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# Promoting Human Rights in the Context of Police Procurement: A Study of Predictive Policing Instruments[*]

## Abstract

Across Canada, human rights activists demand greater democratic accountability of police departments. These demands are a symptom of a serious problem - there is a discrepancy between the goals of policing and the consequences of the police's actions. This discrepancy materializes when the police's attempts to ensure public safety result in the marginalization of racialized communities, particularly in larger cities across Canada. To understand why laudable goals lead to deeply problematic consequences, it is necessary to analyze the specifics of modern policing in our cities. This paper relies on the case study of predictive policing instruments to demonstrate that externalities, such as recommendations generated by private technology, play an important role in undermining the goals of policing. Predictive policing instruments analyse different sources of data - police stops data, reported crimes, individual criminal records, and gang databases - to predict potential criminal activity. The use of this technology may violate several provisions of the Canadian Charter of Rights and Freedoms, including the guarantees of liberty, due process, and equality. Due to the increasing reliance of police departments on private technology, democratic control over the exercise of the police's contracting powers becomes an important, albeit often overlooked, instrument of police reform. This paper argues that communities should condition the funding of police procurement on ex ante technology assessment procedures, technical specifications, and contract enforcement rights. Also, local

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elected representatives should have an opportunity to approve any data and technology sharing arrangements that extend predictive policing to their communities.

**Keywords:** Canada, police, procurement, predictive policing instruments

**Résumé**

Partout au Canada, les militants des droits de la personne exigent une plus grande responsabilité démocratique des services de police. Ces demandes sont le symptôme d'un problème grave : il existe un décalage entre les objectifs de maintien de l'ordre et les conséquences des actions policières. Ce décalage se matérialise lorsque les tentatives de la police pour assurer la sécurité publique entraînent la marginalisation des communautés racialisées, en particulier dans les grandes villes du Canada. Pour comprendre pourquoi des objectifs louables peuvent entraîner des conséquences profondément problématiques, il est nécessaire d'analyser les particularités du maintien de l'ordre moderne dans nos villes. Cet article examine les instruments de prévision policière pour démontrer que des éléments externes, comme les données générées par la technologie privée, jouent un rôle important dans l'affaiblissement des objectifs de la police. Les instruments de prévision policière analysent différentes sources de données – comme les données sur les interpellations, les crimes signalés, les casiers judiciaires, les bases de données sur les gangs de rues – pour prédire l'activité criminelle potentielle. L'utilisation de cette technologie peut contrevenir à plusieurs articles de la Charte canadienne des droits et libertés, comme les garanties de liberté et de procédure équitable dans l'application de la loi ainsi que le

droit à l'égalité. Cela est dû en grande partie à la partialité des données policières qui sont utilisées pour former les algorithmes de prévision.

En raison de la dépendance croissante des services de police à la technologie privée, le contrôle démocratique de l'exercice des pouvoirs contractuels de la police devient un instrument important, bien que souvent négligé, de la réforme de la police. Cet article soutient que les communautés devraient conditionner le financement des achats de la police à des procédures d'évaluation ex ante, à des spécifications techniques et à des droits d'exécution des contrats. En outre, les représentants élus locaux devraient avoir la possibilité d'approuver tout accord de partage de données et de technologies ainsi que les accords fédéraux qui étendent la prévision policière à leurs communautés.

**Mots-clés :** Canada, police, approvisionnement, instruments de prévision policière

## INTRODUCTION

In the last few years, police departments across Canada started procuring predictive policing instruments to ensure public safety.[1] These instruments analyse different sources of data - such as police stops data, reported crimes, individual criminal records, gang databases - to predict

[1] Kate Robertson, Cynthia Khoo, and Yolanda Song, 'To Surveil and Predict: A Human Rights Analysis of Algorithmic Policing in Canada' (Citizen Lab and International Human Rights Program, University of Toronto 2020), 1-2 <https://citizenlab.ca/wp-content/uploads/2020/09/To-Surveil-and-Predict.pdf> accessed 8 May 2021.

potential criminal activity.[2] As reflected in a recent study, predictive policing instruments may be location-focused or person-focused.[3] Location-focused instruments rely on algorithms programmed to find correlations in historical police data to forecast where and when criminal activity is likely to occur. They generate potential 'hot spots' for criminal activity resulting in increased law enforcement presence in certain communities and neighborhoods.[4]

Predictive policing instruments raise serious concerns amongst human rights advocates.[5] As will be discussed in Part III, the use of this technology in Canada may violate a number of provisions of the Canadian Charter of Rights and Freedoms (Charter),[6] including the guarantees of liberty, due process, and equality. Largely, this is due to the bias in policing data sets that are used to train forecasting algorithms.[7] When it comes to protecting Charter rights against predictive policing, persons alleging human rights violations can rely primarily on ex post judicial

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[2] ibid; Walter L Perry and others, 'Predictive Policing: The Role of Crime Forecasting in Law Enforcement Operations' (RAND 2013). <https://www.rand.org/content/dam/rand/pubs/research_reports/RR200/RR233/RAND_RR233.pdf> accessed 8 May 2021.

[3] Robertson (n 1), 1-2; Tim Lau, 'Predictive Policing Explained' (Brennan Center for Justice, 1 April 20200) <https://www.brennancenter.org/our-work/research-reports/predictive-policing-explained#:~:text=Predictive%20policing%20involves%20using%20algorithms,a%20high%20risk%20of%20crime.> accessed 3 May 2021.

[4] Lau (n 3).

[5] Robertson (n1); Andrew G Ferguson, 'Policing Predictive Policing' (2017) 94 Wash U L Rev 1109;.<https://openscholarship.wustl.edu/cgi/viewcontent.cgi?article=6306&context=law_lawreview> accessed 14 April 2021; Andrew D Selbst 'Disparate Impact in Big Data Policing' (2017) 52 Ga L Rev 109 <https://www.georgialawreview.org/article/3373-disparate-impact-in-big-data-policing> accessed 14 July 2021.

[6] *Canadian Charter of Rights and Freedoms*, Part I of the *Constitution Act*, 1982, [Schedule B to the Canada Act, 1982, c.11 (U.K.)].

[7] See discussion in Part II below.

review of police actions. However, courts provide at best a fragmented mechanism for ensuring the constitutionality of policing practices and do 'nothing to assure democratic accountability or sound policymaking'.[8]

In light of the limits of judicial review, this paper considers alternative ways to ensure the constitutionality of police actions and public accountability of police departments. Given that police departments procure predictive instruments from non-governmental actors, democratic control over the exercise of the police's contracting powers becomes an important, albeit often overlooked, instrument of policing reform. This paper examines several ways in which local communities could capitalize on this instrument. It argues that they should condition the funding of procurement contracts for predictive policing technology on ex ante assessment procedures, technical specifications, and third-party contract enforcement rights. Also, local elected representatives should have an opportunity to approve any data and technology sharing arrangements that could extend the application of predictive policing to their communities.

