

**The Effect of AI on Canada's Jury Selection Process**

Written by: Ishank Jain, Estelle Palao and Karlo Varga

*Sunday, December 2nd, 2018*

Word Count (excluding footnotes, reference and title page): 8223 words

CS 798-002 and LAW/LW 3592A.03A

Professor Maura Grossman

TA Alex Williams

## Introduction

The use of AI has provided benefit to a wide variety of tasks originally thought to be carried out only by humans - this is the case in many industries, including the legal profession. Modern legal tasks such as conducting discovery,<sup>1</sup> or making decisions in bail, sentencing and parole hearings<sup>2</sup> have made use of AI in varying capacities. In this paper, we explore the potential for AI to be used in the Canadian jury selection procedures, with specific references to Ontario legislation. We make the overall argument that the use of AI technology helps to alleviate some of the logistical and substantive issues with the current process, but changes to existing AI jury research applications, such as Voltaire, need to be made, and legislative provisions need to be expanded upon through common law deliberations before AI can be used in Canadian jury selection.

In Part I, we describe how the jury selection procedures currently work in Canada, outlining problems posed by both the paper-method and the power of lawyers to reject potential jurors with either for cause challenges for a specific reason or using peremptory challenges without the need to cite a specific cause. In Part II, we describe first how AI would generally work in the process, with reference to Voltaire as currently used in the United States. We explore the advantages and disadvantages of AI's use, pointing out places where AI can specifically tackle problems presented by human error, or recognizing when to be wary of how courts will receive AI's ability to surpass current investigative techniques with consideration to juror privacy. In Part III, we make a list of recommendations for developers of AI jury research programs to ensure, as much as possible, transparency in the underlying scientific process used to make socio-psychological profiles. We also suggest changes for the Canadian and Ontario governments to adopt, including the proposal for any AI jury research programs to be made available through the court system to provide fairness in equal access to such powerful litigation tools. As this paper limits itself to AI being used for lawyers who wish to conduct comprehensive background research done on prospective jurors in order to make the optimal selection decisions, we conclude with the suggestion for further studies to be done on allowing AI to assume a greater, more autonomous level of control over the jury selection process.

---

<sup>1</sup> Maura R. Grossman & Gordon V. Cormack, *Technology-Assisted Review in E-Discovery Can Be More Effective and More Efficient Than Exhaustive Manual Review*, 17(3) Rich. J.L. & Tech 11 (2011), available at <http://scholarship.richmond.edu/jolt/vol17/iss3/5>.

<sup>2</sup> Carole Piovsean & Vivian Ntiri, *Adjudication by Algorithm: The Risks and Benefits of Artificial Intelligence in Judicial Decision-Making*, *The Future of Advocacy* (2018), available at <https://marcomm.mccarthy.ca/pubs/Spring-2018-Journal-Piovesan-and-Ntiri-article.pdf>.

## I. Background

### A. Current Jury Selection Process

In Ontario, the current jury selection process is governed by the *Juries Act*, RSO 1990 c J3,<sup>3</sup> alongside various sections of the Canadian *Criminal Code*, RSC 1985, c C-46.<sup>4</sup> Each year, all Superior Court of Justice (SCJ) locations review their upcoming case lists and send the estimated number of required jurors to the Provincial Jury Centre (PJC). The selection process begins with questionnaires created by the PJC and a letter from the Attorney General (AG)'s Office, all of which are mailed to Canadian citizens who are at least 18 years of age.<sup>5</sup> The recipients of these packages are randomly selected from up-to-date voter's lists from each municipal district, or from Band lists of those in First Nations communities. Jury *rolls* are created from those who respond to the questionnaires, indicating name and contact information. After requisite Criminal background checks, those with a record are deemed ineligible. Individuals can request to excuse themselves from serving on a jury due to articulable hardships (schedule, schooling, illness, or other). In addition, certain professions, such as being a lawyer, police officer, or active medical practitioner, automatically disqualify someone from being a juror.

