cognitive scientists. Conclusions arrived at using quantitative and qualitative research in the domain of policing – relating to police behaviour, organisational factors and police reform has been used to substantiate conclusions regarding the factors that engender such behaviour and ways to tackle them. The social-psychological research relating to discriminatory behaviour (the symptoms of the problem) and the literature on persuasive technology (the proposed solution) relate to the overarching legal problem researched in this thesis – the problem of compliance with legal norms proscribing racist and sexist behaviour by law enforcement. Research into the legal domain has been primarily carried out using the doctrinal method, into legal rules and codes, soft law instruments, and literature interpreting the substantive content of such legal rules that in turn indicate the relevant behavioural norms. This thesis deals with the interaction between 'law', 'norms' and 'ethics', the latter two being a larger category of codes that shape behaviour, and may consist of social and legal norms. To the extent that literature regarding norms is relevant, this thesis uses appropriate social science texts – from political science, sociology, criminology and psychology.

Overall, research for this thesis has been carried out in the following manner – General searches were run on Google Scholar, HeinOnline, Elsevier, and Sage Journals with important keywords such as "implicit bias" "discriminatory policing" "racial profiling" "treatment of female victims", among others. Based on the results, additional and more specific keywords were used in similar searches. Results generally indicated (because of the frequency of occurrence of literature) particular scholars as experts on various topic, whose work has been foundational and extensive in their respective subject areas. Accordingly, literature by such writers was explored, and then research was further developed bi-directionally. That is, literature cited by such scholars, as well as literature where these scholars have been cited was then reviewed and analysed for its relevance to this thesis. This approach has been followed throughout this thesis. The significant scholars whose work functioned as origin points have been further detailed below.

On persuasive technology, analysed extensively in chapter 2 and chapter 5, the starting point of the research is B.J. Fogg's seminal work on Persuasive

Technology,⁵⁰ and finding literature where Fogg's work was cited and used. Additionally, proceedings of the International Conference on Persuasive Technology were used as a basis, with citations mentioned in the Conference proceedings followed up on. Significantly, work on persuasive technology by the following writers has been extensively used – Chittaro,⁵¹ Oinas Kukkonen,⁵² Harjumma,⁵³ Orji.⁵⁴ On digital nudging and the role of design in behaviour change, work by Lockton⁵⁵ proved a useful starting point, and further research into digital nudging was carried out based on literature cited, in addition to general searches. On persuasive technological features for behaviour specifically for social purposes, analysed in Chapter 5, literature on using persuasive technology for environmental purposes by Midden,⁵⁶ Haam⁵⁷ was used as an origin point. References contained within their work, and literature building on those were further explored and analysed to support the argument of using persuasive technology to address discriminatory behaviour.

On the occurrence of racist and sexist behaviour in law enforcement, analysed in chapter 3, extensive literature has been found from institutional sources itself. That is, reports and research output sponsored or produced by the Department of Justice in the United States, or the National Association of the Chiefs of Police in the United Kingdom. Additionally, empirical investigations by Dellinger Page⁵⁸ on sexist policing, and Smith⁵⁹ on racist policing were used as starting points for further research. On the cognitive and social mechanisms underlying racist policing, also explored in chapter 3, extensive

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- 50 Prof. Brian J. Fogg, Adjunct Professor at Stanford University, Director of Stanford Behavior Design Lab previously known as Persuasive Technology Lab
- 51 Dr. Luca Chittaro, Director of the Human Computer Interaction Lab, Member of EASA working group on innovative technologies in cabin crew training.
- 52 Prof. Harri Oinas-Kukkonen, Professor of Information Systems Science, known for foundational work on the study of behaviour change support systems.
- 53 Dr. Marji Harjumma, Senior Scientist of VTT technical research center, with over 50 published works on persuasive technology.
- 54 Dr. Rita Orji, Canada Research Chair, Faculty of Computer Science with nearly a 100 published works on persuasive technologies, many of them in social contexts.
- 55 Dr. Dan Lockton, Eindhoven University of Technology and Imaginaries Lab, with nearly 50 published works on the subject of design, nudging and behaviour change.
- 56 Prof. Cees Midden, Professor of Human Technology Interaction at Eindhoven University, known for a large body of work on technologies for environmental purposes and the uses and limits of embodied agents.
- 57 Prof. Jaap Ham, Associate professor at Eindhoven University of Technology, with extensive work on persuasive technologies and social agents.
- 58 Prof. Amy Dellinger Page, Professor of Sociology at Appalachian University and collaborator with OASIS, the local domestic violence and sexual assault crisis center on sexual assault prevention programming with defining work on treatment of sexual assault victims within the criminal justice system.
- 59 Prof. Michael R. Smith, Professor in the Department of Criminology & Criminal Justice at the University of Texas at San Antonio, with over 50 published works on racial profiling in the United States, many of them research carried out through the Department of Justice.