This paper proceeds as follows. Part I describes how area- and person-focused predictive policing technologies work and what data they use for making predictions. Part II examines why this data may be inaccurate or biased. Part III is devoted to the Charter analysis of predictive policing. It discusses why predictive instruments that draw inferences from big data may violate section 7 ('the right to life, liberty and security of the person'), section 9 ('the right not to be arbitrarily detained or imprisoned'), and section 15 ('the right to the equal protection and equal benefit of the law') of the Charter. Given the limits of ex post rights enforcement through courts,

[8] Barry Friedman and Maria Ponomarenko, 'Democratic Policing' (2015) 90 NYU L Rev 1827, 1865-1877 <https://its.law.nyu.edu/faculty/profiles/representativeFiles/NYULawReview-90-6-Friedman-Ponomarenko_F3BC31AE-1B21-6206-607DF02733DD8476.pdf> accessed 11 July 2021.

Part IV focuses on alternative avenues for promoting human rights - through the procurement process and the resulting contract clauses. It suggests conditioning contracts for predictive policing instruments on technology assessment procedures, technical specifications, and third-party contract enforcement rights. Finally, Part IV also recommends limiting opportunities for data and technology sharing arrangements that could extend predictive policing to local communities.

## PART 1. AN OVERVIEW OF PREDICTIVE POLICING

The criminal justice system has long embraced predictive techniques that seek to make decisions about the limitations of individual rights and freedoms more objective and fair.[9] For example, Andrew Ferguson recounts how in the beginning of the twentieth century a group of sociologists from Chicago developed one of the first predictive methodologies for determining the likelihood of convicted parolees reoffending.[10] This methodology relied on a combination of individual factors (such as gender, age, criminal history, substance abuse) to help the actors of the criminal justice system predict criminal behaviour.[11] While initially focused on parolees, so-called

[9] Ferguson (n 5), 1117; Carolyn McKay, 'Predicting Risk in Criminal Procedure: Actuarial Tools, Algorithms, AI and Judicial Decision-making' (2020) 32:1 CICJ 22 <https://doi.org/10.1080/10345329.2019.1658694> accessed 1 May 2021.

[10] Ferguson (n 5), 1117-1118.

[11] Sonja B Starr, 'Evidence-Based Sentencing and the Scientific Rationalization of Discrimination' (2014) 66 Stan L Rev 803 <http://www.stanfordlawreview.org/wp-content/uploads/sites/3/2014/04/66_Stan_L_Rev_803-Starr.pdf> accessed 14 April 2021; Jordan Thompson, 'Reconsidering the Burden of Proof in Dangerous Offender Law: Canadian Jurisprudence, Risk Assessment and Aboriginal Offenders' (2016) 79 Sask L Rev 49 <https://heinonline.org/HOL/Page?handle=hein.journals/sasklr79&div=7&g_sent=1&casa_token=&collection=journals> accessed 14 April 2021.

'actuarial predictions' have gained traction in other parts of the criminal justice system. For example, in Canada, risk experts frequently conduct actuarial predictions during dangerous offender hearings to establish the dangerousness of an individual at the designation stage and to interpret the reasonable expectation of control at the sentencing stage.[12]

The risk-averse criminal justice system embraces actuarial models for their purported capacity to achieve system-wide results. First, they promote public safety by limiting individual rights and freedoms of persons identified as a result of assessments as 'problematic', 'dangerous', or 'aggressive'. Second, actuarial predictions advance the efficient management of public resources by directing law enforcement efforts towards surveilling the aforementioned individuals.[13]

Predictive policing tools that are at the heart of this paper represent a new development in familiar actuarial risk assessments. As data collection and data analysis became more sophisticated, new statistical prediction techniques emerged to identify likely targets for police intervention and crime prevention.[14] The latest generation of predictive policing tools relies on algorithmic analysis of data to make person-focused and location-focused predictions.

Before discussing normative and policy challenges posed by predictive policing instruments, it is necessary to make a brief note on terminology. In predictive policing, the term 'algorithm' is used to refer to decision-making rules that estimate an individual's propensity to

[12] Thompson (n 11), 63; Canada, The Department of Justice, 'The Development of the Brief Spousal Assault Form for the Evaluation of Risk (B-SAFER): A Tool for Criminal Justice Professionals' (7 January 2015). <https://www.justice.gc.ca/eng/rp-pr/fl-lf/famil/rr05_fv1-rr05_vf1/p4.html> accessed 14 April 2021.

[13] Canada, The Department of Justice (n 12).

[14] Perry (n 2), 1–2.

commit a crime or a likelihood of a crime occurring in a certain area, from 'low' to 'high'.[15] Algorithms can make predictions based on a number of variables, such as individual criminal history (previous offenses, failure to appear in court, violent offenses), sociodemographic characteristics (gender, education level, employment status),[16] or previously reported crimes in a certain area.[17] For example, an unemployed person having a history of previous offenses and residing in a 'high crime' neighborhood could be identified as presenting 'high-risk' based on the patterns derived from her reference group.[18] However, as will be discussed in Part II, such generalized evaluations are problematic because they do not take into account any risk-relevant differences between an individual and their reference group, as well as the inherent bias of inputted data.

The most advanced form of algorithmic analysis is artificial intelligence (AI). Although there is no universally accepted definition of AI, this term generally refers to 'autonomous computerised processing of data that resembles or replicates human processing and

[15] Angèle Christin, Alex Rosenblat, danah boyd, 'Courts and Predictive Algorithms. Primer for the Data & Civil Rights Conference: A New Era of Policing and Justice' (Data & Civil Rights, Washington, D.C., 27 October 2015) <http://www.datacivilrights.org/pubs/2015-1027/Courts_and_Predictive_Algorithms.pdf.> accessed 10 April 2021.

[16] ibid.

[17] Litska Strikwerda, 'Predictive Policing: The Risks Associated with Risk Assessment' [2020] Pol J <https://doi.org/10.1177/0032258X20947749> accessed 16 March 2021.

[18] Perry (n 2), 81.

intelligence'.[19] Machine learning is the current application of AI, whereby the machine 'learns' how to improve its tasks over time and may modify an algorithm as it processes new data sets.[20]

Modern predictive policing technology does not replace human judgment. Rather, it provides law enforcement officers with insights into associations and patterns that might be missed in the ordinary course of criminal investigation'.[21] In other words, it supplements, rather than replaces existing policing techniques and strategies.

Locations-focused instruments represent the first version of predictive policing. They were originally designed in Los Angeles to help prevent three types of crimes: burglary, automobile theft, and theft from automobiles.[22] An algorithm analyzed historical crime data (time, place, and type) to predict likely areas of criminal activity in the city. Patrol officers visited these targeted areas as often as practicable because '[i]t was believed that increased police presence at the identified areas would disrupt the continued pattern of property crimes'.[23] Later versions of similar tools focused on predicting locations of violent crimes - robberies, gun violence, and gang violence.[24]

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[19] Australian Human Rights Commission, 'Human Rights and Technology Issues Paper' (Sydney, July 2018) 26. <https://humanrights.gov.au/sites/default/files/document/publication/AHRC-Human-Rights-Tech-IP.pdf> accessed 15 March 2021.

[20] Aviv Gaon and Ian Stedman, 'A Call to Action: Moving Forward with the Governance of Artificial Intelligence in Canada' (2019) 56 Alta L Rev 1137, 1140 <https://doi.org/10.29173/alr2547> accessed 15 March 2021.

[21] Ferguson (n 5), 1125.

