Exploring algorithmic justice for policing data analytics in the United Kingdom

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Abstract

Privacy rights and related civil liberties in the criminal process are being affected in new ways, as digital policing is being shaped by new degrees of data analytics practices. Between 2016 and 2021, a great deal of media attention, pressure from human rights NGOs, academic scrutiny and regulatory oversight has sprung up in relation to policing data analytics practices in the UK. Live facial recognition, offender risk profiling, hotspots policing, crime investigation triage and mobile device data extraction have all been deemed controversial for different reasons. New forms of accountability have sprung up in response: new mechanisms like police data ethics committees, supplemented by soft regulation through codes of practice and the recommendations of a large number of reports and studies. This chapter will consider what is known about police data analytics in practice, to determine whether themes of 'algorithmic justice' can be discerned in the UK context, and what this developing picture means, chiefly, for privacy rights in criminal process terms.

1. Introduction

Privacy rights and related civil liberties in the criminal process are being affected in new ways, as digital policing is being shaped by new degrees of data analytics practices. But, as Baroness Helena Kennedy QC observed in *Prospect* magazine in September 2021, "[t]here is growing concern about the creep in the use of advanced technologies in criminal justice."[1] Between 2016 and 2021, a great deal of media attention, pressure from human rights NGOs, academic scrutiny and regulatory oversight has sprung up in relation to policing data analytics practices in the UK. Live facial recognition, offender risk profiling, hotspots policing, crime investigation triage and mobile device data extraction have all been deemed controversial for different reasons. New forms of accountability have sprung up in response: new mechanisms like police data ethics committees, supplemented by soft regulation through codes of practice and the recommendations of a large number of reports and studies[2]. This chapter will consider what is known about police data analytics in practice, to determine whether themes of 'algorithmic justice' can be discerned in the UK context, and what this developing picture means, chiefly, for privacy rights in criminal process terms.

2. Innovation in police use of technology

There is no doubt that technological innovation is part and parcel of contemporary policing - but also that it always has been. This is something, enjoyably, that you can see for yourself, very vividly. In the summer, of 2021, my wife and I took our five year-old boy to the National Emergency Services Museum (NESM) in Sheffield[3], and in a brilliantly accessible series of exhibits we saw the development and integration of technology into policing over hundreds of years. Radios, photography, fingerprinting, vehicles, restraints, uniforms, weaponry - all of these were charted in their development in the NESM exhibits. This development and integration of technology in policing continues, of course - and always will, just as society itself continues to develop and adapt to new technologies. In August 2021, Prof. Paul Taylor, the first Chief Scientific Adviser for policing in England and Wales, was reported as explaining that in his view "more than ever, today the police are clearly a huge

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[1] Helena Kennedy, 'A letter to the new justice secretary', Prospect, 17 September 2021, from: https://www.prospectmagazine.co.uk/politics/a-letter-to-the-new-justice-secretary-dominic-raab-reshuffle accessed 18.09.2021

[2] See, for example: Council of Europe Committee of experts on human rights dimensions of automated data processing and different forms of artificial intelligence (MSI-AUT), *A study of the implications of advanced digital technologies (including AI systems) for the concept of responsibility within a human rights framework* (2018), from https://rm.coe.int/draft-study-of-the-implications-of-advanced-digital-technologies-inclu/16808ef255 (accessed 08.04.2021); Parliamentary Office of Science and Technology (POST), *AI in policing and security* (2021), from https://post.parliament.uk/ai-in-policing-and-security/ (accessed 30.04.2021); The Law Society of England and Wales, Algorithms in the Criminal Justice System (2019), from https://www.lawsociety.org.uk/en/topics/research/algorithm-use-in-the-criminal-justice-system-report (accessed 08.04.2021); The Police Foundation, *Data-Driven Policing and Public Value* (2019), from https://www.police-foundation.org.uk/2017/wp-content/uploads/2010/10/data_driven_policing_final.pdf (accessed 08.04.2021); Royal United Services Institute, *Data Analytics and Algorithms in Policing in England and Wales: Towards A New Policy Framework* (2020), from https://rusi.org/sites/default/files/rusi_pub_165_2020_01_algorithmic_policing_babuta_final_web_copy.pdf (accessed 08.04.2021); and Committee on Standards in Public Life, *Artificial Intelligence and Public Standards* (2020), from https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/868284/Web_Version_AI_and_Public_Standards.PDF (accessed 23.09.2021)

[3] The NESM is active on Twitter - see https://twitter.com/NESMUSEUM (accessed 17.09.2021)

consumer and innovator of technology…", and that "“there’s been an emerging recognition that science and technology is becoming more central to efficient and effective policing"[4]. Contemporary examples of technological innovation in policing in England and Wales are numerous and wide-ranging. In London, at the time of writing, pilots are taking place which see domestic abusers are being tagged and monitored in real time using GPS systems in order to keep victims safe[5]. AI might soon be used on a wider scale to interrogate the tranches of material obtained from the mobile phones and other digital devices held by parties to an offence, including, most sensitively, those held by victims, and using the newly published Digital Processing Notices, formulated in response to the "need to follow all reasonable lines of enquiry with the need to respect the privacy of victims and witnesses, while meeting disclosure obligations"[6]. More police forces in England and Wales are establishing surveillance drone units (which can be equipped with technology like thermal imaging cameras or high-powered zoom lenses); with West Midlands Police publicising their self-assessment in relation to the current Surveillance Camera Code of Practice in relation to their use of drones to search for suspects or vulnerable missing persons, or to monitor sporting events or protests[7]. Additionally, Greater Manchester Police have been experimenting with virtual reality (VR) hate crime training set-ups so that officers can appreciate victims' perspectives in a new way[8]. And more widely, UK government bodies have been shown to be investing more in behavioural 'nudge' techniques using advertising online, and including the approach in crime prevention strategies aimed at younger offenders[9].