work done by Alpert⁶⁰ and replicated in multiple jurisdictions was relied on, including literature used by Alpert and literature that further developed the work by Alpert and colleagues. On the factors and causes engendering sexist policing, investigated in chapter 3 reliance was placed on literature analysing the treatment of female victims by policing, including Jordan,⁶¹ and Dellinger Page, and literature that built upon their work.

On the theme of procedural justice, used in chapters 3 and 4, the work of Tyler⁶² has been seminal and defining. Hence, literature by Tyler, and other research where it has been used has been relied upon in advancing recommendations based on procedural justice. On the role of norms as a form of regulation for legal outcomes, set out in chapter 4, prominent writers on the subject included McAdams,⁶³ Cooter⁶⁴ and Sunstein.⁶⁵ Their work was used to investigate legal scholarship on the expressive function of law and the utility of norms in shaping behaviour, bi-directionally.

On theories of behaviour change and persuasion, used in chapters 2, 4 and 5, the work of scholars who propounded and advanced research on specific theories has been used. Thus, Bandura⁶⁶ has been relied upon for the social learning theory, Festinger⁶⁷ for the cognitive dissonance theory, Ajzen⁶⁸ for the theory of planned behaviour, Tajfel⁶⁹ on social identity theory.

Literature until [September 2023] was taken into account.

60 Prof. Geoffrey Philip Alpert is a professor in the Department of Criminology and Criminal Justice at the University of South Carolina with multiple books on police misconduct, use of force, and methods to improve.

61 Prof. Jan Jordan Emerita Professor School of Social and Cultural Studies, Victoria University of Wellington, with nearly 50 publications focusing on the response of criminal justice systems to sexual assault.

62 Prof. Tom R. Tyler, Professor of Psychology and Law at Yale Law School, pioneer of the movement towards procedural justice in policing, both in interactions with citizens and within police organisations.

63 Prof. Richard H. McAdams, Bernard D. Meltzer Professor of Law and Aaron Director Research Scholar at the University of Chicago Law School whose work on the interaction between law and norms, arising out of the law and economics school of thought is heavily used and cited on the role of norms in achieving legal outcomes.

64 Prof. Robert Cooter, Herman F. Selvin Professor of Law at the University of California, Berkeley, School of Law, also heavily cited in the literature on the interaction between law and norms.

65 Prof. Cass R. Sunstein, Robert Walmsley University Professor at Harvard, extensively cited in economic perspectives on law, with considerable literature on nudging, the expressive nature of law, and the role of norms in behavioural regulation.

66 Prof. Albert Bandura, formerly Professor Emeritus of Social Science in Psychology at Stanford known for his work on social cognitive theory and social learning theory.

67 Prof. Leon Festinger, Else and Hans Staudinger Professor of Psychology at the New School for Social Research, best known for advancing the theory of cognitive dissonance and social comparison.

68 Prof. Icek Ajzen, Professor of Psychology (Emeritus) at University of Massachusetts Amherst, known for his work on the theory of Planned Behaviour

69 Prof. Henri Tajfel, Chair of Social Psychology at University of Bristol, known for his pioneering work on the cognitive aspects of prejudice and the social identity theory.

1.3.2 Theoretical Framework

The overarching theoretical framework for this thesis is regulatory theory, particularly the branch of regulatory theory that acknowledges the regulation of human behaviour through modalities other than the law, or in addition to positive law such as norms and artefacts in an individual's environment. Grounded in this theoretical perspective, this thesis takes an inter-disciplinary approach towards achieving compliance with the prohibitions on racist and sexist discrimination.

With regard to the category of law, the behaviour or rather actions that are the focus of legal rules in this research are mainly dealt with by regulations, i.e., legal codes drafted by administrative or executive bodies by virtue of the powers accorded to them by legislative bodies also known as delegated legislation. The overarching category of law used in this research therefore is regulatory law, focused on constraining public power, and not substantive law, which contemplates and defines penal offences.