[22] Andrew G Ferguson, 'Predictive Policing and Reasonable Suspicion' (2012) 62 Emory L J 259, 267 <https://scholarlycommons.law.emory.edu/elj/vol62/iss2/1> accessed 16 March 2021.

[23] Ferguson (n 5), 1127.

[24] ibid, 1134.

In 2019, the Netherlands became the first country to deploy predictive policing on a national scale.[25] Dutch National Crime Anticipation System generates a 'heat map' that assigns risk scores to different locations based on different data, including crime rates and the distance from the location to the nearest highway.[26] The system's work is based on the so-called 'near-repeat concept' suggesting that certain locations and time windows are more conducive to recidivism and, thus, require greater police presence.[27]

In Canada, according to a recent report, the Vancouver Police Department (VPD) uses a location-focused predictive system called GeoDASH.[28] It relies on historical police data to predict the time and location for break-and-enter crimes. The GeoDASH algorithmic policing system was created through a private-public undertaking between a consortium of academic researchers, in-house staff at the VPD, and a private company called Latitude Geographics.[29] The Toronto Police Service (TPS) may be interested in developing a location-focused algorithmic program in collaboration with Environics Analytics.[30] The TPS also has access to IBM's software that offers opportunities for data mining and location-focused predictive modeling.[31]

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[25] Strikwerda (n 17).

[26] ibid, 4.

[27] Anneleen Rummens and others, 'A scoping review of predictive analysis techniques for predicting criminal events' in Eva Lievens and Gert Vermeulen (eds), *Data Protection and Privacy Under Pressure: Transatlantic tensions, EU surveillance, and big data* (Maklu 2017), 264–266.

[28] Vancouver Police Department, 'GeoDASH Crime Map' <https://geodash.vpd.ca/Html5Viewer/?disclaimer=on&viewer=VPDPublicRefresh_gvh&x=73&y=59> accessed 7 May 2021.

[29] Robertson (n 1), 42.

[30] ibid, 44.

[31] ibid, 45.

Person-focused predictive policing instruments, in their turn, predict an individual's likelihood of engaging in criminal activity. These instruments rely on past criminal activity, current associations, and other factors to profile potential perpetrators and victims of crimes.[32] Identified individuals form a social network of sorts, composed of 'associations and connections, and links to addresses, phone numbers, and other data sources'.[33] Chicago's Custom Notification Program (CNP), which was terminated in 2019, illustrates how a person-focused policing tool for predicting offenders and victims of gun violence worked in a metropolitan area. The system collected data on demographics, arrest history, and social network variables, and generated a 'heat list' of individuals who were likely to engage in gun violence.[34] Each individual on the list received a letter from the police department notifying them of the negative consequences of engaging in criminal activity.

Based on publicly available information, currently, police departments in Canada do not use person-focused instruments. However, the Calgary Police Service engages in algorithmic social network analysis, which may also be used for person-focused algorithmic policing.[35]

## PART 2. PREDICTIVE POLICING AND THE PROBLEM OF DATA

An overview of person-focused and location-focused predictive policing instruments demonstrates that they rely on the aggregation and analysis of massive volumes of data, such as

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[32] Ferguson (n 5), 1137.

[33] ibid, 1138.

[34] Jessica Saunders, Priscillia Hunt, John S Hollywood, 'Predictions put into practice: a quasi-experimental evaluation of Chicago's predictive policing pilot' (2016) 12 J Exp Criminol 347, 354–357 <doi: 10.1007/s11292-016-9272-0> accessed 15 April 2021.

[35] ibid, 2.

personal information, communications data, geolocation data, and policing data, to generate forecasts about people and locations. Because the accuracy and fairness of predictions depend on the quality of data inputted into an algorithm for analysis, much research on predictive policing focuses on examining information sources and data collection techniques.

The main problem of data used for predictive policing instruments is that it is laden with bias and inaccuracies.[36] Many accounts indicate that implicit bias influences policing decisions on the street. Among the racialized population, young Black men are more likely than others groups to encounter the police under adversarial conditions.[37] The following passage from the second verse of Jay-Z's song 99 Problems masterfully describes an exchange between a young black man and a police officer during a racially motivated traffic stop:

> So I, pull over to the side of the road
>
> I heard, 'Son, do you know why I'm stopping you for?'
>
> *Cause I'm young and I'm black and my hat's real low*
>
> Do I look like a mind reader, sir? I don't know
>
> Am I under arrest or should I guess some more?
>
> 'Well *you was doing fifty-five in a fifty-four*'
>
> 'License and registration and step out of the car'

[36] Robertson (n 1), 18-25.

[37] L Song Richardson, 'Arrest Efficiency and the Fourth Amendment' (2011) 95 Minn L Rev 2035, 2038 <https://www.minnesotalawreview.org/wp-content/uploads/2011/06/Richardson_PDF.pdf> accessed 8 May 2021; Adam Benforado, 'Frames of Injustice: The Bias We Overlook' (2010) 85 Ind LJ 1333, 1367 <https://www.repository.law.indiana.edu/cgi/viewcontent.cgi?article=1041&context=ilj> accessed 8 May 2021.

'*Are you carrying a weapon on you, I know a lot of you are*'.[38]

As Jay-Z suggests in the song and in the book 'Decoded',[39] he was targeted by the New Jersey police in 1994 for fitting a drug courier profile: a young Black man with an out-of-state licence plate. Although the described traffic stop took place in the United States, profiling of racialized and Indigenous individuals by police officers happens in Canada as well. According to a 2018 report of the Independent Street Checks Review, data from police departments across Ontario indicates disproportionate rates of police stops and detentions involving Indigenous, Black, and other racialized individuals, as well as people from underprivileged socioeconomic groups.[40] Over-policing of certain areas also results in disproportionate scrutiny by law enforcement officers of the everyday lives of racialized and Indigenous individuals.[41] Research also indicates that as a result of biased over-policing racialized persons are more likely to be arrested for minor offences than non-racialized individuals.[42] Because of a biased law enforcement process, Indigenous, Black, and other racialized individuals are disproportionately represented in police databases that feed predictive policing instruments.

Racially motivated over-policing, arrests, and traffic stops are the most conspicuous manifestations of biased data-collection tactics that influence predictive policing instruments.

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[38] Shawn Carter and others, '99 Problems' (Universal Music 2003) (emphasis added).

[39] Jay-Z, *Decoded* (Spiegel & Grau 2010).

[40] The Honourable Michael H Tulloch, *Report of the Independent Street Checks Review* (Ontario 2018), 44; Scot Wortley, *Halifax, Nova Scotia: Street Checks Report* (Nova Scotia Human Rights Commission 2019), 105.

[41] Robertson (n 1), 15.

[42] ibid.

Modern algorithmic surveillance may promote bias in policing in more subtle ways. For example, recently, the Royal Canadian Mounted Police (RCMP) awarded a contract to a company that surveilles online speech and behaviour in a number of online communities, such as hidden encrypted darknet websites, video game players, user review sites, and group buying sites.[43] Using artificial intelligence, the software analyzes relationships between the content and its senders, translates content into hundreds of languages, and filters it based on geographic areas and expressed sentiments.

