IDEPP response to CDEI consultation on algorithmic bias in policing and justice

IDEPP (the Independent Digital Ethics Panel for Policing) is an advisory body established with the support of policing but independent of it. It exists to provide insight and challenge to a range of areas associated with digital policing. IDEPP is a multi-disciplinary body, made up of volunteers with backgrounds in political science, philosophy, civil society, law, human rights, industry, policing and intelligence. As a formal mechanism by which law enforcement agencies can test ethical boundaries for policing an increasingly complex and digitised Britain, the value of IDEPP's work has been cited, by among others, Lord Anderson QC[1], RUSI[2], the Police Foundation[3] and its experience has been sought by the Committee on Standards in Public Life.

The context for IDEPP's work is provided by the core principles of policing[4] first attributed to Sir Robert Peel at the time of the creation of the Metropolitan Police service 190 years ago. In particular the core precept that 'the police are the public and the public are the police' is central to the concept of policing by consent, which has been the cornerstone of the British policing model, and subsequently echoed and replicated around the world. Maintaining the concept of policing by consent in an increasingly contested and politicised environment is a significant challenge, and one that key policing commentators and experts recognise requires the involvement of a broader constituency of expertise and views than that which exists solely within policing bodies.[5]

This is especially the case in the fast-moving environment of data-driven policing, where IDEPP's expertise is centred. To date, IDEPP has provided ethical advice on projects and plans to organisations including the Home Office, the National Police Chiefs' Council (NPCC), the National Crime Agency, Kent and Essex police and (jointly with the Alan Turing Institute) West Midlands Police. In particular, the West Midlands Police advice concerned a proposal for a National Analytics Solution, a project involving intensive use of data sources and analytical techniques in pursuit of law enforcement objectives. We were critical of many of the proposed uses of information; the report contains our reasoned questioning of these plans, and was published in November 2018.[6]

IDEPP's response to the CDEI consultation on algorithmic bias, to which we now turn, has

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[1] https://www.gov.uk/government/publications/mi5-and-counter-terrorism-policing-implementation-report-2017-terrorist-attacks?utm_source=1493469f-9788-491f-a0aa-9c2110cdade0&utm_medium=email&utm_campaign=govuk-notifications&utm_content=immediate

[2] https://rusi.org/publication/whitehall-reports/machine-learning-algorithms-and-police-decision-making-legal-ethical

[3] http://www.police-foundation.org.uk/2017/wp-content/uploads/2010/10/data_driven_policing_final.pdf

[4] https://www.gov.uk/government/publications/policing-by-consent/definition-of-policing-by-consent

[5] Bradford, Ben, Jackson, Jonathan and Hough, Mike (2014) *Police futures and legitimacy: redefining good policing* among others

[6] https://www.turing.ac.uk/news/usinganalytics-policing-ethics-advisory-report-west-midlands-police

been formulated with contributions from all members of the Panel. It is based on this experience in the field of crime and justice. However, because the development of algorithmic techniques in policing is currently moving rapidly and providing findings that fuel both supportive and critical stances, our response is necessarily provisional until more evidence can be gathered and evaluated.

To start with, it is important to recognise the very rapidly changing demand on policing driven by a combination of prolonged fiscal austerity, policing mission creep into wider areas of social policy (e.g. increasing mental health calls for service) and changing crime patterns, themselves driven to a significant extent by technology (e.g. the rise of cybercrime and digital evidence). This strains existing policing models, leading to demands for reform in police use of technology. This has been repeatedly highlighted by the Chief Inspector of Constabulary, who has explicitly exhorted police forces 'to harness the power of technology – particularly artificial intelligence and machine learning'.[7]

This means that police forces are under considerable pressure to achieve results in the prevention and detection of crime, and in dealing with some of the drivers of criminal behaviour, by means of data-driven and algorithmic tools (e.g., for prediction and facial recognition) that could be effective and efficient, especially in a climate of severe resource constraint. Where other, more traditional means have been shown to be inadequate, we think that these newer techniques are worth considering for these purposes. We recognise the existing exploratory efforts that have been underway in forces such as Durham, the West Midlands, the Metropolitan Police, and Avon and Somerset.

If such initiatives, or others that may be undertaken along similar lines, prove to be reliable and mitigate the biases that have already been identified, we believe that their adoption can be justified provided that sufficient safeguards are put in place. These would include data quality, purpose limitation, governance and accountability measures, as well as transparency and oversight. Our engagement with the law enforcement community gives us confidence that these points are being taken seriously, but there is still some distance to go before police and the public can be confident that 'algorithmic policing' can be put in place without harming their relations and falling short of the requirements of justice.

There are a number of clearly positive applications of technology in law enforcement. In particular, those that assist policing in dealing with the increasing volumes and variety of data that are associated with investigations. It may support intelligence analysis to identify subjects of interest and provide evidential links after searches have uplifted large amounts of data; for example in child sexual abuse and exploitation, which has seen a massive explosion in volume of referrals and a consequent challenge of differentiating between contact and viewing offences. In another avenue, law enforcement is just at the beginning of exploring the use of machine learning in disclosure. The processes for disclosure are fundamental to our criminal justice system; they concern fairness at trial (i.e., identifying material that could undermine the prosecution or assist the defence). If large amounts of data cannot be handled in a transparent and fair manner, public confidence in the criminal

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[7] https://www.justiceinspectorates.gov.uk/hmicfrs/wp-content/uploads/state-of-policing-2017-double-page-1.pdf

justice system will be at risk. There may be significant benefits provided these applications can be developed in a manner that will retain the confidence of the courts and the public.