In terms of the most diverse growth in policing innovation with technology, the most quickly-developing area of practice seems to be in operational and investigative uses of data-driven technology in policing, or what we might think of as 'big data policing'. It is worth mentioning a few recent examples here. In the USA, the US Government Accountability Office reported in August 2021 that the number of federal agencies that use facial recognition surveillance is growing[10]. Again, in the US, the number of police forces using predictive

[4] Nick Smith, 'Science and technology is becoming more central to efficient and effective policing', *Engineering and Technology*, 16 August 2021, from https://eandt.theiet.org/content/articles/2021/08/science-and-technology-is-becoming-more-central-to-efficient-and-effective-policing-paul-taylor-national-police-chiefs-council/ accessed 09.09.2021

[5] Charles Hymas, 'Domestic abusers tagged and monitored around the clock to keep victims safe', *The Daily Telegraph*, 18 August 2021, from: https://www.telegraph.co.uk/news/2021/08/18/domestic-abusers-tagged-monitored-around-clock-keep-victims/ (accessed 09.09.2021)

[6] National Police Chiefs' Council, ' Police update notice for permission to search for relevant information on digital devices', NPCC, 16 September 2021, from: https://news.npcc.police.uk/releases/police-update-notice-for-permission-to-search-for-relevant-information-on-digital-devices accessed 16.09.2021

[7] West Midlands Police, Surveillance Camera Commissioner Self-Assessment Tool, from: https://www.west-midlands.police.uk/_flysystem/public-sync/inline-files/Surveillance%20Self-assessment%20tool%20-%20WMP%20Overt%20Use%20of%20Drones.pdf accessed 16.09.2021

[8] Josie Le Vay, ' We tried on the VR goggles Manchester police are using to train 2,000 officers in tackling hate crime', *Manchester Evening News*, 18 August 2021, from: https://www.manchestereveningnews.co.uk/news/greater-manchester-news/tried-vr-goggles-manchester-police-21335451 accessed 09.09.2021

[9] Alex Hern, 'Study finds growing government use of sensitive data to ‘nudge’ behaviour', *The Guardian*, 8 September 2021, from: https://www.theguardian.com/technology/2021/sep/08/study-finds-growing-government-use-of-sensitive-data-to-nudge-behaviour accessed 09.09.2021

[10] James Hendler, ' Feds are increasing use of facial recognition systems – despite calls for a moratorium', *The Conversation*, 1 September 2021, from: https://theconversation.com/feds-are-increasing-use-of-facial-recognition-systems-despite-calls-for-a-moratorium-145913 accessed 17.09.2021

analytics may also be growing. Despite the high-profile cessation in the spring of 2019 of the 'LASER' predictive policing programme run by the Los Angeles Police Department (LAPD)[11], in the state of Florida, throughout 2021, Pasco County Sheriff's Office has been sending out letters to target residents for 'increased accountability' and interventions from crime reduction 'community partners', on the basis of predictive analytics[12]. (These Pasco County letters do at least make it clear that 'participants' will be removed from the programme of interventions if they are not the subject of any crime reports for two years, and reportedly features a phone number to call for any advice or questions.) In terms of developments here in the UK, examples of innovation in 'data-driven policing' also continue to proliferate. Several police forces in England and Wales are beginning to deploy retrospective facial recognition to augmenting investigations that include scrutiny of CCTV and other images of suspects and witnesses[13]. To mention a few examples, the Metropolitan Police Service (MPS), West Midlands Police (WMP) and South Wales Police (SWP) are beginning to use investigative data analytics in order to understand trends in, and causes of, the most serious forms of violence in London, Birmingham and Cardiff, including gang-related homicides[14]. Additionally, in the wider crime prevention context, research by Big Brother Watch has recently found that roughly one in six local authorities currently use automated processes for benefit claims assessments to some degree, often including fraud risk screening[15].

So it is easy to stumble across examples of this data-driven technological innovation in policing and wider law enforcement contexts - but it is harder, I feel, to sift the evidence as to its efficiency and effectiveness. And it is very hard to miss the concerns that abound over the ways that innovation in police data analytics might over time reinforce the 'learned' institutional racism, or racial discrimination, that plagues the UK criminal justice system[16], much as advanced algorithmic models can 'learn' from police training data sets riddled with systemic biases. The most worrying problems with algorithmic justice are potentially just older policing problems exacerbated by the use of algorithms and data 'dashboards' and the

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[11] Grace Baek and Taylor Mooney, 'LAPD not giving up on data-driven policing, even after scrapping controversial program', CBS News, from: https://www.cbsnews.com/news/los-angeles-police-department-laser-data-driven-policing-racial-profiling-2-0-cbsn-originals-documentary/ accessed 17.09.2021

[12] Kathleen McGrory, 'Pasco Sheriff's Office letter targets residents for 'increased accountability'', *Tampa Bay Times*, 24 July 2021, from: https://www.tampabay.com/investigations/2021/07/24/pasco-sheriffs-office-letter-targets-residents-for-increased-accountability/ accessed 17.09.2021

[13] Rhiannon Williams, 'Police across UK testing new retrospective facial recognition that could identify criminals and missing people', *The Independent*, 31 July 2021, from: https://inews.co.uk/news/technology/uk-police-testing-retrospective-facial-recognition-identify-criminals-1128711 accessed 09.09.2021

[14] Mark Townsend, 'Police review teen killings in search of catalyst for spike in murders', *The Guardian*, 1 August 2021, from: https://www.theguardian.com/uk-news/2021/aug/01/police-review-teen-killings-in-search-of-catalyst-for-spike-in-murders (accessed 17.09.2021)

[15] Judith Burns, 'Council algorithms mass profile millions, campaigners say', BBC News, from: https://www.bbc.co.uk/news/uk-57869647 accessed 09.09.2021

[16] Sofia Lyell, 'The dangerous rise of policing by algorithm', *Prospect*, 19th March 2021, from: https://www.prospectmagazine.co.uk/science-and-technology/the-dangerous-rise-of-policing-by-algorithm (accessed at 20.09.2021)

like. For example, Adam Elliott-Cooper has observed that the creation of tools such as the Gangs Violence Matrix used by the Metropolitan Police, due to the racially-skewed profiles of the (mainly) young men and boys that has made up its subjects, has given the police a new ability to "control and surveil suspect communities in an increasingly invasive, draconian and militarised way"[17]. Elliott-Cooper also reminds us that the Notting Hill carnival in London was the first testing site for live facial recognition technology in UK policing[18]. Overall, as Purshouse and Campbell have observed: "It is clear that [automated facial recognition] varies in terms of accuracy and reliability in matching individuals to images, depending on gender, age, skin colour, etc, and such embedded biases may compound existing biases in policing."[19]