Even though the collection of data through such social media surveillance tools may be helpful for crime prevention purposes, there is a possibility that algorithms will be used to identify some individuals as presenting 'high-risk' based on their involvement in justice-seeking social movements and organizations, racial justice protests, race, and social media connections.[44] Feeding this information into risk prediction instruments will exacerbate the disparate effects of policing on racialized individuals and communities.

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[43] Public Works and Government Services Canada, *Request For a Standing Offer M7594-184225/B* (14 April 2020); Bryan Carney, 'RCMP Hires US Artificial Intelligence Firm to Spy on Web Users' (The Tyee, 23 September 2020) <https://thetyee.ca/News/2020/09/23/RCMP-US-Artificial-Intelligence-Firm-Spy-Users/?utm_source=twitter&utm_medium=social&utm_content=092320-4&utm_campaign=editorial&fbclid=IwAR06dVxS5YZR7G38O3JhrRH-SdkG1KH5YPnmltAp02xwSaKJoBoV8UmLsoU> accessed 7 May 2021.

[44] Robertson (n 1), 97-98.

## PART 3. PREDICTIVE POLICING AND THE CHARTER

The principle of the rule of law requires that all actions of law enforcement agencies, including the use of predictive policing instruments, comply with human rights protected by the Charter.[45] As Steve Coughlan notes, the Charter created a mechanism by which individuals can ask of every single piece of behaviour by police officers, 'did they have the authority to do that?'[46] Given their pervasiveness and their disproportionate effects on racialized communities, predictive policing instruments warrant at least as much constitutional scrutiny as the more conventional policing methods, such as detention for investigative purposes and check-stops.

The following sections engage in the Charter analysis of predictive policing instruments. First, it will be argued that the opacity of predictive policing algorithms may violate due process guarantees of section 7 of the Charter ('the right to life, liberty, and security of the person'). Second, algorithmic predictions may not provide reasonable grounds to justify interference with individual liberty for investigative purposes, thereby violating section 9 of the Charter ('guarantee against arbitrary detention or imprisonment') Third, the use of biased and erroneous data sets for predictions results in adverse effects of algorithmic analysis on groups protected by section 15 of the Charter ('the right to equality and freedom from discrimination').

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[45] *Roncarelli v Duplessis*, [1959] SCR 121 (the Court relied upon the principle of rule of law to assert that all official acts must be authorized by law).

[46] Steve Coughlan, 'Charter Protection against Unlawful Police Action: Less Black and White Than It Seems' (2012) 57 Sup Ct L Rev 205, 206 <https://digitalcommons.osgoode.yorku.ca/sclr/vol57/iss1/9> accessed 1 May 2021.

*Section 7: The right to life, liberty, and security of the person* Section 7 of the Charter guarantees that all individuals have the right to life, liberty, and security of the person, which cannot be limited 'except in accordance with the principles of fundamental justice'.[47] One specific principle of fundamental justice that stems from section 7 of the Charter is the right to make full answer and defence to a criminal charge.[48] The exercise of this right depends on the accused being able to call the evidence necessary to establish a defence and to challenge the evidence called by the prosecution.[49] If evidence against the accused or convicted person involves algorithmic risk assessments, due process guarantees of section 7 of the Charter require that affected individuals obtain the necessary information to evaluate the algorithmic assessment's reliability.

The proposals to establish the right to an explanation of decisions made by artificially intelligent systems have been gaining traction in Canada and internationally.[50] For example, the Canadian government's Directive on Automated Decision-Making requires that government departments provide explanations for some decisions made on the basis of algorithmic analysis.[51]

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[47] *Canadian Charter of Rights and Freedoms*, Part I of the *Constitution Act*, 1982, [Schedule B to the Canada Act, 1982, c.11 (U.K.)], s 7.

[48] *R v Seaboyer*, [1991] 2 SCR 577, 608.

[49] ibid.

[50] Regulation (EU) 2016/679 of the European Parliament and of the Council on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation) [2016] OJ L 119/1, art 22; See also Sandra Wachter, Brent Mittelstadt and Luciano Floridi, 'Why a Right to Explanation of Automated Decision-Making Does Not Exist in the General Data Protection Regulation' (2017) 7 IDPL 76 <https://doi.org/10.1093/idpl/ipx005> accessed 11 April 2021.

[51] Citizens should receive a meaningful explanation for common decision results and for any decision that 'resulted in the denial of a benefit, a service, or other regulatory action', see Canada, Treasury Board, *Directive on Automated Decision-Making* (1 April 2019), appendix C.

Although the right to an explanation is instrumental to algorithmic transparency and accountability, its enforcement encounters serious obstacles due to the opacity of algorithms that make inference-based predictions. Algorithms generate opaque results when a recipient of an algorithm's output does not understand how or why an algorithm deduced a decision from inputted data.[52] The opacity of algorithms stems from several sources. First, it can be upheld by law due to the proprietary claims of private technology vendors. For example, algorithms' codes and inputted data can be protected from third-party disclosure due to the requirements following from trade secrets.[53] Second, the opacity of algorithms materializes when a technology developer is unable to explain how an algorithm works or how it weighs various factors to arrive at a conclusion about the existence or absence of actual or potential risks based on inputted data.[54] This is especially true in relation to more complex machine learning systems that alter their internal decision logic in the process of learning on training data.

The opacity of algorithms, also referred to as the black box problem, strongly suggests that the law enforcements' use of technology is incompatible with the Charter right to make full answer and defence.[55] Some commentators suggest that this issue could be addressed through an

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[52] Jenna Burrell, 'How the Machine 'Thinks': Understanding Opacity in Machine Learning Algorithms' (2016) 3 Big Data & Society 1 <https://doi.org/10.1177%2F2053951715622512> accessed 14 July 2021.

[53] ibid, 2.

[54] ibid; Pragya Paudyal and BL William Wong, 'Algorithmic Opacity: Making Algorithmic Processes Transparent through Abstraction Hierarchy' (2018) 62 Proceedings of the Human Factors and Ergonomics Society Annual Meeting 192 <https://doi.org/10.1177/1541931218621046> accessed 8 July 2021; Han-Wei Liu, Ching-Fu Lin and Yu-Jie-Chen, 'Beyond State v. Loomis: Artificial Intelligence, Government Algorithmization and Accountability' (2019) 27 IJLIT 122 <https://doi.org/10.1093/ijlit/eaz001> accessed 11 July 2021.

[55] Robertson (n 1), 136.

establishment of a specialized body, similar to the Privacy Commissioner, that would be granted access to proprietary information, such as algorithms' codes, and would be able to determine the fairness of predictions.[56] While a specialized regulator may be able to deliver explanations regarding the predictions generated by linear (simple) algorithms, machine learning will remain outside the regulatory reach due to the identified technical issues.

*Section 9: Guarantee against arbitrary detention or imprisonment* Section 9 of the Charter provides to everyone the guarantee against arbitrary detention or imprisonment.[57] There is a direct relationship between sections 7 and 9 of the Charter. As Justice Lamer wrote in Reference re Section 94(2) of the Motor Vehicle Act (B.C.):

> Sections 8 to 14 [of the Charter] address specific deprivations of the "right" to life, liberty and security of the person in breach of the principles of fundamental justice, and as such, [violations of ss. 8 to 14 are also] violations of s.7. They are designed to protect, in a specific manner and setting, the right to life, liberty and security of the person set forth in s.7.[58]

Among other things, the guarantee against arbitrary detention or imprisonment requires that the state demonstrates that it had reasonable grounds to justify the interference with individual

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[56] ibid, 133-134.