Child protection is another area in which artificial intelligence tools hold some promise of promoting public safety. Even if data analysis may over-identify children at potential risk, this could be considered a good outcome when the risk caused by the alternative — under-identification — is considered. However, as that outcome may also cause harm (for example, allegations of child abuse may stick with someone, even if they are formally cleared of any wrongdoing), forces will need to consider the risks presented by these technologies, even in seemingly positive situations, and work out how they should be mitigated.

Situations of this kind illustrate the fact that judgments of the pros and cons of algorithms, and of algorithmic bias are less securely grounded than may appear at first consideration. Yet they also open up the possibility for ethical debate and for considering the important part to be played by human decision-making in law enforcement and the criminal justice system. In particular, they raise fundamental questions that ought to guide the acquisition of algorithmic or other machine learning tools in policing: what is the problem to be addressed? What are the objectives sought? What should count as 'success' in law enforcement? What is the operational need, and how it can shape the requirements? How can requirements be validated through a process that may involve a wider circle of stakeholders beyond policing?   These questions may ultimately raise the issue of machine and human interaction and decision making, a topic that is both novel and contentious and on which society's views are necessarily embryonic, but will need to be shaped by explicit public engagement if trust and legitimacy are to be preserved.

So whilst we recognise the potential advantages promised by artificial intelligence to law enforcement, we share the concern of many organisations, research bodies and individuals about bias, unfairness, and the current state of the art of analysis and understanding of these approaches. It also threatens to undermine the legitimacy of data-driven policing capabilities, which will be increasingly important as society becomes ever more data-centric.

There is no doubt that the outcome of automated systems can exhibit behaviour that reflects unintended shortcomings in their design and implementation, and that this behaviour itself and/or how it is acted upon can lead to bias. As the Law Society of England and Wales Technology and Justice Commission has recently shown,[8] there are a number of sources of bias, of which bias in algorithms plays a very prominent part.

But there is no reason to assume that current systems represent the limits of what is achievable. On the contrary, if they are well designed and implemented, properly piloted, objectively evaluated, incorporated intelligently into policing and subjected to appropriate monitoring and review, they could deliver cost savings and an increase in the operational agility and effectiveness of policing. To this end, the co-operation and increasing transparency of law enforcement agencies in opening up their plans to independent scrutiny

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[8] https://www.lawsociety.org.uk/news/speeches/christina-blacklaws-speech-artificial-intelligence-in-legal-services-summit/

and ethical appraisal are welcome. If conditions for improvement are met, there is reason to expect that the benefits of these analytical methods in law enforcement — and the way they are likely to be used in decision-making — are likely to outweigh the risks to individuals and groups, and the potential harm to relations between the police and the public, and ultimately to the rule of law.

However, there is widespread evidence to show that current oversight mechanisms for the development and deployment of such data-driven capabilities within policing nationally are currently inadequate. This is particularly concerning given that the reliability and unbiased nature of the techniques, including data sources and machine learning for the development of algorithms, remains to be convincingly demonstrated. In addition, the governance safeguards have not yet been sufficiently elaborated to give confidence that pursuit of the legitimate purposes of law enforcement may be furthered in an unbiased manner, rather than impeded. Commercial and political pressures to adopt algorithmic techniques for crime prevention and reduction need to be counterbalanced by clear articulation of requirements, circumspect procurement, ethical scrutiny, and informed debate, particularly on the question of bias.

We welcome the trials that continue to be undertaken by and for some police forces for predictive policing algorithms and the associated machine learning, provided that these trials are genuinely 'trials' rather than actual deployments, are ethically and transparently conducted, and lead to actual improvement in the technical and organisational dimensions of new data-driven policing initiatives. We believe that the current lack of co-ordination and systematisation of these experiments and the lack of sufficient institutional preparation and support for them is a serious drawback. Decisions to use or reject algorithm-based predictions in law enforcement need to be based on solid evidence and cross-agency learning and experience. The ethical dimension is not the least of the components that arbitrate such decisions, and would be best served by greater recognition of the importance of law enforcement ethics, and of the need for accountability and governance of algorithm-related initiatives, in the central workings of UK government and the law enforcement community.

To date however, there has been a lack of attention to a systematic framework for overseeing the development and deployment of new data-driven capabilities in policing, and a marked lack of funding to support the work of bodies operating in this field, including IDEPP. There are recent developments, such as the positive response to the recent London Police Ethics Panel report,[9] on the Metropolitan Police trial of live facial recognition, and the NPCC's recognition of the need for much greater co-ordination of such development activity[10] that indicate that the mood is changing.

Oversight machinery, statutory measures, improved training, and enforceable codes of practice may all have a part to play in governance, ensuring that any such initiatives mitigate risks of inherent bias or bias in their application in practice. These elements of improved

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[9] http://www.policingethicspanel.london/uploads/4/4/0/7/44076193/lfr_final_report_-_may_2019.pdf
[10] Letter to chief constables dated 28th May 2019 from CC Julian Williams, NPCC ethics portfolio lead (unpublished)

policy and governance require careful design and further development. In this respect the CDEI focus on developing a new code of practice for predictive policing must be welcomed, and IDEPP stands ready to assist with this work. The ultimate aim must be to enshrine the principles of ethics into internal police decision-making around new technology as well as having in place stronger external oversight and transparency, in order to protect and preserve the principle of policing by consent.

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