Research presented in this thesis into policing behaviour, its occurrence and causes has been drawn mainly from experimental research into prejudice and discrimination from the field of social psychology and criminal justice. For the purpose of this thesis, the assumptions and methodology of that research are taken as given, and the results of such empirical research have been used to inform the analysis in this thesis. Similarly, findings regarding the effects of technology on behaviour have been used as presented in the field of human-computer interaction to advance an answer to the research questions.

1.4 THE STRUCTURE OF THIS THESIS

Chapter 2 of this thesis answers the first sub-question of what persuasive technology is as well as how it can help in improving compliance and therefore establishes the conceptual foundations for the approach being proposed. Accordingly, Chapter 2 looks at how the foundational concepts of norm internalisation to facilitate norm compliance and persuasive technology to change behaviour can be better understood. Chapter 2 starts with an exploration of what makes a technology persuasive and how it is understood in the literature, thereby highlighting how it can be further developed to encourage legal compliance. It elaborates on the behavioural and sociological factors that undergird the working of such technologies and thereby enable behaviour change in accordance with existing norms and values, to accomplish desirable goals in various domains. It demonstrates with examples how existing technologies serve to enable behaviour change in other domains and can therefore serve as an additional avenue for enabling compliance. Chapter 2 provides the answer to the first research sub-question by detailing legal approaches to the regulation of behaviour that consider instruments other than positive

law backed by the force of sanctions to influence actions and thus support the use of technology for behaviour change. This includes legal frameworks such as the modalities of regulation by Lessig and the theory of nudging by Thaler and Sunstein.

Chapter 3 turns to another necessary dimension of the problem, i.e., how discriminatory behaviour is caused and engendered, how it is sought to be prevented and answers the second sub-question. To that end Chapter 3 explains how the doctrine of ‘new public management’ in managing police performance fell short of ensuring the delivery of justice and protection of rights, facilitating discriminatory and biased policing. It continues with a deep dive into the incidence of prejudicial and discriminatory behaviour on the basis of race and sex in the selected jurisdictions. It then examines the major factors driving the discriminatory behaviour under scrutiny, from two perspectives: a macro perspective, analysing the social and organisational factors and a micro perspective that focuses on cognitive shortcuts and individual biases engendering such behaviour. Findings indicate that the actions and behaviour under scrutiny here are less a product of deliberate malice or criminal intent, such as corruption, but rather infractions that occur as an inevitable effect of the policing function and the nature of policing in our societies, but nevertheless have devastating consequences. Chapter 3 continues with an investigation of the various measures taken to address this behaviour and analyses their relative successes as well as shortcomings. Although there have been repeated initiatives to counter racist⁷⁰ and sexist reactions⁷¹ that can impede the de-

70 Rebekah Delsol, ‘How Stop and Search Reforms Have Failed’ (23 October 2018) <<https://www.justiceinitiative.org/voices/ending-racial-bias-police-stop-and-search>> accessed 25 September 2023 (UK) reflecting on how, despite reforms to improve stop and search practices since 2014, little has changed. Robert Klemko and John Sullivan, ‘The Endless Cycle of Outrage and Reform over Policing in America’ *Washington Post* (10 June 2021) <<https://www.washingtonpost.com/investigations/interactive/2021/police-reform-failure/>> accessed 24 September 2023 (US) highlighting that despite many reforms, racial profiling resurges cyclically.

71 ‘Police Super-Complaint Report Shines a Light on Police Failure to Protect Domestic Abuse Victims as Prosecutions Collapse by 50% in Just Three Years’ (*Centre for Women’s Justice*, 24 August 2021) <<https://www.centreforwomensjustice.org.uk/news/2021/8/23/police-super-complaint-report-shines-a-light-on-police-failure-to-protect-domestic-abuse-victims-as-prosecutions-collapse-by-50-in-just-three-years>> accessed 22 September 2023 shining a light on failures to improve policing long after the government claimed to be making it a priority through its Domestic Abuse Act (UK). ‘Justice Department: Police Misconduct in Responding to Domestic and Sexual Violence Can Violate Survivors’ Civil Rights’ (*American Civil Liberties Union*, 25 June 2013) <<https://www.acu.org/news/criminal-law-reform/justice-department-police-misconduct-responding>> accessed 21 September 2023 (US) highlighting ongoing misconduct in responding to sex-based crimes. But training seems to change little as reflected in Jeffrey Thomas Gazzo, ‘Evaluating the Influences of Domestic Violence Training on the Attitudes and Perceptions of Police Recruits at the East Tennessee Regional Law Enforcement Academy’ (Master’s Thesis, East Tennessee State University 2018). As recently as 2023, little seems to have changed – Andy Mannix Star, ‘Minneapolis Police Systemically Fail in Response to Domestic Violence Calls, Study Finds’ *Star Tribune* <<https://www.>