[57] *Canadian Charter of Rights and Freedoms*, Part I of the *Constitution Act*, 1982, [Schedule B to the Canada Act, 1982, c.11 (U.K.)], s 9.

[58] *Reference re BC Motor Vehicle Act* [1985] 2 SCR 486, 502-503; David M Paciocco, 'What to Mention about Detention: How to Use Purpose to Understand and Apply Detention-Based Charter Rights' (2011) 89 Can Bar Rev 65, 97-98 <https://cbr.cba.org/index.php/cbr/article/view/4162> accessed 11 July 2021.

liberty for investigative purposes.[59] In case of detention, the police must demonstrate reasonable suspicion that an individual was implicated in criminal activity. In Kang-Brown, Justice Binnie provided the following definition of reasonable suspicion: '"Suspicion" is an expectation that the targeted individual is possibly engaged in some criminal activity. A "reasonable" suspicion means something more than a mere suspicion and something less than a belief based upon reasonable and probable grounds'.[60] The jurisprudence of the Supreme Court also provides us with some guidelines regarding the grounds for reasonable suspicion and how they should be assessed.

In R v Chehil, the Supreme Court pointed out that reasonable suspicion can be established based on 'sufficiently particularized factors'.[61] Although the Court does not provide examples of these factors, it excludes from the grounds for reasonable suspicion 'characteristics that apply broadly to innocent people'.[62] Human rights advocates suggest that 'suspicion based on beliefs about an ethnic group or the location where an individual was found'[63] is not reasonable and does not justify interference with individual liberty for investigative purposes. In fact, in Chehil, Justice Karakatsanis wrote that 'it is unhelpful to speak of profiling as generating reasonable suspicion. The term itself suggests an assessment based on stereotyping and discriminatory factors, which have no place in the reasonable suspicion analysis'.[64]

The Supreme Court's reasonable suspicion analysis has two important implications for the use of predictive policing instruments. First, because Chehil requires that reasonable suspicion is

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[59] *R v Chehil*, [2013] 3 SCR 220 [40]-[43]; *R v Kang-Brown*, [2008] 1 SCR 456.

[60] *R v Kang-Brown*, [2008] 1 SCR 456 [75].

[61] *R v Chehil*, [2013] 3 SCR 220 [30].

[62] ibid [31].

[63] Robertson (n 1), 125.

[64] *R v Chehil*, [2013] 3 SCR 220 [39].

based on sufficiently particularized factors, the police cannot rely exclusively on algorithmic predictions drawn from statistical trends, to justify interference with individual liberty.[65] Second, the use of instruments that rely on inferences derived from biased data directly contravenes the Supreme Court's statement that profiling and stereotyping cannot give rise to reasonable suspicion. Moreover, in R v Chehil, the Supreme Court provides us with helpful guidelines on how to assess particularized factors to establish reasonable suspicion. These factors should be subjected to 'independent and rigorous judicial scrutiny'.[66] Such scrutiny is practically impossible when the police cannot establish the reliability of the algorithmic prediction and its underlying data or cannot explain how the algorithm reached the decision about an individual's likelihood to engage in criminal activity.[67]

Even though the analysis generated by predictive policing instruments cannot justify interference with individual liberty, algorithmic predictions may influence reasonable suspicion that is formed based on the police officers' professional expertise. In other words, it may be difficult to pinpoint cases where detention occurred exclusively based on an algorithmic prediction. Some may suggest that formal training of police officers may minimize the risks of overreliance on algorithmic predictions. Although the evaluation of such proposals is beyond the scope of this paper, suffice it to say that professional training is not a panacea for biased policing.[68]

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[65] Robertson (n 1), 125.

[66] *R v Chehil*, [2013] 3 SCR 220 [3].

[67] Robertson (n 1), 125.

[68] Robert E Worden and others, 'The Impacts of Implicit Bias Awareness Training in the NYPD' (July 2020) <https://www.documentcloud.org/documents/7203724-The-Impacts-of-Implicit-Bias-Awareness-Training> accessed 9 May 2021; Tom James, 'Can Cops Unlearn Their Unconscious Biases?'( *The Atlantic*,

*Section 15: The right to equality and freedom from discrimination* Section 15 of the Charter guarantees the right to equality and freedom from discrimination on enumerated and analogous grounds.[69] The enumerated grounds are mentioned in the text of the Charter. They include race, national or ethnic origin, colour, religion, sex, age, or mental or physical disability. Common law recognized the following characteristics as non-exhaustive, analogous grounds for constitutional protection under section 15: citizenship status, marital status, sexual orientation, and Aboriginality-residence.[70]

Government activity violates section 15 of the Charter if it has the purpose or effect of creating a distinction based on enumerated or analogous grounds and the distinction perpetuates disadvantage.[71] A party alleging discrimination does not need to prove the government's intent to discriminate. It is enough to demonstrate that government actions have a discriminatory impact.[72]

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23 December 2017) <https://www.theatlantic.com/politics/archive/2017/12/implicit-bias-training-salt-lake/548996/> accessed 9 May 2021.

[69] Policing, including law enforcement policies and actions, fall under 'the application or operation of law', which the Charter prohibits from being discriminatory, see *Elmardy v Toronto Police Services Board*, 2017 ONSC 2074; *Doe v Metropolitan Toronto (Municipality) Commissioners of Police* (1998), 39 OR (3d) 487, 160 DLR (4th) 697, 126 CCC (3d) 12.

[70] Non-citizenship: *Andrews v Law Society of British Columbia*, [1989] 1 SCR 143; *Lavoie v Canada*, [2002] 1 SCR 769); Marital status: *Miron v Trudel*, [1995] 2 SCR 418; *Nova Scotia (Attorney General) v Walsh*, [2002] 4 SCR 325; Sexual orientation: *Egan v Canada*, [1995] 2 SCR 513; *Vriend v Alberta*, [1998] 1 SCR 493; *M v H* [1999] 2 SCR 3; Aboriginality-residence as it pertains to a member of an Indian Band living off the reserve: *Corbiere v Canada (Minister of Indian and Northern Affairs)*, [1999] 2 SCR 203.

[71] *Kahkewistahaw First Nation v Taypotat*, [2015] 2 SCR 30; *R v Kapp*, [2008] 2 SCR 483; *Andrews v Law Society of British Columbia*, [1989] 1 SCR 143; *Law v Canada (Minister of Employment and Immigration)*, [1999] 1 SCR 497.

[72] *R v Kapp*, [2008] 2 SCR 483; *Andrews v Law Society of British Columbia*, [1989] 1 SCR 143; *Law v Canada (Minister of Employment and Immigration)*, [1999] 1 SCR 497.