From jury rolls, the PJC uses a computer random generator program to exclude the names that are not to serve as jurors and creates jury *panels/arrays*. Details on how this specific computer program works is not available on the AG's information website, but it is clear that the database only includes and uses citizenship information and registered answers that an individual has provided on their completed questionnaires. The jury arrays are pools from which the various SCJs select their trial specific jurors. In empaneling the arrays, the courts must ensure that the individuals generally represent the community, and in *R v Church of Scientology of Toronto* [1997], OJ No 1548, it was deemed that this requirement is satisfied as long as the array is randomly selected, since questions that ask about gender, ethnicity, sexual orientation and similar information can infringe the privacy interests of potential jurors.<sup>6</sup> The court must make sure that there has been a *reasonable effort* to compile the jury roll using random selection from lists that draw from a broad cross-section of society, and thus it follows that an array formed from the roll would also be fair.<sup>7</sup>

In criminal trials, those who have been charged with an offence for which a potential prison sentence can be five years or more have the right to a trial by jury (and in specific

---

<sup>3</sup> *Juries Act*, RSO 1990 c J3, available at <https://www.ontario.ca/laws/statute/90j03>.

<sup>4</sup> *Criminal Code*, RSC 1985, c C-46, available at <http://canlii.ca/t/53gxz>.

<sup>5</sup> Ministry of the Attorney General, *The Annual Jury Selection Process*, Court Services, Queen's Printer for Ontario (September 6, 2018), available at [https://www.attorneygeneral.jus.gov.on.ca/english/courts/jury/jury\\_selection\\_process.php](https://www.attorneygeneral.jus.gov.on.ca/english/courts/jury/jury_selection_process.php).

<sup>6</sup> *R v Church of Scientology of Toronto*, [1997] OJ No 1548 (QL), 1997 CanLII 16226 (ONCA), available at <http://canlii.ca/t/6hxy>.

<sup>7</sup> *R v Kokopenace*, 2015 SCC 28, [2015] 2 SCR 398, available at <https://scc-csc.lexum.com/scc-csc/scc-csc/en/item/15373/index.do>.

circumstances, depending on the nature of the crime, those who have been accused of a crime for which the punishment is less than five years may be allowed a jury).<sup>8</sup> The majority of civil trials in Canada are heard before a judge only, but some cases can be tried by both a judge and a jury.<sup>9</sup> The selection process for either criminal or civil case jury members remains the same up to the point of the array stage, where in contrast to 12 people juries in criminal trials, civil trial juries are made up of only six members.

Once members of the array are called to a specific courtroom, their assigned number gets placed into a ballot box to be chosen one-by-one, lottery style. In criminal trials, the Crown attorney and the defense counsel can reject a limited number of potential jurors without needing to give a reason – this is called a ‘peremptory challenge’.<sup>10</sup>

Peremptory challenges are viewed as necessary to correct the imbalance left by the strict rules regarding for cause challenges. Because attorneys are limited in their ability to question jury panelists, it is much harder to detect any biases the panelist may have for or against either party. As such, attorneys are allowed a limited opportunity to remove jurors without having to show cause.<sup>11</sup> Depending on the type of trial and offence, both sides are also given between four and twenty peremptory challenges, meaning that the prospective juror can be removed without providing any reason. Prospective jurors can also themselves ask to be removed on the basis of illness or that service will impose on them an undue hardship.<sup>12</sup>

As mentioned above, counsel can also pose standard questions to each juror when they are called up and declare ‘challenge for cause’, in which the answers given by the juror indicate that the individual would likely be unable to set an unfair bias aside when reasoning in the case, and thus, are rejected from serving for the particular trial.<sup>13</sup> Either side may challenge an unlimited number of prospective jurors “for cause”, however typically it is done on the basis that the prospective juror will not be “indifferent between the Queen and the accused”.<sup>14</sup> Challenges for cause require the challenging party to articulate clearly on the record the precise reason for challenging the potential juror, but the decision whether to exclude a panel member for cause is vested in the trial court. The challenging attorney must point to some particular bias that has come out through such questioning that renders the panelist unable to judge the case on its merits

---

<sup>8</sup> Department of Justice, *Canada's System of Justice: The Role of the Public - Jury Duty*, Government of Canada (October 16, 2017), available at <https://www.justice.gc.ca/eng/csj-sjc/just/12.html>.

<sup>9</sup> *Ibid.*

<sup>10</sup> Justice Mara Greene & Gary J. Grill, *Jury Selection*, Lecture Notes for Criminal Procedure, Osgoode Hall Law School (November 2018).