livery of justice, not all have been as successful as hoped. It analyses the helpfulness of the idea of procedural justice in incentivising legally compliant behaviour on the part of police officers and reviews the limitations and advantages of the various steps taken to address such issues with legal compliance of police officers. Chapter 3 provides the answer to the second sub question by distilling the most important lessons about the phenomenon of racism and sexism within law enforcement to accurately identify the difficulty in resolving these tendencies, and successful initiatives are elaborated upon.

Chapter 4 answers the third sub question as to the relevant legal and ethical norms that policing personnel ought to comply with and the utility of norm internalisation to achieving compliant behaviour. This is because using persuasive technologies to achieve legal compliance requires breaking down broad legal proscriptions into specific norm-oriented behavioural goals as these technologies aim to change behaviour incrementally, i.e., by encouraging behaviour in alignment with desirable values and goals. With a complete picture of the problem and its particularities being established, Chapter 4 elaborates on the norms that are being flouted, and how compliance with them may be improved upon, by measures other than sanctions. It begins by analysing the landscape of equality and non-discrimination laws, codes of conduct and instruments of soft law regulating police performance regarding racism and sexism, with a view to abstracting the norms they embody. It goes on to assess approaches towards legal compliance rooted in an understanding of law as an expression of desirable social norms and values and infers norms that can function as behavioural standards from jurisprudential thought on equality and non-discrimination. It also utilizes the concepts of procedural justice and other measures of police legitimacy to distil norms regarding non-discriminatory behaviour that can serve as behavioural goals. Chapter 4 continues with an investigation into how compliance with norms can be brought about. To that end, it analyses how insights from social learning theory and persuasion strategies can offer an advantage in bringing about a change in belief regarding relevant norms. It also assesses how the importance of the social identity of the police and the values attached to it can be capitalised upon to enable norm internalisation. Chapter 4 provides the answer to the fourth sub question by modelling the process of norm internalisation and norm activation to illustrate how normative compliance can be achieved without the force of sanctions and signifying the relevance of technology.

Chapter 5 further expands upon the technological aspect, already explained in Chapter 2 and answers the fourth research sub-question, regarding the persuasive technologies that enables norm internalisation and how they should be implemented to facilitate norm compliant behaviour. It builds upon the conclusions arrived at in Chapters 2 to 4, about the best methods to achieve

norm internalisation as well as identification of the most suitable theories of behaviour change and persuasive strategies to implement these methods. Chapter 5 thus contains a systematic integration of mechanisms of behaviour change with appropriate persuasive design strategies which supports concrete recommendations as to persuasively designed technological features that would internally incentivise compliant behaviour. It begins with distinguishing between various kinds of persuasive features, among a range of technological artefacts that can be designed to inhibit choices, to influence decision making or simply to remind the user of certain aspects. It does so by delineating the design aspects that make technology persuasive and elaborates on the theoretical principles that influence the designing of persuasive technology, i.e., how a specific persuasively designed feature can be expected to bring about a change in behaviour. This analysis establishes how insights about behaviour change can be 'operationalised' through technologically enabled processes or practices. On the basis of the theoretical approaches to behaviour change that underpin specific persuasive technologies, and for the specific purpose of internalising norms that resist racism and sexism, Chapter 5 details certain persuasive features are more advantageous. Thus, it demonstrates how norms and the behavioural standards they embody can be expressed through technology, and how that can be used to achieve the desired legal compliance. Chapter 5 provides the answer to the fourth sub-question by mapping a landscape of policing technologies currently in use, and laying out a roadmap for how the selected persuasive features can be integrated into existing technologies and thus bring about behaviour change. This includes, e.g., the potential of automatic reminders on word processing software or a database used to file details of the crimes and offences being reported, such as categorisation, nature of offence, if the entered information utilises sexist or racist tropes.

Chapter 6 answers the main research question, integrating the findings arrived at in the preceding chapters and presents the final conclusions of this thesis. It identifies areas for further research and enumerates recommendations.