However, newer forms of accountability have sprung up more recently: new mechanisms like specialist police data ethics committees, supplemented by soft regulation through codes of practice and ethical guidance. This has been a vital shift in the discourse on 'algorithmic justice' in England and Wales, because, as Adam White has observed, "where critical public discourse is weak and piecemeal, the state is more likely to respond with weak regulation…"[20]. With regard to the Gangs Violence Matrix operated by the MPS[21], or the Harm Assessment Risk Tool (HART) programme at Durham Constabulary[22], it is notable that public discourse has not been weak, resulting in changes being applied to the operation of these offender risk-scoring tools in different ways. Amnesty International released a report, *Trapped in the Matrix*, which gained a lot of traction in the centre-left media and 'grey' literature on algorithmic policing[23], leading ultimately to a review of the Matrix by the Mayor's Office of Policing and Crime (MOPAC)[24]. In another examples, Big Brother Watch made a great deal of campaigning capital out of the inclusion of Experian Mosaic postcode data, which can be a proxy for ethnicity, in the HART model used by Durham, though there are disputed versions as to why Durham removed the Mosaic data from their model after a period of time[25]. However, there are some algorithms like the Evidence-Based Investigative Tool (E-BIT) model, which has been used by

[17] Adam Elliott-Cooper, *Black Resistance to British Policing*, Manchester University Press, 2021, p.153

[18] *Ibid*, p.159.

[19] Joe Purshouse and Liz Campbell, 'Automated facial recognition and policing: a Bridge too far?', *Legal Studies* (2021) 1-19, 8.

[20] White, A. 'Private security and the politics of accountability', in Lister, S. and Rowe, M. (eds), *Accountability of Policing*, Routledge, 2016, p.185.

[21] Mayor's Office for Policing and Crime (MOPAC), 'Review of the MPS Gangs Violence Matrix - Update', 3 February 2021, from: https://www.london.gov.uk/mopac-publications-0/review-mps-gangs-violence-matrix-update accessed 17.09.2021

[22] Patricia Nilsson, 'UK police test if computer can predict criminal behaviour', https://www.ft.com/content/9559efbe-2958-11e9-a5ab-ff8ef2b976c7 accessed 13.09.2021

[23] Amnesty International, *Trapped in the Matrix: Secrecy, stigma and bias in the Met's Gangs Database*, May 2018, from: https://www.amnesty.org.uk/files/reports/Trapped%20in%20the%20Matrix%20Amnesty%20report.pdf (accessed 20.09.2021)

[24] Mayor's Office for Policing and Crime (MOPAC), 'Review of the MPS Gangs Violence Matrix - Update', 3 February 2021, from: https://www.london.gov.uk/mopac-publications-0/review-mps-gangs-violence-matrix-update accessed 17.09.2021

[25] Patricia Nilsson, 'UK police test if computer can predict criminal behaviour',https://www.ft.com/content/9559efbe-2958-11e9-a5ab-ff8ef2b976c7 accessed 13.09.2021

Kent Constabulary[26], which have attracted much less scrutiny, certainly in the general public domain, even though they threaten victims' 'access to justice' in specific ways by potentially reducing the likelihood that investigative resources will be devoted to a particular reported crime in certain circumstances, in order to allow the investigative resources of the force to be managed more efficiently[27].

I would argue that we need more concrete components of a model of 'algorithmic justice' to be established so that we can avoid a 'policy spiral'[28] that would be more costly for the rights of victims of crime and for suspects and offenders, too. However, it is important to note the work of some police forces and other bodies in holding themselves and other organisations to account in their use of (variously) machine learning, advanced analytics and 'big data' techniques in policing contexts, and which might be slowing the algorithmic (in)justice 'policy spiral'[29].

3. The current data-driven policing landscape in the UK

The minority of police forces in England and Wales that use advanced data technologies tend to deploy one or more of a controversial group of uses: a) *Predictive crime 'hotspot' mapping*; b) *Case investigation triage and 'solvability' ranking*; c) *Predictive harm scoring*; *and serious crime intelligence linkage and mapping*; and e) *Automated (live and retrospective) facial recognition*. Each of these uses warrants its own statutory code of practice, I would argue, as it presents significant, and different, human rights issues under the ECHR framework, and as follows:

a) Predictive crime 'hotspot' mapping tools - these might well lead to more interventions, such as Section 60 stops-and-searches, in a specific area, when a mapping tool is used to help augment intelligence-based decisions by senior officers to render public spaces 'suspicion less' search zones under the 1994 Act. As such, these types of tools might impact, broadly, more on the Article 8 ECHR rights of those then affected by these 'targeted' interventions. In September 2021, it was announced there would be a roll-out to eighteen forces in England and Wales of the type of intensive 'hotspot' patrol policing that Essex Police had used to reduce violent crime in Southend-on-Sea and other areas by more than 70% in a pilot in 2019 - and it was

[26] See Kent McFadzien et al, 'The Evidence-Based Investigative Tool (E-BIT): a Legitimacy-Conscious Statistical Triage Process for High Volume Crimes', *Cambridge Journal of Evidence-Based Policing*, 4, 218-232 (2020)

[27] Joshua Howgego, ' A UK police force is dropping tricky cases on advice of an algorithm', New Scientist, 8 January 2019, from: https://institutions.newscientist.com/article/2189986-a-uk-police-force-is-dropping-tricky-cases-on-advice-of-an-algorithm/ (accessed 17.09.2021)

[28] Clive Walker has observed that:
"A "policy spiral" describes a policy which lacks clear initial purpose or subsequent direction, progression, control and reflection. A policy spiral is therefore susceptible to unresolved contradictions or gaps, dramatic direction changes, and uncertain outcomes. As a result, policy spirals arise from inexact and contested meanings, objectives, and mechanisms…" Clive Walker, 'Counter-terrorism and counter-extremism: the UK policy spirals', (2018) PL 725, 726.