<sup>11</sup> Abby Zayyad & Tim Clarke, *The Peremptory Challenge: A Racially Discriminatory Tool in the Criminal Legal System*, in Judge William G. Young's “Advanced Trial Practice” (2016), available at <http://socialaw.com/docs/default-source/judge-william-g.-young/advanced-trial-practice---fall-2016/the-preemptory-challenge-zayyad-clarke.pdf?sfvrsn=4>.

<sup>12</sup> Honourable Frank Iacobucci, *Independent Review of First Nations Representation on Ontario Juries*, Report for the Legislative Assembly (February 2013) available at <http://www.ontla.on.ca/library/repository/mon/27002/321038.pdf>.

<sup>13</sup> Greene & Grill, *Jury Selection*.

<sup>14</sup> Honourable Frank Iacobucci, *Independent Review*, at page 27.

fairly in order to exclude the panelist from the jury.<sup>15</sup> Such challenges are also posed for cases whose stories and pre-trial reports are highly publicized in the media, as described in *R v Sherratt*, [1991] 1 SCR 509.<sup>16</sup> Media reporting often focuses on a defendant's supposed bad character, or involves speculation (uninformed or otherwise) on guilt or innocence. The determination of bias being present also depends on how recent, frequent, and widespread the bias-inducing reports were.

In selection processes that involve challenge for cause, the standard procedure is to have the triers rotate such that the selected two preceding jurors can be part of the determination on whether the next potential juror has answered the counsel's questions appropriately, and once there are twelve jurors, the process is complete.

Civil trials, in contrast, have a much simpler screening process – from the ballot selection, the 6 are selected and counsel is asked if they have an objection to any of them. If yes, then they are automatically replaced by another panel member from the ballot box until all members are agreed upon.

## B. Problems with the Current Selection Method

### *i. Procedural Issues: Lack of Flexibility in the Logistics*

Although it should be thought of as a Canadian 'duty' to serve on a jury, some of the logistical problems with the current selection system are in the inaccessibility and inflexibility of the initial forms. Other than failing to be environmentally friendly, the current Ontario questionnaire is subject to just one method of collecting information from potential jurors. However, in exercising its power to administer justice by s. 92(14) of the *Constitution Act*<sup>17</sup> which includes making legislation around the creation of juries, the province of Ontario should choose to implement a Jury Online System (JOS)<sup>18</sup> similar to that in New Jersey, USA where answers to jury questionnaires are submitted online and a phone app aids in each step of the process (from explanations, to court date reminders for duty). This JOS is synced up to what is called a Jury Automated System (JAS) used by the judiciary to store information on potential jurors, similar to the computer program in Ontario's own PJC, but goes further to track juror use, panel selection, and manages failures to appear or service in need of verification.<sup>19</sup> If it had this online system, or a combination JOS/JAS with the current paper-based mailing system, Ontario

---

<sup>15</sup> Zayyad & Clarke, *The Peremptory Challenge*.

<sup>16</sup> *R v Sherratt*, [1991] 1 SCR 509, available at <https://scc-csc.lexum.com/scc-csc/scc-csc/en/item/734/index.do>. [Sherratt]

<sup>17</sup> *Canadian Charter of Rights and Freedoms*, Part I of the *Constitution Act*, 1982, being Schedule B to the *Canada Act 1982 (UK) 1982*, c11, s 92(14), available at <https://laws-lois.justice.gc.ca/eng/const/page-4.html#h-19>.

<sup>18</sup> Honorable Chief Justice Stuart Rabner, *Trends in State Courts: Using Technology to Improve Jury Service*, National Center for State Courts (2014), available at [https://www.ncsc.org/~media/microsites/files/future%20trends%202014/using%20technology%20to%20improve%20jury%20service\\_rabner.ashx](https://www.ncsc.org/~media/microsites/files/future%20trends%202014/using%20technology%20to%20improve%20jury%20service_rabner.ashx).

<sup>19</sup> Honorable Chief Justice Stuart Rabner, *Trends in State Courts*.

would be able to encourage more engagement with the jury system, in an effort to both bolster the diversity within jury arrays meant to be ‘representative’ and address the problem of citizens finding ways to avoid jury duty due to inconvenience.<sup>20</sup>

In addition, having a questionnaire constantly mailed out to thousands of Ontarians means that an error in the forms could significantly affect the reputation of the justice system, as the actual eligibility of jurors would be questioned and any administration backlogs throughout the courts would have further delay added to it. Such is what happened in 2016, when the AG at the time, Madeleine Meilleur, had to address the error of forms which falsely indicated that those who were convicted of three offences were still eligible to serve as a juror.<sup>21</sup> If there has been an online questionnaire instead, such changes could be made swiftly and answers immediately recalled if Parliament demanded. On top of this, the ability to change or edit minor discrepancies on forms is much faster to do on an online basis, and such a system would be able to keep in step with questions that might be more appropriate with the dynamic of society.