Section 15 requires, among other things, engaging in a contextual analysis to evaluate the real impact of government actions on individuals or groups alleging the government's discriminatory actions:[73]

> The focus of the inquiry is on the actual impact of the impugned law, taking full account of social, political, economic and historical factors concerning the group. The result may be to reveal differential treatment as discriminatory because of prejudicial impact or negative stereotyping.[74]

The Supreme Court's section 15 jurisprudence equips human rights advocates with strong arguments against the use of predictive policing instruments that promise 'neutral' analysis of available data, but lead to discrimination on protected grounds.[75] As was noted in Part II, predictive policing instruments that find trends in large sets of data reproduce existing patterns of discrimination, [76] 'independent of any intent to do so'.[77] Thus, suggestions that these instruments can provide neutral (i.e. non-discriminatory) predictions are misguided.[78]

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[73] *Andrews v Law Society of British Columbia*, [1989] 1 SCR 143, 165; *R v Kapp*, [2008] 2 SCR 483 [15]; *Withler v Canada (AG)*, [2011] 1 SCR 396 [34]; Diana Majury, 'The Charter, Equality Rights, and Women: Equivocation and Celebration' (2002) 40 Osgoode Hall LJ 297, 305.

[74] *Withler v Canada (AG)*, [2011] 1 SCR 396 [39].

[75] Selbst (n 5), 120.

[76] Solon Barocas and Andrew D Selbst, 'Big Data's Disparate Impact' (2016) 104 CLR 671, 674 <http://dx.doi.org/10.15779/Z38BG31> accessed 13 July 2021.

[77] Selbst (n 5), 116.

[78] Seeta Peña Gangadharan, 'Predictive Algorithms Are Not Inherently Unbiased' *The New York Times: Room for Debate* (New York, 19 November, 2015)

A study on the hypothetical application of the PredPol's algorithm to drug-related offences in Oakland, California, offers a useful illustration of how predictive policing instruments may result in differential treatment of racialized communities.[79] Statistical analysis indicates that if the algorithm was used to predict drug-related offenses, 'black people would be targeted…at roughly twice the rate of whites. Individuals classified as a race other than white or black would receive targeted policing at a rate 1.5 times that of whites. This is in contrast to … roughly equivalent [drug use] across racial classifications'.[80] The algorithm failed to reflect the actual patterns of illicit drug use across different social groups and racial classifications because it relied on locations that were over-represented in the historical police data.[81] In Canada, human rights advocates suggest that the Charter protection against adverse impacts discrimination would likely apply to similar instances where it can be shown that 'an algorithmic "prediction" contributes to an officer discriminating against a member of a marginalized community'.[82]

Human rights advocates invoke the aforementioned Charter guarantees of liberty, due process, and equality to argue against the use of predictive policing instruments, and rightly so. Like any other state agency that exercises authority in ways that affect individual rights, the police must respect constitutional norms. And yet, as mentioned in Part I, several law enforcement agencies have already procured instruments examined in this paper. When it comes to protecting

<https://www.nytimes.com/roomfordebate/2015/11/18/can-predictive-policing-be-ethical-and-effective/predictive-algorithms-are-not-inherently-unbiased> accessed 14 July 2021.

[79] Kristian Lum and William Isaac, 'To predict and serve?' (2016) 13 Significance 14 <https://doi.org/10.1111/j.1740-9713.2016.00960.x> accessed 14 July 2021.

[80] ibid, 18.

[81] ibid.

[82] Robertson (n1), 105.

*Charter* rights against predictive policing instruments, persons alleging human rights violations can rely primarily on *ex post* judicial review of police actions. However, a lack of transparency about modern policing practices and the opacity of algorithms may prevent affected individuals from proving instances of technology-facilitated illegal policing.[83] Also, courts provide a fragmented mechanism for ensuring the constitutionality of policing practices and do nothing to assure democratic accountability of police departments.[84]

In theory, justice-seeking groups could try to challenge in court the police's decision to buy predictive policing instruments. However, in practice, they will face significant difficulties in accessing the administrative law remedy. Canadian administrative law does not give standing to any citizen or a group of citizens to challenge any public decision. The common law restricts the administrative law guarantee of procedural fairness only to those persons whose 'rights, privileges or interests' have been affected by the decision.[85] Standing is also restricted by statutes. For example, s 18(1) of the Federal Courts Act stipulates that only parties 'directly affected by the matter in respect of which the relief is sought' may make an application for review.[86] As such, even though the instruments purchased by police departments may violate Charter rights, members of

[83] Hannah Bloch-Wehba, 'Visible Policing: Technology, Transparency, And Democratic Control' (2021) 109 CLR 917, 973-974 <https://www.californialawreview.org/print/visible-policing-technology-transparency-and-democratic-control/> accessed 12 July 2021.

[84] Friedman and Ponomarenko (n 8).

[85] *Cardinal v Director of Kent Institution*, [1985] 2 SCR 643 [14].

[86] *Federal Courts Act*, RSC 1985, c F-7, s 18.1(1).

the public will not be able to challenge procurement decisions absent express statutory provisions granting enforcement rights to third parties.[87]

## PART 4. PROMOTING HUMAN RIGHTS THROUGH PREDICTIVE POLICING CONTRACTS

In Canada and in other countries, the year 2020 ushered in demands to increase the police's democratic accountability.[88] These demands are a symptom of a deeper problem - there is a growing discrepancy between the goals of policing and the consequences of the police's actions. This discrepancy conspicuously manifests itself when the police's attempts to ensure public safety result in the marginalization of racialized communities. In this sense, predictive policing instruments examined in this paper exacerbate the ills of law enforcement by supplying the police with new methods that facilitate old and deeply problematic policing tactics. Perhaps the easiest legal solution would be to introduce a legislative ban on the use of predictive policing instruments. However, such a policy response is unlikely due to the purported benefits of predictive policing instruments - their ability to reduce crime and promote the efficient use of police resources.

Police departments are faced with two options regarding the delivery of predictive policing instruments: they can develop the technology in-house or enter into a contract for predictive

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[87] David J Mullan and Antonella Ceddia, 'The Impact on Public Law of Privatization, Deregulation, Outsourcing, and Downsizing: A Canadian Perspective' (2003) 10 Ind J Global Legal Studies 199, 243. <https://www.repository.law.indiana.edu/ijgls/vol10/iss1/9> accessed 10 April 2021.

[88] Brooklyn Neustaeter, 'What defunding the police could look like in Canada's largest city' (CTV News, 10 June 2020)<https://www.ctvnews.ca/canada/what-defunding-the-police-could-look-like-in-canada-s-largest-city-1.4977969#:~:text=More%20than%20%2415%20billion%20was,in%20the%20city's%20operating%20budget.> accessed 7 May 2021.

policing instruments with a private company.[89] In Canada, police departments that use or plan on using these instruments tend to rely on the latter option, entering into procurement contracts with external providers or partnering with research institutions. The growing reliance of police departments on private vendors has important implications for the police reform proposals. Particularly, it forces us to think about what additional avenues for democratic control open when the police engage private companies to deliver predictive policing instruments. This Part discusses how local elected representatives could engage in ex ante oversight of police departments - by monitoring the procurement process and by placing conditions on resulting contracts for predictive policing instruments.

*Social Function of Public Procurement* The notion that public procurement can advance democratic values or serve as an instrument of policy shifts may seem counterintuitive due to the deep-rooted beliefs about the goals of government contracting. Some commentators suggest that public procurement is ill-equipped to further social goals because its main objective is to ensure efficient delivery of goods and services.[90] On this view, pragmatic procurement managers are more concerned with finding the cheapest, the best (or some combination of both) goods and services, than with advancing social goals. In this sense, imposing additional public duties on private actors delivering predictive policing instruments, may undermine the economic benefits

[89] Lau (n 3).