[29] I have explored this issue in more depth in the following draft chapter for another collection on human rights and technology: see Jamie Grace, 'Machine Learning Technologies and Human Rights in Criminal Justice Contexts', November 15, 2019, available at *SSRN*: https://ssrn.com/abstract=3487454 (accessed 23.09/2021)

highlighted, in a report on the announcement, that "[p]olice data analysis will inform which areas are most at risk of violent crime and where the patrols should be targeted."[30]

b) Case investigation triage and 'solvability' ranking - with these tools, if victims of serious crime are excluded from having their cases fully investigated to the same extent as some others, and as a result of the input or recommendation of a modelling tool, then there could be a danger that the investigative duty on the police under Article 3 ECHR is not met. This could well be where an algorithmic recommendation leads to (what can later be shown to be) an 'egregious error' in shelving an investigation and taking no further action in relation to that victim's complaint[31].

c) Predictive offender harm scoring (and serious crime intelligence linkage and mapping) - as an example: Avon & Somerset Constabulary and Bristol City Council have spent a number of years developing a joint tool - known as the Think Family database - which can be used to present risk scores concerning possible harm to children in 54,000 families in the city. Independent research by Big Brother Watch, using freedom-of-information requests has shown that the number of children flagged as at risk of sexual exploitation in Bristol was around 450 in June 2021, but that the accuracy rate for these flags was 80% - suggesting the model used in the Think Family database is statistically sensitive as opposed to statistically specific - i.e. it favours flagging risk, to a degree, over putting individuals in risk categories as accurately as possible[32]. These sorts of tools, used in the policing context and never mind the post-trial sentencing context, or the parole context, have great potential to engage the Article 6 ECHR right to a fair hearing, and/or the Article 8 ECHR rights to respect for private and family life. Much as with crime 'hotspot' tools mentioned above, harm/risk prediction tools applied to individuals, and perhaps even more so when combined with 'dashboard' displays which link the individuals in organised crime groups to show the 'network centrality' of a particular person, can be used to guide interventions that will impact on the private life of those prioritised for policing in this way. Additionally, we might have concerns about the manner in which an individual is or is not made aware of the role of such a tool in their targeting for intervention; raising key transparency concerns. As well as engaging Article 6 and 8 ECHR we might also see concerns from individuals that their risk scores/network centrality 'picture' is not accurate, is out of date, or does not take into account some particular personal factor. The kinds of issues raise data protection law concerns, since Section 47(3) of the Data Protection Act 2018 requires that data processing, such as the production of a risk score of ranking, should not be used if "it is not possible to ascertain whether it is accurate or not"[33]. There are also common law principles about failures to take into account relevant

[30] Charles Hymas, "Hotspot policing' rolled out to more forces after violent crime fell by 70 per cent in pilot scheme', *The Daily Telegraph*, 17 September 2021, from: https://www.telegraph.co.uk/politics/2021/09/17/hotspot-policing-rolled-forces-violent-crime-fell-70-per-cent/ accessed 17.09.2021

[31] On the duty to avoid any 'egregious error' in investigating serious violent and sexual offences, as it applies to police forces operationally under Article 3 ECHR, see *Commissioner of Police of the Metropolis v DSD and another* [2018] UKSC 11.

[32] Jake Harfurt, 'How a police and council database is predicting if your child is at risk of harm', The Bristol Cable, 20 July 2021, from: https://thebristolcable.org/2021/07/how-a-police-and-council-database-is-predicting-if-your-child-is-at-risk-of-harm/ accessed 17.09.2021

[33] In Section 205(1) of the Data Protection Act 2018,*"inaccurate"*, in relation to personal data, means incorrect or misleading as to any matter of fact.

considerations, or the taking into account of irrelevant considerations, too, from the perspective of a person subject to the use of such a tool[34]. As Sarah Esther Lageson has observed, based on her research in the US context, "patchy data collection precludes the smart investigations and prosecutions that legitimized data collection in the first place, [and] bad data also leaves people caught in the system under surveillance"[35].

d) Automated facial recognition (AFR) - AFR is arguably less controversial when used retrospectively, in scanning CCTV footage in the aftermath of a serious crime already detected or reported; since such footage has already been recorded, and it might save valuable police investigative resources to trawl such material in an automated manner. Much more problematic is the live use of AFR with cameras in public spaces at events such as protests, or live facial recognition (LFR), where the LFR is used to guide interventions by the police in real time. A package of protest rights, under Articles 10 and 11 ECHR, as well as privacy rights under Article 8 ECHR, are affected to a lesser or greater degree depending on the amount and type of interventions that take place during the LFR deployment - while there might well be a residual 'chilling' effect on protest purely from the overt deployment of the LFR tech itself.

4. A transparency-heavy model of algorithmic justice

As I noted with my collaborator Roxanne Bamford in 2020, "[a]s the use of algorithms to inform critical and sometimes life-changing decisions becomes more prevalent in our criminal justice system and in other public services, the issue of access to justice is fast becoming a problem of access to *algorithmic* justice."[36] But, how to define 'algorithmic justice', itself? We can imagine more easily what algorithmic justice *is not*. We might be able to suggest that algorithmic *in*justice is possible isolation and removal from standards of justice because of a technological medium or intervention - what Layla Skinns and Lindsey Rice have termed 'digital vulnerability'[37]. So perhaps algorithmic justice, in terms of headline principles, is about equality, procedural fairness, access to justice and the rule of law. But what standards might comprise a core notion of algorithmic justice that is possible to define in a more concrete, tangible, and ultimately more enforceable manner?

First, I think we can re-frame what Marjanovic et al describe, in their original theoretical research, as the 'domains' of algorithmic justice 'contestation'[38]. I would put it this way: Algorithmic justice requires data-driven policing and law enforcement activity to be i)

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[34] See generally Marion Oswald, 'Algorithm-assisted decision-making in the public sector: framing the issues using administrative law rules governing discretionary power', *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences* 376.2128 (2018): 20170359.

[35] Sarah Esther Lageson, *Digital Punishment: Privacy, Stigma, and the Harms of Data-Driven Criminal Justice*, Oxford University Press, 2020, p.65.

[36] Jamie Grace and Roxanne Bamford. "'Ai Theory of Justice': Using Rawlsian Approaches to Legislate Better on Machine Learning in Government." *Amicus Curiae* 1 (2020): 338, 347

[37] Lindsey Rice and Layla Skinns, 'Theorising 'Digital Vulnerability' in the Criminal Justice Process', British Society of Criminology blog, 20 July 2021, from: https://thebscblog.wordpress.com/2021/07/20/theorising-digital-vulnerability-in-the-criminal-justice-process/ accessed 17.09.2021

[38] Olivera Marjanovic, Dubravka Cecez-Kecmanovic & Richard Vidgen (2021), 'Theorising Algorithmic Justice, European Journal of Information Systems', DOI: 10.1080/0960085X.2021.1934130, p.10.

deployed using the most suitable data, ii) in the right parts of processes, iii) utilised with only the most suitable data subjects; and iv) made transparent with the right mode of communication, about v) the right kind of available opportunities for challenge.