Involving technology to the jury selection process, such as through a JOS/JAS, would not only be more accessible but more feasible in terms of the ability to accommodate change. AI technology, specifically, would also be able to tackle these logistical problems on a grander scale.

Aside from these logistical setbacks, the current jury selection process also possesses deep problems with the amount of representation actually found on juries in the public’s perception, despite the efforts made by the province and the courts to make selections as randomly and fairly as possible.

## *ii. Substantive Issues: Challenges Made by Lawyers in Rejecting Jurors*

The current method of jury selection, up to and including the use of peremptory challenges is plagued with issues. This is especially problematic given the importance of a jury in the rule of law. Justice must both be done and be perceived to be done for the public to trust the justice system.<sup>22</sup> The function of a jury is one of the most popularly known and understood aspects of our justice system. If there is a perceived failure of the impartiality or representativeness of a jury, especially so in a criminal law context, the case may enter into the realm of public debate and public outrage may ensue. This shows the importance the public places on the input the cross-section of a community provides in deciding the fate of a case, as a jury of the defendant’s peers. Most recently this occurred in the cases of Colten Boushie and Tina Fontaine. In *R v Stanley*, 2018 SKQB 27,<sup>23</sup> an all-white Saskatchewan jury found Gerald

---

<sup>20</sup> Peter Worthington, *How to Avoid Jury Duty*, Huffington Post (March 12th, 2012), available at [https://www.huffingtonpost.ca/peter-worthington/avoid-jury-duty\\_b\\_1199045.html](https://www.huffingtonpost.ca/peter-worthington/avoid-jury-duty_b_1199045.html).

<sup>21</sup> Colin Perkel, *Ontario Ministry Scrambled to Deal with Jury Form Error*, The Star Toronto Newspaper (April 26, 2016), available at <https://www.thestar.com/news/canada/2016/04/26/ontario-ministry-scrambled-to-deal-with-jury-form-error-records-show.html>.

<sup>22</sup> Honourable Frank Iacobucci, *Independent Review*.

<sup>23</sup> *R v Stanley*, 2018 SKQB 27 (CanLII), available at <http://canlii.ca/t/hr0w8>. [Stanley]

Stanley not guilty of second-degree murder in the death of 22-year-old Colten Boushie. Stanley was a white man accused of killing Boushie who was a member of the Red Pheasant First Nation. Following the not-guilty verdict, public outrage ensued, prompting responses and promises of change by even the prime minister and minister of justice.<sup>24</sup>

The promises of change regarded two substantive issues plaguing the Canadian jury system. The first issue is the source of the pool of people to whom questionnaires are sent vary wildly by province. Court rooms which are interested in summoning a “fair-cross-section” of citizens to form a representative jury typically know only basic identifying data about citizens—gender, race, age, employment, and limited geographic characteristics.<sup>25</sup> While some have recently swapped to using the recommended and comprehensive provincial health card holder lists, others use sources of lists of people that have a tendency to discriminate against certain demographics, thus creating an inherent bias and skewing representation on the final jury board. The easiest and most widespread example of this is using the Municipal Property Assessment Corporation to select the initial pool of people who receive questionnaires, which results in mainly homeowners receiving jury summons.<sup>26</sup> It should be no surprise that research has empirically shown that juries in the Ottawa areas studied are 10 times more likely to be drawn from predominantly white, middle-class neighbourhoods than poor, racialized ones.<sup>27</sup>

A Toronto Star report, although using a less scientific method by visually examining the sitting juries racial composition, found a similar finding where 71% of the 632 documented jurors were white in cities where more than half the population self-identified as non-white.<sup>28</sup> Another common criticism of the reduction of the pool is the burden and inconvenience of serving on juries. In Ontario, jurors are paid nothing for the first ten days of a trial, \$40 for everyday thereafter up to the fiftieth day of trial, and \$100 a day thereafter. This lack of payment, as well as the lack of requirement for an employer to pay wages during jury duties, lack of financial support for childcare, travel, food and other juror related expenses are further causes of why the wealthier are more prone to serving on juries.<sup>29</sup> It should be noted that over 80% of civil

---

<sup>24</sup> Joe Friesen & Sean Fine, *What You Need to Know About Juries, Challenges and Potential Reforms*, The Globe and Mail (February 12, 2018), available at <https://www.theglobeandmail.com/news/national/what-you-need-to-know-about-juries-challenges-and-potential-reforms/article37957170/>.