[90] Jody Freeman, 'Extending Public Law Norms through Privatization' (2002) 116 Harv L Rev 1285, 1296 <https://www.jstor.org/stable/1342728?seq=1#metadata_info_tab_contents> accessed 5 April 2021.

of public/private cooperation or dissuade private actors from participating in government tenders in the first place.[91]

While it is true that government procurement puts a premium on advancing competition and efficiency, the economic and social goals of public procurement are not fundamentally irreconcilable. One of the leading US scholars of government contracting, Steven Schooner, identified nine goals of government contracting policy that, roughly speaking, fall into an economic or social category.[92] These goals are competition, integrity, transparency, efficiency, customer satisfaction, the best value, wealth distribution, risk avoidance, and uniformity.[93] Because achieving various goals requires trade-offs, the government can demand reasonable concessions from private actors - in the form of adherence to social goals – in exchange for contracting out its work.[94] There are many examples of government policies that require that government contracts are accompanied by the so-called 'social linkages'.[95] Ultimately, the potential of public procurement to advance broader social goals is 'at least as plausible as the alternative'.[96] Its success, of course, depends on many circumstances, such as market conditions, talents of the project management team, and applicable law.

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[91] ibid, 1310.

[92] Steven Schooner, 'Desiderata: Objectives for a System of Government Contract Law' (2002) 11 PPLR 103 <https://scholarship.law.gwu.edu/faculty_publications/102/> accessed 5 April 2021.

[93] ibid.

[94] Freeman (n 90), 1285.

[95] Christopher McCrudden, *Buying Social Justice: Equality, Government Procurement and Legal Change* (OUP 2007), 3; ACL Davies, *The Public Law of Government Contracts* (OUP 2008), ch 9.

[96] Freeman (n 90), 1285.

*Policy Proposals* From the analytical standpoint, the focus on the police procurement process offers us an opportunity to consider the aspects of police administration that often escape accountability and democratic scrutiny. There is a need for a comprehensive set of enforceable rules that will encourage enlightened police procurement and provide redress to affected persons and communities. These rules should apply from the moment when police departments start contemplating the procurement of predictive policing instruments to the moment of contract termination. The public law of government contracts is well-equipped to tackle this task. It consists of a patchwork of rules and policies that regulate procurement practices of government departments and agencies.[97] The public law of government contracts puts a premium on the principles of procedural fairness and accountability because these principles seek to ensure responsible spending of public funds, facilitate contracting activities, and protect government contractors.[98] These principles materialize in more specific requirements that regulate the procurement process in its entirety: from a decision to solicit third-party goods and services to the conclusion of a project. Within the confines of this paper, it is not possible to examine in detail how the police should organize each stage of procurement to comply with these principles. The following paragraphs sketch out the milestones of the procurement process that would bring greater transparency and democratic accountability to the procurement of predictive policing instruments.

[97] Davies (n 95), ch 2.

[98] ibid, ch 3.

*1) Internal Assessment Frameworks* Organizational decisions to externalize the delivery of services may be motivated by several circumstances. Like other government agencies, police departments may assume that procurement of predictive policing instruments from private companies results in efficiency (obtaining high-quality services at the lowest possible cost), improves the quality of policing, and is the quickest way to get access to state of the art technology.[99]

The fact that predictive policing instruments are purchased from private vendors, rather than developed in-house, does not mean that police departments consider predictive policing unimportant. On the contrary, many sources within the police confirm the strategic importance of risk assessments for the core functions performed by law enforcement. Given the alleged importance of predictive policing instruments for ensuring public safety and the potential negative effects of these instruments on our communities, it seems reasonable to require police departments to carefully assess the pros and cons of investing in this technology prior to signing contracts with vendors. The closest analogy may be to the procedural constraints on the outsourcing of inherently governmental or core public functions in some jurisdictions.[100]

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[99] Stan Soloway and Alan Chvotkin, 'Federal Contracting In Context: What Drives It, How To Improve It' in Jody Freeman and Martha Minow (eds), *Government by Contract: Outsourcing and American Democracy* (Harvard University Press 2009 ), 192-194.

[100] In the U.S.: Federal Activities Inventory Reform Act of 1998, 31 USC §501 (2000); Mathew Blum, 'The Federal Framework for Competing Commercial Work between the Public and Private Sectors' in Jody Freeman and Martha Minow (eds), *Government by Contract: Outsourcing and American Democracy* (Harvard University Press 2009); In the EU: Willem A Janssen, 'The Institutionalised and Non-Institutionalised Exemptions from EU Public Procurement Law: Towards a More Coherent Approach?' (2014) 10 Utrecht L Rev 168 <https://doi.org/10.18352/ulr.307> accessed 2 May 2021; Elisabetta Manunza & Wouter Jan Berends, 'Social Services of General Interest and the EU Public Procurement Rules' in Ulla Neergaard and others (eds), *Social Services of General Interest in the EU* (Springer 2013);

Internal procedural rules for police procurement could incorporate a rights vetting mechanism. This mechanism will help determine whether a proposed predictive policing instrument is likely to be found to violate the Charter. Police departments can draw inspiration for a rights vetting process from the provisions of the Treasury Board's Directive on Automated Decision-Making.[101] The Directive requires federal public purchasers to address the likelihood of bias and other unexpected outcomes of the source data and outputs of inferential analytics before implementing artificial intelligence systems.[102] To minimize the likelihood of bias, the Directive suggests implementing the risk management process and creating an audit trail for the decisions made by the system.

For our purposes, the focus of the Directive on the quality of data is important to keep in mind because it questions the use of seemingly logical or readily available data sources in bureaucratic decision-making. Applying a similar analysis to predictive policing instruments may force police departments and private developers of technology to evaluate the normative acceptability of using certain sources of data (for example, postcodes, internet activity, arrests). Andrew Ferguson recounts how in the US similar considerations led PredPol to rely on reported crimes rather than arrest statistics, thereby minimizing the influence of police officers' bias on predictions:

> Reported crimes are less subject to bias than mere arrests. Some crime only comes to the attention of police because of a victim's report. In traditional Predictive Policing 1.0 cases,

[101] Canada, Treasury Board, *Directive on Automated Decision-Making* (1 April 2019) <https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=32592> accessed 2 May 2021.

[102] ibid, s 6.3.

> usually the homeowner reports the burglary or the car owner the theft. As such, in that instance, crime reports might be less biased and more reliable than arrest statistics.[103]

In addition to the analysis of the relevance of data sources, police departments should be able to demonstrate that the outcomes of predictive analysis will not exacerbate existing inequalities. As mentioned above, seemingly neutral or accurate data may produce discriminatory results upon algorithmic analysis.[104] This is because even accurate data that forms the basis for predictions of criminality reflects intersecting social and economic injustices that are woven into the fabric of our society.[105] If the results of the instrument's evaluation raise serious concerns about the potential discriminatory outcomes of predictive policing, police departments must explain why the need to use such instruments outweighs potential risks to substantive equality and also document their risk-management process.