Secondly, we can look to see where there is an example of the courts in a jurisdiction with advanced respect for human rights standards holding government bodies to account with one or more of these criteria. In doing so, we can draw upon the example of the *Systeem Risico Indicatie* or 'Systemic Risk Indication' (SyRI) case[39], from the first instance Hague Divisional Court in the Netherlands. The key learning point here is about the requisite degree of transparency required under Article 8 ECHR. This judgment might have been the output of the first completed, *successful* judicial review challenge under an ECHR jurisdiction to an algorithmic law enforcement tool using predictive data analytics. In finding that there was a violation of Article 8 ECHR in relation to the use of the SyRI model to predict risk of benefit fraud amongst claimants, the Hague Divisional Court noted that (at para. 6.91):

> "The importance of transparency, with a view to [accountability], is important in part because the use of the risk model and the analysis that is carried out in this context involves the risk that (unintentionally) discriminatory effects will occur."

The Hague Divisional Court was not impressed with the manner in which the legislation enabling the SyRI programme resulted in a lack of transparency, which in turn resulted in less opportunity for individuals to challenge the suspicions of state bodies that they had been engaging in benefit fraud. The Court emphasised (at para. 6.90) that:

> "…it is not possible to check how the simple decision tree [used in the SyRI model] is created and which steps it consists of. It is thus difficult to see how a data subject can defend himself against the fact that a risk report has been made with regard to him or her. Likewise, it is difficult to see how a data subject whose data has been processed in SyRI but has not led to a risk report can be aware that his or her data has been processed on appropriate grounds. The fact that in the latter situation the data did not lead to a risk notification and, moreover, must have been destroyed no later than four weeks after analysis does not detract from the required transparency with regard to that processing."

Ultimately, however, while I would argue strongly in favour of concrete, judicially reviewable standards of transparency over the use of algorithms in law enforcement contexts, because of the culture of challenge (and accountability) this would facilitate in the UK police service, I would admit that, otherwise, models of algorithmic justice must be flexible, adaptable and to a degree non-universalisable and will be very much context-dependent. But a statutory code of practice that was binding on UK police forces in their use of predictive data analytics, for example, would do a lot of good for algorithmic justice in the police service *if* readily enforceable transparency standards were stated most clearly and precisely in such a code. Indirectly, this enforceable transparency would encourage a culture of challenge, and, indirectly again, better protection of the privacy rights of victims, suspects, offenders and witnesses to crime.

5. An emerging range of regulatory options?

[39] *Netherlands Committee of Jurists for Human Rights v State of the Netherlands* (2020), available in English from: https://uitspraken.rechtspraak.nl/inziendocument?id=ECLI:NL:RBDHA:2020:1878 (accessible 20.09.2021)

This section of this chapter gives a quick overview of the range of ways in which best practice in regulating and monitoring algorithmic policing, and the promotion of algorithmic justice, is taking place. In the USA, there is a growth in the means of challenges to algorithmic policing, but structurally there can be important differences in how this works at a local level. This can be as distinct as a local government advisory model versus a true political veto model: for example, there is the City of Oakland, with a Privacy Advisory Commission, which makes recommendations about data and surveillance related expenditure[40], versus San Francisco, with binding votes of a board of supervisors that controls which technologies the San Francisco Police Department can deploy (for example, a prohibitory vote on their use of facial recognition in public spaces in May 2019)[41].

Plenty of jurisdictions besides the UK are also wrestling with the range of issues discussed in this chapter. Police in Queensland, Australia, are to pilot the use of a predictive analytics tool which will help to prevent, it is hoped, prevent domestic violence in the state by directing interventions toward the most suitable and higher risk offenders[42]. (This is a promising development, since, in reviewing the evidence on the effectiveness of an existing and long-running tool to predict risk of domestic abuse in Spain, known as Viogen, even the NGO Algorithm Watch has had to conclude that the accuracy of the Spanish model was sufficiently strong when compared to the accuracy of cancer screening tools - "in other words, Viogen works"[43].) It can be hoped that the Queensland pilot will be as robust in the face of its critics. The Australian Human Rights Commission (AHRC) have recently recommended, however, that a human rights impact assessment, including a process of consulting with groups who are most likely to be affected by a data analytics model, should be undertaken, and a system of notifying individuals affected by decisions where AI is 'materially used', in order that those decisions be better challenged by individuals[44]. Meanwhile, New Zealand Police have appointed an advisory panel with regard to their work on 'emergent technologies'[45], in the context of an Algorithm Charter to be adhered to by public bodies in New Zealand[46].

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[40] City of Oakland, 'Privacy Advisory Commission', from: https://www.oaklandca.gov/boards-commissions/privacy-advisory-board (accessed 17.09.2021)

[41] Kate Conger, Richard Fausset and Serge F. Kovaleski, 'San Francisco Bans Facial Recognition Technology', *New York Times*, 14 May 2019, from: https://www.nytimes.com/2019/05/14/us/facial-recognition-ban-san-francisco.html accessed 17.09.2021

[42] Ben Smee, 'Queensland police to trial AI tool designed to predict and prevent domestic violence incidents', The Guardian, 14th September 2021, from: https://www.theguardian.com/australia-news/2021/sep/14/queensland-police-to-trial-ai-tool-designed-to-predict-and-prevent-domestic-violence-incidents (accessed 15.09.2021)

[43] Algorithm Watch, 'In Spain, the Viogen algorithm attempts to forecast gender violence', 27 April 2020, from: https://algorithmwatch.org/en/viogen-algorithm-gender-violence/ accessed 17.09.2021

[44] Australian Human Rights Commission, *Human Rights and Technology Final Report*, from: https://tech.humanrights.gov.au/downloads accessed 17.09.2021 - p.193

[45] New Zealand Police, 'Expert panel on technology confirms terms of reference', from: https://www.police.govt.nz/news/release/expert-panel-technology-confirms-terms-reference accessed 17.09.2021

[46] New Zealand Police, 'Algorithm charter', from: https://www.police.govt.nz/about-us/programmes-and-initiatives/police-use-emergent-technologies/algorithm-charter (accessed 17.09.2021)

A supranational regulation model is developing in the infrastructure of the European Union. April of 2021 saw European Commission proposals on an AI framework published to much debate and discussion[47]. Article 5 of the proposed measure would mean the prohibition of "…the use of 'real-time' remote biometric identification systems in publicly accessible spaces for the purpose of law enforcement", meaning and including LFR, unless it is 'strictly necessary' for identifying imminent risks to public safety, imminent terror attacks, or to specific victims, including missing children. In Annex 6.6 the proposal sets out a list of high risk AI system types in the law enforcement context, including: individual risk assessment tools; polygraphs or similar tools; tools to detect 'deepfakes'; tools assessing the reliability of criminal evidence; tools for profiling individuals and those that use analytics to " identify unknown patterns or discover hidden relationships in the data". Articles 9 and 10 of the proposed measure would then require, in relation to the use of any of these high-risk tools, regular risk identification and analysis; adoption of risk management measures; staff training and other forms of risk mitigation; the validation and testing of training data; and the examination of any emerging biases. Standards are also to be required about transparency (under the proposals of Article 13); the necessity of human oversight (Article 14), and standards for measuring accuracy and robustness (in Article 15).