<sup>25</sup> Andrew Guthrie Ferguson, *The Big Data Jury*, 91(3) Notre Dame L. Rev. 935 (2016), available at <https://scholarship.law.nd.edu/cgi/viewcontent.cgi?article=4641&context=ndlr>.

<sup>26</sup> Dale Smith, *Jury Selection Report Shows System Biased, Say Lawyers*, Law Times, Thomson Reuters (June 18, 2018) available at <https://www.lawtimesnews.com/author/dale-smith/jury-selection-report-shows-system-biased-say-lawyers-15880/>.

<sup>27</sup> Justice Giovanna Toscano Roccamo, *Report on Jury Selection in Ontario*, Canadian Judicial Council (June 2018), available at <https://www.cjc-ccm.gc.ca/cmslib/general/Study%20Leave%20Report%202018%20June.pdf>.

<sup>28</sup> Ebyan Abdigir, Kvesche Bijons-Ebacher, Palak Mangat, Robert Cribb & Jim Rankin, *How a Broken Jury List Makes Ontario Justice Whiter, Richer and Less Like Your Community*, The Toronto Star (February 16th, 2018), available at <https://www.thestar.com/news/investigations/2018/02/16/how-a-broken-jury-list-makes-ontario-justice-whiter-richer-and-less-like-your-community.html>.

<sup>29</sup> Canadian Broadcasting Corporation (CBC), *Jury duty: Unfair Burden or Civic Obligation?*, Canada News (March 6th, 2012), available at <https://www.cbc.ca/news/canada/jury-duty-unfair-burden-or-civic-obligation-1.994514>.



trials are concluded within one day in Ontario, with most criminal trials lasting 1-5 days.<sup>30</sup> As such, in most cases in Ontario even the \$40 per day are rarely reached.

The second issue is the use of peremptory challenges to create a biased and unrepresentative jury. The Supreme Court of Canada stated in *R v Sherratt* [1991] that the modern jury was envisioned as a representative cross-section of society, honestly and fairly chosen, and that the Charter right to jury trial is meaningless without some guarantee that it will perform its duties impartially and represent the larger community.<sup>31</sup> Without the two characteristics of impartiality and representativeness, a jury would be unable to perform many of the functions that make its existence desirable in the first place. So why then are peremptory challenges part of the jury selection process? The Law Reform Commission of Canada holds that “its importance lies in the fact that justice must be seen to be done. The peremptory challenge is one tool by which the accused can feel that he or she has some minimal control over the make-up of the jury and can eliminate persons for whatever reason, no matter how illogical or irrational, he or she does not wish to try the case.”<sup>32</sup> And there are indeed good reasons, for both plaintiff and defendant to use peremptory challenges, for example if a juror seems disinterested, appears biased or shows animus toward the accused. However, reports have found that this power to exclude potential jurors for ‘illogical or irrational’ reasons has undesirable effects on the racial make-up of jury panels.<sup>33</sup>

Others have gone further, arguing that it is “a form of state-sanctioned discrimination because the use of peremptory challenges is arbitrary, forcing counsel to make assumptions about prospective jurors, for example, based on information that is related to race.”<sup>34</sup> It is important to note that it is not in the purview of this paper to argue for or against the abolishment of peremptory strikes. Instead, it is our purpose here to explore the current human-run methods and faults of jury selection and further below to explore the potential solution to such faults through the use of AI.

The use of peremptory challenges therefore, clearly has the legal community split on its merits. On one hand, its use is clear to give lawyers a chance to comb through the potential deciders of the parties’ fates. There must be an opportunity to discover biases and remove any and all jurors with them, but the biases discovered cannot be based on race, gender, or ethnicity.<sup>35</sup> Both US (*Batson v Kentucky*, [1986]<sup>36</sup>) and Canadian case law (*R v Gayle*, [2001]<sup>37</sup>) show courts attempting to curb racial (and even gender and religious) discriminatory use of peremptory challenges, but both attempts have been discredited as rather unsuccessful.<sup>38</sup>

---

<sup>30</sup> Justice Giovanna Toscano Rocco, *Report on Jury Selection in Ontario*.