Suggested internal frameworks for the evaluation of predictive policing instruments face one significant shortcoming - they do not provide for direct third-party enforcement of the procurement process. The prospects for their success will depend on the discretion of police departments and, potentially, on government watchdogs that supervise public procurement and algorithms. Such frameworks, however, could be beneficial in the event of a litigation challenge of police actions. Affected persons could request police departments to disclose their internal

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[103] Ferguson (n 5), 1150.

[104] Sandra Wachter and Brent Mittelstadt, 'A Right to Reasonable Inferences: Re-Thinking Data Protection Law in the Age of Big Data and AI' (2019) Colum Bus L Rev 494; Deborah Hellman, 'Big Data and Compounding Injustice' (2021) Virginia Public Law and Legal Theory Research Paper 27/2021 <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3840175> accessed 9 May 2009.

[105] Hellman (n 104).

assessments of predictive policing instruments to determine the procedural fairness of the procurement process. Also, local elected representatives could require police departments to present impact assessments and data management protocols as conditions for procurement funding.[106]

*2) Limitations on Data-Sharing and Technology-Sharing Arrangements* In Canada, police departments are administered on three levels - municipal, provincial, and federal.[107] The decentralized system of police administration seeks to ensure that policing is tailored to the needs of local communities that vary in their types of crimes and crime rates, the trustworthiness of their police departments, and their politics.[108] Although police departments make an effort to reckon with local democratically elected governments, communities still may lose control over the use of predictive policing technologies. The procurement of predictive policing technologies by police departments administered at one level of government may have spillover effects on the ways other police departments carry out their daily functions. This risk may materialize if police departments having access to predictive policing instruments decide to share technology or data with their colleagues. That the federal RCMP provides policing services to the majority of provinces,

[106] Catherine Crump, 'Surveillance Policy Making by Procurement' (2016) 91 Wash L Rev 1595, 1660 <https://www.law.uw.edu/wlr/print-edition/print-edition/vol-91/4/surveillance-policy-making-by-procurement> accessed 3 May 2021.

[107] Patricia Conor and others, 'Police Resources in Canada, 2019' (Statistics Canada 2020) 4 <https://www150.statcan.gc.ca/n1/en/pub/85-002-x/2020001/article/00015-eng.pdf?st=n79_C-oa> accessed 6 May 2021.

[108] Crump (n 106), 1655.

territories, and many municipalities significantly facilitates the flow of data and technology-sharing arrangements between all levels of policing.[109]

If communities lose control over the use of predictive policing instruments because the federal government does not require local elected representatives to be involved in the decision-making process, then a federal solution could fix the problem. For example, the RCMP could condition access to data, technology, and standing offer arrangements on approvals by local democratic representatives. However, because data and technology sharing arrangements can also exist at local levels, the federal solution would solve the problem of a lack of democratic accountability only partially. Provinces and territories could adopt similar measures limiting data and technology sharing arrangements. Incidentally, a recent report indicates that some police departments are waiting for more provincial guidance before implementing algorithmic policing instruments.[110]

*3) Contract Specifications and Contract Enforcement* While previous sections discussed the potential of the procurement process to improve transparency and accountability of predictive policing instruments, this section focuses on the procurement contract itself. The use of procurement contracts to promote public values is certainly not new.[111] Because the government

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[109] Royal Canadian Mounted Police, 'Contract Policing' (30 August 2013) <https://www.rcmp-grc.gc.ca/ccaps-spcca/contract-eng.htm> accessed 8 May 2021; Alison Brooks, 'Law Enforcement Information Management Study' (International Data Corporation 2014), 27.

[110] Robertson (n 1), 45.

[111] Jennifer Nou, 'Privatizing Democracy: Promoting Election Integrity through Procurement Contracts' (2009) 118 Yale L J 744, 770 <https://chicagounbound.uchicago.edu/journal_articles/3711/> accessed 2

is supposed to carry out all its contracting activities in the public interest, public purchasers regularly use procurement contracts to serve the public goals of accountability, transparency, socio-economic empowerment, and others. A well-designed procurement contract helps achieve public goals due to a combination of traditionally public and private principles. As Jennifer Nou notes,

> On the one hand, procurement contracts resemble traditional commercial contracts with their respective causes of action and remedies. On the other hand, government procurement at all levels also requires contractors to follow a well-developed body of regulations designed to achieve a battery of public norms.[112]

In order to capitalize upon the contract's potential to advance public goals, local legislatures could extend public regulation to certain provisions of contracts for predictive policing instruments. For example, they may condition the funding of police contracts on certain design standards of predictive policing instruments.[113] Procurement contracts could require that developers of technology use only those algorithms for which they can explain the decision-making process, including why certain data forms a normatively acceptable basis for predictions and whether the

May 2021; Davies (n 95), ch 9; McCrudden (n 95); Peter Trepte, *Regulating Procurement: Understanding the Ends and Means of Public Procurement Regulation* (OUP: Oxford, 2004) 168-176.

[112] Nou (n 111), 770.

[113] ibid; Bloch-Wehba (n 83), 973-974.

data and methods are accurate and statistically reliable.[114] Contracts could also provide for sanctions in case of breach of design standards by instruments' developers.

Beyond design specifications, procurement contracts could provide for supplementary enforcement rights.[115] For example, allowing affected individuals to sue private manufacturers for specific performance to disclose underlying source code and to explain risk predictions would provide a meaningful remedy for human rights violations.[116] The implementation of this remedy will require overriding the doctrine of trade secrecy that is often invoked by private developers to prevent the disclosure of the source code.[117]

## CONCLUSION

The use of predictive policing instruments presents significant risks for racialized and Indigenous communities across Canada. While these communities have long been subject to over-policing and increased scrutiny, predictive policing instruments exacerbate these familiar challenges by offering the police more efficient methods to perpetuate deeply problematic practices.

Upon initial inspection, it may seem that the irrelevance of the Charter to the procurement decisions of police departments prevents proper vetting of predictive policing instruments.

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[114] In the EU context, Sandra Wachter and Brent Mittelstadt suggest that data protection laws should require ex ante justifications regarding inferences drawn from Big Data analytics. The reform of data protection laws will help prevent situations when low quality data is used to make decisions that affect privacy, reputation, and well-being of individuals, see Wachter and Mittelstadt (n 104), 581. <https://journals.library.columbia.edu/index.php/CBLR/article/view/3424> accessed 6 November 2020.

[115] On the benefits of enforcement of procurement contracts by third parties see Nou (n 111), 789.

[116] ibid, 751.

[117] Robertson (n 1), 133; Nou (n 111), 784.

However, this paper has argued that human rights enforcement mechanisms reside elsewhere. The reliance of police departments on third-party contracts for predictive policing instruments creates opportunities for a reform of police procurement practices that is instrumental in fixing the problems of modern-day policing. This paper explored alternative avenues for promoting human rights through the procurement process and the resulting contract clauses. It suggested increasing the role of local democratically elected representatives in the police procurement process as well as introducing third party contract enforcement rights. While this paper has been mostly descriptive and analytic, it has also had a larger conceptual purpose. It has demonstrated, perhaps counterintuitively, that the procurement of predictive policing instruments does not necessarily undermine democratic values. Rather, it creates opportunities for additional democratic control over the police.

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