We might have assumed that the 'Brussels effect' of EU regulation becoming a proxy for even wider international regulation, as bodies in 'third countries' align their own regulations to the EU, might mean that UK police forces would be pushing for HM Government to ensure interoperability with European police forces and Europol, for example. But this might well not be an issue, even where a police force in the UK that deploys advanced data analytics is working with police in an EU member state. This is because of the text of proposed Article 2(4), that reads: "This Regulation shall not apply to public authorities in a third country… where those authorities or organisations use AI systems in the framework of international agreements for law enforcement and judicial cooperation with the Union or with one or more Member States." More widely, however, the Department of Digital, Culture, Media and Sport (DCMS) have, at the time of writing, opened up a consultation over possible reforms to the data protection landscape in the UK and are "…considering changes to make the legislative framework simpler, more transparent and flexible by streamlining and clarifying rules on the collection, use and retention of data for biometrics by the police."[48] It remains to be seen, exactly, what this might mean for police forces in the UK that innovate with data.

6. Regulatory shifts

Some police forces in the UK are, however, starting to shift their attitudes towards a stronger culture of self-regulation on algorithmic justice issues. I have seen this change first hand in the last three years. Some of my co-authored research[49] led to the creation of a self-regulation

[47] Cailean Osborne, ' The European Commission's Artificial Intelligence Act highlights the need for an effective AI assurance ecosystem' Centre for Data Ethics and Innovation blog, 11 May 2021, from: https://cdei.blog.gov.uk/2021/05/11/the-european-commissions-artificial-intelligence-act-highlights-the-need-for-an-effective-ai-assurance-ecosystem/ accessed 17.09.2021

[48] Department of Culture, Media and Sport, *Data: A new direction*, 10 September 2021, p.110.

[49] Marion Oswald, Jamie Grace, Sheena Urwin & Geoffrey C. Barnes (2018) Algorithmic risk assessment policing models: lessons from the Durham HART model and 'Experimental' proportionality, Information & Communications Technology Law, 27:2, 223-250, DOI: 10.1080/13600834.2018.1458455

framework on data analytics for policing in the UK – known as 'ALGO-CARE'. In the absence at the time of much formal guidance from government bodies, in November 2018, the Business Change Council of the National Police Chiefs' Council (NPCC) endorsed ALGO-CARE as a model for best practice in the self-regulation of the development of algorithmic tools by UK police forces. Through a series of CPD events I (co-)delivered in 2019, the ALGO-CARE framework was shared in detail with more than 20 UK police organisations, including the National Crime Agency, the College of Policing, and a number of larger and smaller regional police forces. Foremost amongst these was West Midlands Police (WMP), home to the Home Office-funded National Data Analytics Solution (NDAS) for the policing service in England and Wales[50]. While NDAS projects at WMP, which are informed by the ALGO-CARE framework, have a national scope in terms of their development, Essex Police have also utilised the ALGO-CARE framework in setting up the oversight processes for their data analytics partnership with Essex County Council[51]. Freedom-of-information requests I submitted, with ethical approval from Sheffield Hallam University, while working on a formative piece of research with my collaborator Marion Oswald, showed that police forces in County Durham, North Wales, West Yorkshire, Wiltshire, Lancashire, Avon & Somerset and Kent have also built the ALGO-CARE model into their machine learning and data analytics projects. The Information Commissioner's Office (ICO) also cites ALGO-CARE in their data analytics 'toolkit' for law enforcement bodies in the UK[52]. ALGO-CARE has also informed early drafts of the forthcoming 'Ethical Decision-making Guidance for Police Use of Data Analytics' which the DCMS Centre for Data Ethics and Innovation have drafted and which is, at the time of writing, being reviewed by the NPCC and College of Policing. This forthcoming Guidance, which is going to be crucial regulation for police forces in the UK investing in advanced data analytics capabilities, may still be in development - but it represents an important shift toward specific standards, I would hope, on algorithmic justice issues in UK policing.

So the emerging UK model for algorithmic justice is one of self-regulation through independent police ethics committees serving particular forces (like those of West Midlands and Essex), layered with (currently) non-binding codes of practice or guidance on data analytics, albeit with some statutory guidance on surveillance cameras and thus AFR in public spaces. (In the late summer of 2021, HM Government published a new draft surveillance camera code of practice covering LFR and CCTV[53], seeking to update a code

[50] For an example of the work of the NDAS based at WMP, in flagging potential victims of modern slavery using advanced data analytics, please see: Jeanette Oldham, 'Police reveal 4,200 slavery victims in West Midlands - with one gang making £2million', *Birmingham Mail*, 24th July 2020, from: https://www.birminghammail.co.uk/news/midlands-news/police-reveal-4200-slavery-victims-18584100 (accessed 20.09.2021)

[51] Essex Centre for Data Analytics, (2019) 'Transparency and trust' Essex Partnership https://www.essexfuture.org.uk/ecda/collaborative-learning/transparency-and-trust/ (accessed 20.09.2021)

[52] Information Commissioner's Office, 'ICO launches tool to help police forces using data analytics', 9th December 2020, from: https://ico.org.uk/about-the-ico/news-and-events/news-and-blogs/2020/12/ico-launches-tool-to-help-police-forces-using-data-analytics/ (accessed 20.09.2021)