<sup>31</sup> [*Sherratt*].

<sup>32</sup> Chairman Francis Muldoon, *The Jury in Criminal Trials*, Working Paper 27, Law Reform Commission of Canada (1980) at page 54.

<sup>33</sup> Honourable Frank Iacobucci, *Independent Review*.

<sup>34</sup> Justice Giovanna Toscano Rocco, *Report on Jury Selection in Ontario*.

<sup>35</sup> Zayyad & Clarke, *The Peremptory Challenge*.

<sup>36</sup> *Batson v Kentucky*, [1986] 476 US 79, available at <https://supreme.justia.com/cases/federal/us/476/79/>.

<sup>37</sup> *R v Gayle*, [2001] 54 OR (3d) 36, 2001 ONCA 4447 (CanLII), available at <http://canlii.ca/t/1fbrf>.

<sup>38</sup> Honourable Frank Iacobucci, *Independent Review*.



We should also consider the notion that, as articulated by Andrew Guthrie Ferguson, a law professor at the University of the District of Columbia, “Lawyers tend to pick jurors based on things they can see—race, gender, age, sexual orientation—in part because they don’t know anything more.”<sup>39</sup> Most recently, the recommended approach developed in *R v Gayle* of simply warning the judge the opposing party is using peremptory challenges on a strictly racial basis was not accepted in *R v Cornell* (2017).<sup>40</sup> In *R v Stanley*,<sup>41</sup> a combination of the aforementioned problems with the pool of jury selection, coupled with each side’s use of peremptory strikes lead to an all-white jury. This case is an excellent example of the importance of a jury both appearing and being unbiased for the purposes of public faith in the administration of justice. Similarly, it also displays how unchanged the uses and basis of peremptory strikes are in modern day Canada. The defence used all of its peremptory challenges to remove Indigenous appearing jury members regardless of their age, gender or social status.<sup>42</sup> In contrast, the Crown removed as many potential jurors as possible that appeared to not be Indigenous by appearance. Thus, neither side used any other information about jurors at all aside from whether they appeared to be Indigenous or not. Chris Murphy, the Boushie family's lawyer, said "Everybody wants an impartial jury, but there are better ways to determine partiality or bias than looking at a person's skin. So let's change it."<sup>43</sup>

Another infamous trial involving jury selection was the US case *People of the State of California v Orenthal James Simpson*.<sup>44</sup> During the O.J. Simpson trial, both defence and prosecution hired jury selection experts as consultants. It was widely held that black jurors would be more sympathetic to Mr. Simpson, and the defence was anxious to have as many of them as possible on the 12-member panel.<sup>45</sup> The defence even went as so far as to select the jurisdiction to proceed in to be in poorer and predominantly black south-central LA, rather than the wealthy and predominantly white populated Santa Monica where the crime had been committed.<sup>46</sup> Both sides also thought women, regardless of race would sympathize more with their arguments. The prosecutors believed this to be true due to the domestic violence aspect of the case, while the defence’s research polls suggested women were generally more likely to acquit the accused than

---

<sup>39</sup> Leslie A. Gordon, *Professor Says Data Mining Can Improve Jury Selection*, ABA Journal (September 2016), available at [http://www.abajournal.com/magazine/article/big\\_data\\_improve\\_jury\\_system](http://www.abajournal.com/magazine/article/big_data_improve_jury_system).

<sup>40</sup> *R v Cornell*, 2017 YKCA 12, [2017] YJ No 374 (QL) (CanLII) available at <http://canlii.ca/t/h568n>.

<sup>41</sup> [Stanley].

<sup>42</sup> Aidan Macnab, *Stanley Acquittal Should Not Lead to Scrapping Peremptory Challenges*, Say Criminal Lawyers, Canadian Lawyer Magazine, Thomson Reuters (February 14th, 2018), available at <https://www.canadianlawyermag.com/legalfeeds/author/aidan-macnab/stanley-acquittal-should-not-lead-to-scrapping-peremptory-challenges-say-criminal-lawyers-15332/>.

<sup>43</sup> Gloria Galloway, *Liberals to Examine Jury-Selection Rules After Acquittal in Boushie Killing*, The Globe and Mail (February 13th 2018), available at <https://www.theglobeandmail.com/news/politics/colten-boushies-family-meets-federal-ministers-after-stanleys-acquittal/article37939245/>.

<sup>44</sup> *The People of the State of California v Orenthal James Simpson*, (1995) Cal Super Ct LA County No BA097211.

<sup>45</sup> David Margolick, *Issues of Race Are Raised In Simpson Jury Selection*, The New York Times (October 28th, 1994), available at <https://www.nytimes.com/1994/10/28/us/issues-of-race-are-raised-in-simpson-jury-selection.html>.

<sup>46</sup> *Ibid.*

men. From an original jury pool of 40% white, 28% black, 17% Hispanic, and 15% Asian, the final jury for the trial had ten women and two men, of which there were nine blacks, two whites, and one Hispanic.<sup>47</sup> Highly respected jury consultant for the defence, Jo-Ellan Dimitrius, coordinated massive data on each of the jury finalists, including their answers to the questionnaire, responses and body language during questioning, and other data the defense had managed to collect.

Although novel then, the use of jury selection consultants nowadays has become more and more common, especially in the US. It's rising popularity is shown in the recent CBS show "Bull" which depicts employees and their work at a jury selection consultant company that not only selects the right jurors for their clients, but also helps lawyers decide which type of argument will win over jurors best.<sup>48</sup> In the jury selection process, trial consultants are able to rely on empirical research and questioning during the jury selection process to identify potential biases in prospective jurors. Without the use of a trial consultant, counsel is more likely to employ their own individual assumptions and stereotypes to jury selection, resulting in a potentially less advantageous jury composition.<sup>49</sup> Although less commonly used in Canada due to the limited ability to obtain a jury trial for civil procedures and the tailored restrictions on Crown counsel in criminal trials for jury researching prior to selection, desire for its use is growing. Furthermore, due to the constitutional guarantee of a jury trial in the US for both civil and criminal matters, there are more opportunities there to use jury selection experts.<sup>50</sup>

In Canada, counsel is given no opportunity to question prospective jurors in order to elicit information about their backgrounds or opinions. However, counsel can obtain a list of the prospective juror's name, address and occupation in advance of trial. While it is possible to conduct some investigation of the potential jurors in advance, this is practically difficult and typically expensive, thus restricting such investigations to larger trials and wealthier clients.<sup>51</sup> However, this is the stage that jury trial consultants come in. Many private investigators and specialized corporations offer juror selection investigative services such as criminal records checks, religious background, juror's interest in or relation to the case, occupation and any publicly accessible information about the potential juror. Most importantly, the emergence of social media has greatly increased the amount of publicly accessible information. Now instead of reviewing the information that jurors make available to attorneys in court, jury consultants and attorneys can access heaps of additional information on a juror by conducting a simple social media search. While extremely useful and cost effective, this presents a wealth of questions about the privacy to be afforded jurors and to the privacy of the jury process as a whole. The American Bar Association rules for instance, say attorneys can conduct "passive" searches of

---

<sup>47</sup> *Ibid.*

<sup>48</sup> IMBD, 'Bull' TV Show Synopsis, CBS Productions (2016 - ongoing), available at <https://www.imdb.com/title/tt5827228/>.

<sup>49</sup> Gordon McKee & Caitlin McIntyre, *Jury Trial Consultants in Canada*, for *Mock Juries: Not Just for Trial Outcome*, IADC Mid-Year Meeting Program (February 15, 2017), available at <http://www.iadcmeetings.mobi/assets/1/7/26.2 - McKee- Jury Consultants in Canada.pdf>.

<sup>50</sup> *Ibid.*

<sup>51</sup> McKee & McIntyre, *Jury Consultants in Canada*.

social media profiles and the internet, so long as they do not act fraudulently or “friend” the jurors on any social media sites to access additional information.<sup>52</sup>

Companies like the O’Mara Law Group in Orlando provide a team headed by a jury consultant who manages a team of social media specialists, and a private investigator. The social media specialists work off-site to identify potential social media accounts as names of individuals on the panel are identified. The private investigator provides additional information, often through research on relatives, about individuals who are difficult to locate online. The jury consultant compiles the information, supplements the data, identifies actionable information, and presents it to the legal team when it is needed.<sup>53</sup>

Since a AI jury research application itself would have the ability to conduct social media searches on the lawyers behalf and encompass the role of a jury consultant in providing risk-based advice, the Canadian concerns of basing challenges to jurors on more empirical grounds would be addressed in an effective manner. As a result, trials would have a more representative jury, fulfilling what peremptory challenges were originally meant for but failed to accomplish in its practical applications.