[53] Home Office, *Surveillance Camera Code of Practice (Consultation)*, available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1010815/Surveillance_Camera_Code_of_Practice__update_.pdf (accessed 17.09.2021)

dating only from November 2020[54]; though the new (much shorter) draft under consultation in early September 2021 was swiftly criticised by civil liberties groups and some commentators as too permissive and enabling of facial recognition deployments, and not detailed enough in terms of its function as guidance on the same[55].) This regulatory approach is then backed up by the courts deploying statute law provisions, drawn from across the Human Rights Act 1998, Part 3 of the Data Protection Act 2018, and the Equality Act 2010 when required to in judicial review proceedings. (Although again in relation to police use of AFR, in *Bridges*[56] the Court of Appeal declared the regulatory mix up to late 2020 was not sufficiently foreseeable to be legitimate in its effects with regard to police use of LFR.[57])

The Equality Act 2010 might actually be the most powerful framework to use to enforce algorithmic justice (in the courts), when compared with the ECHR and Part 3 of the Data Protection Act 2018 (the part of the 2018 Act which applies to police forces as law enforcement bodies). In Section 149 the 2010 Act contains the Public Sector Equality Duty (PSED), the duty to have 'due regard' to the need to address issues of inequality in adopting or operating policy and in decision-making in public law[58]; meaning that police force adopting a new algorithmic model or working practice must be 'properly informed'[59] as to its equality impacts with regard to a range of statutory protected characteristics, including race, age, sex and disability[60]. This means police forces doing their equality impact homework, and feeding it into decision-making on pilots and roll-outs in an iterative manner, and collecting and demonstrating evidence on their doing this - not necessarily easy if a particular police force is more paramilitary than evidence-based in its culture. The ICO made the point that the Gangs Matrix operated by the MPS as it stood at the time, in late 2018, was likely to be in

[54] Surveillance Camera Commissioner, *Facing the Camera*, from: https://www.gov.uk/government/publications/police-use-of-automated-facial-recognition-technology-with-surveillance-camera-systems (accessed 17.09.2021)

[55] BBC News, 'New police CCTV use rules criticised as bare bones', 17 August 2021, from: https://www.bbc.co.uk/news/technology-58206586 (accessed 17.09.2021)

[56] *R (Bridges) v SWP* (2020) EWCA Civ 1058

[57] However, as Purshouse and Campbell have noted, "the Court of Appeal left open the possibility that an internal police policy document could be brought into accordance with the law for Article 8 purposes if it limited the discretion of individual officers as to who can go on a watchlist and where AFR can be used." Joe Purshouse and Liz Campbell, 'Automated facial recognition and policing: a Bridge too far?', *Legal Studies* (2021) 1-19, 10.

[58] Section 149(1) Equality Act 2010 requires that: "A public authority must, in the exercise of its functions, have due regard to the need to—
(a) eliminate discrimination, harassment, victimisation and any other conduct that is prohibited by or under this Act;
(b) advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it;
(c) foster good relations between persons who share a relevant protected characteristic and persons who do not share it."

[59] On the 'properly informed' standard in defining the 'due regard' duty, see for example *R (LH) v Shropshire County Council* [2014] EWCA Civ 404

[60] Under Section 149 (7) EA 2010 the protected characteristics are: "age; disability; gender reassignment; pregnancy and maternity; race; religion or belief; sex; sexual orientation"

breach of the PSED[61]; while the PSED was also deemed to be breached by South Wales Police in the decision in *Bridges* in the Court of Appeal in 2020[62]. And as the BBC has reported, the Home Office withdrew the use of a visa processing algorithm, when challenged through the initiation of judicial review proceedings by Foxglove, a tech/data rights NGO, because the algorithm created a 'feedback loop' meaning that some nationalities with historically lower successful visa application rates were flagged for closer scrutiny, resulting in lower success rates for visas, and so on[63]. The use of nationality as a criterion for 'red-flagging' certain visa applications was, it was argued, unlawful with regard to the prohibition of discrimination on the basis of nationality under Sections 13 and 29 (and a failure to have 'due regard' to prevent such discrimination under Section 149) of the Equality Act 2010[64], and in practical terms produced, as Rafe Jennings has noted, a 'vicious circle'[65].

In Belgium, we can see a parallel experience to that of the UK. In the UK the ICO published the Gangs Matrix enforcement notice in November 2018[66], and this led to more scrutiny of this particular database, and others, by policymakers, researchers and activists. In Belgium, the Supervisory Body of Police Information found in 2019 that a data protection impact assessment had not been undertaken in relation to a pilot of facial recognition system at an airport, rendering the introduction of the system unlawful, and leading to a temporary cessation of the system, and the creation of a working comprised of lawyers and police practitioners to provide better oversight of such biometric project pilots[67]. But while Belgium will benefit in terms of regulatory certainty from recent European Commission proposals on addressing potential harms from AI, as mentioned above, the United Kingdom may not.

7. Conclusions

The *Beating Crime Plan*, or national policing strategy, set out by HM Government in July 2021 promises that when tackling the most serious forms of violence in society, police in England and Wales will be able to use "a sophisticated, data-driven approach [that] will allow forces to

[61] See Information Commissioner's Office, 'Data Protection Act 1998 - Supervisory Powers of the Information Commissioner - Enforcement Notice', 13th November 2018, from: https://www.met.police.uk/SysSiteAssets/media/downloads/force-content/met/about-us/gangs-violence-matrix/ico-enforcement-notice.pdf (accessed 20.09.2021)

[62] See *R (Bridges) v SWP* (2020) EWCA Civ 1058, paras. 168 to 201.

[63] BBC News, 'Home Office drops 'racist' algorithm from visa decisions', 4 August 2020, from: https://www.bbc.co.uk/news/technology-53650758 (accessed 17.09.2021)

[64] See para. 4 of the Foxglove grounds of review , which are freely available here: https://drive.google.com/file/d/12WzweATsBzrjUjuC7bXSH8_YcSyPb1a_/view

[65] Rafe Jennings, 'Government Scraps Immigration "Streaming Tool" before Judicial Review', UK Human Rights Blog, from: https://ukhumanrightsblog.com/2020/08/06/government-scraps-immigration-streaming-tool-before-judicial-review/ accessed 17.09.2021

[66] Information Commissioner's Office, 'Data Protection Act 1998 - Supervisory Powers of the Information Commissioner - Enforcement Notice', 13th November 2018, from: https://www.met.police.uk/SysSiteAssets/media/downloads/force-content/met/about-us/gangs-violence-matrix/ico-enforcement-notice.pdf (accessed 20.09.2021)

[67] Rosamunde van Brakel, ' How to Watch the Watchers? Democratic Oversight of Algorithmic Police Surveillance in Belgium', Surveillance and Society, 19.2 (2021): 228-240, 234.

micro-target places where serious violence is most likely to occur…"[68]. In the wider context, multi-agency information sharing, which is important in some examples of advanced data analytics, will be facilitated by the duty to collaborate to prevent serious violence, under the Police, Crime Sentencing and Courts Bill (2021) (at the time of writing), but this has admittedly raised a number of ethical and legal concerns around possible breaches of confidence, a spiralling lack of trust, and the entrenchment of inequality, if healthcare providers and community services are expected to share data more consistently with law enforcement agencies[69].

Didier Fassin wrote a decade ago that "the general evolution of policing worldwide has been toward the harsh version of law enforcement… [partly] facilitated by changes in technology, with the move from foot to vehicle patrols, the development of more sophisticated and routinely carried weapons, and the computerization of services that results in the systematization and multiplication of files on individuals convicted, suspects and even victims"[70]. Today we might well still feel that algorithmic justice is at risk from forces' use of data technology with any 'feedback loop' that reinforces the 'harsh version' of UK policing.

But if we can address the trends toward elements of algorithmic injustice that might currently be emerging, we can still make great benefits for police accountability out of advanced data analytics in our police service. One way that this can happen is for the police to scrutinise their own practices more deeply using 'big data'. As Sarah Brayne has put it, with "…the surveillant gaze… inverted, data can be used to fill holes in police activity, shed light on existing problems in police practices, [and] monitor police performance…"[71]. For example, these benefits are visible in a West Midlands Police project designed to help the organisation better understand its own policing and investigation of rape and serious sexual offences (RASSO). The WMP Data Lab inspected records on RASSO investigations to establish commonalities between cases where charges could not be brought against suspects; as well as trends in cases where charges could be brought. The WMP RASSO project established that the most influential factor in charges being brought in relation to a reported case of rape was the amount of time spent on the investigation by the allotted lead investigator[72] - raising questions of resources for dedicated and specialist case investigators, and their training and development. Additionally, the second most influential factor in relation to whether charges are brought, with another link to police handling of technology, was a failure to obtain mobile phone data of rape complainants themselves, as cases were not progresses in an investigation

[68] Home Office, *Beating Crime Plan*, HM Government, from: https://www.gov.uk/government/publications/beating-crime-plan accessed 17.09.2021 - p.20

[69] Aamna Mohdin and Alexandra Topping, 'Policing bill will deepen racial and gender disparities, say experts', The Guardian, 13 September 2021, from: https://www.theguardian.com/uk-news/2021/sep/13/policing-bill-will-deepen-racial-and-gender-disparities-say-experts (accessed 17.09.2021)

[70] Didier Fassin, *Enforcing Order: An Ethnography of Urban Policing*, Polity Press, 2013, translated from the French edition (2011), p.216.

[71] Sarah Brayne, *Predict and Surveil: Data, Discretion and the Future of Policing*, Oxford University Press, 2021, p.143.

[72] West Midlands Police and Crime Commissioner, 'Ethics Committee minutes' (January 2020) Birmingham: Office of the Police and Crime Commissioner for the West Midlands, from: https://www.westmidlands-pcc.gov.uk/wp-content/uploads/2020/02/17012020-EC-Item-3-RASSO-Findings.pdf?x56534 accessed 19.09.2021

without this, since it was an investigatory avenue that could be exculpatory for a suspect, and the product of which might well need to be disclosed to the defence at a later point in time under Section 3 of the Criminal Procedure and Investigations Act 1996. These sorts of insights help police service bodies and institutions change their priorities and practices in innovative, problem solving-oriented ways. What is needed, however, is the institutional and political will, backed up with the necessary funding, to act swiftly and effectively on these data-derived shortcomings, just as there is already the political desire to pump funding into algorithmic projects that look promising and feature the kinds of police that sell well to certain voters, like data-driven hotspots patrolling[73].

It feels like we are in a state of flux on algorithmic justice - a tipping point to somewhere. Government strategy seems to be gearing up toward more police use of AI and emerging law enforcement technology. And while the regulatory model that the European Commission has recently put forward for AI is not something that UK law enforcement will necessarily be required to engage with - we may end up with a commensurate regulatory position nonetheless, through public scrutiny and a steady drip feed of 'soft law' on data analytics and advanced biometrics in policing. The *Bridges* decision, specifically on LFR in the context of Article 8 ECHR, feels permissive, in a way that ultimately, in a wider regulatory context, *S & Marper v UK*[74] and *Catt v UK*[75] were ultimately no bar to biometric data retention and intelligence data retention respectively. (After all, it is not the task of courts, constitutionally, to put in place technological moratoria, but the task of parliaments.)

At the time of writing, the Centre for Data Ethics and Innovation (CDEI, part of DCMS) is preparing, along with the NPCC and College of Policing, a set of guiding principles which will not slow, but will make more accountable, the use of advanced data analytics for policing in England and Wales. At the same time, however, the PSED strand of the *Bridges* judgment in the Court of Appeal, together with the obvious success of the NGO Foxglove in using the Equality Act 2010 in their grounds of challenge against the Home Office over a visa algorithm, might suggest that UK equality law, if not UK human rights law, might in time be the best means of litigating for algorithmic justice.

However, there is also a wider state of flux to contend with. At the time of writing, a prominent critic of the Human Rights Act 1998, Dominic Raab, has just been made Secretary of State for Justice, at the same time that a government review of the HRA is underway. So grassroots campaigns to pressure the police to be mindful of algorithmic justice are going to be very important in the next several years. For this reason, the *SyRI* judgment from the judiciary in the Netherlands can be seen to point the way to stronger standards utilising the principle of transparency under Article 8 ECHR; because grassroots campaigns cannot target what they know nothing of. Finally, it will be crucial for algorithmic justice in policing in England and Wales that the relevant forthcoming CDEI guidance, when supported by the NPCC and the College of Policing, puts transparency about algorithmic tools front and centre in its expectations of best practice, therefore.

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[73] See for example: Charles Hymas, "Hotspot policing' rolled out to more forces after violent crime fell by 70 per cent in pilot scheme', *The Daily Telegraph*, 17 September 2021, from: https://www.telegraph.co.uk/politics/2021/09/17/hotspot-policing-rolled-forces-violent-crime-fell-70-per-cent/ accessed 17.09.2021

[74] (2008) (Applications nos. 30562/04 and 30566/04)

[75] (2019) (Application no. 43514/15)

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