On the surface, it appears that (a) AI has the ability to integrate into other technological uses throughout the initial pooling process (such as the JAS/JOS aforementioned) and; (b) the capacity to address substantive issues, such as biased jury array collection and subsequent insufficiently informed challengers made to jurors. In reflection, both provide good basis for AI’s use in jury selection. Yet, it would also be useful to explore the practicalities of AI’s application.

## **II. AI Jury Selection**

### **A. Potential for Use**

The rise of big data and the subsequent centrality of analytics has started to have an impact on nearly every industry and occupation in the globe – a trend that is only set to continue. Critical to the selection of a jury panel can be understanding the likes, dislikes, habits, biases and social backgrounds of potential jurors. AI can use historical data, linked to the specific type of case at hand and apply the information gained by to help trial lawyers select their next set of jurors. With the help of big data applications, machine learning and artificial intelligence we could have a system which facilitates the jury selection process. Such behavior and predictive analytics are crucial to jury selection and case outcomes. Lawyers spend endless hours and

---

<sup>52</sup> Sean Livesey, *Jury Selection: How Social Media is Changing the Game*, Blog Post for Rich. J.L. & Tech (November 16, 2016), available at <https://jolt.richmond.edu/2016/11/16/jury-selection-how-social-media-is-changing-the-game/>.

<sup>53</sup> O’Mara Law Group, *Social Media Investigations*, Media Consultants - O’Mara Law Firm (2015) available at <http://www.omaralawgroup.com/social-media-investigations-for-jury-selection.html>.

resources when taking a case to trial. For trial lawyers, these types of tools and applications will provide an increase in effectiveness, efficiency and thus a noticeable cost reduction, something law firms and clients would certainly appreciate.<sup>54</sup>

The AI system would be designed to help lawyers eliminate jurors who come to the courtroom with a personal bias towards a certain litigant. The system will be designed to help lawyers gather information on individuals in the jury pool and provide suggestions to strike them off the jury list. The system places data, as it is collected for individual jurors through the questionnaire, public records, their social media and even behavioral analysis, in an AI system with jurors as records and data variables as fields. Before the selection process, each record, in turn, is retrieved from the database, and backward chaining produces the computed values of predicted personal bias a potential juror might have. Analysis of the output is then available that shows the jurors ranked in decreasing order of predicted bias toward the defendant. Litigators can now either use the recommended strikes proposed by the regression model based AI system or attempt to combine the regression models predicted bias with the leadership ratings to arrive at an alternative strike list.<sup>55</sup>

## B. Current Applications: Voltaire

Voltaire is a jury research software that helps attorneys learn more about the potential jurors before the trial begins. Voltaire's software can search through billions of data points using automated search based on someone's basic identity information; it can provide access to billions of documents including public records, social media posts, professional information, and a variety of other information on prospective jurors. The software is powered by IBM Watson, also uses deep psycholinguistic and behavioral analysis to discover the hidden biases, risks, and views of prospective jurors and to deliver real-time predictions on how they might vote. Voltaire gives a custom-designed reports that can be viewed on a laptop computer or smartphone app, making the process of jury research and selection much more efficient and productive.<sup>56</sup> Once logged into the Voltaire application, an individual can see all their cases listed in alphabetical order, then select their case to see the analyses on the list of juries for that particular case. It is

---

<sup>54</sup> Brian Panish, *Artificial Intelligence in the Courtroom*, Jury Analyst Blog (2016) available at <https://juryanalyst.com/blog/artificial-intelligence-in-the-courtroom/>.

<sup>55</sup> Roy Lachman, *AI, Decision Science, and Psychological Theory in Decisions about People: A Case Study in Jury Selection*, 19 AI Magazine 1 (1998), available at <https://www.aaai.org/ojs/index.php/aimagazine/article/download/1357/1257>.

<sup>56</sup> Robert Kreisman, *Selecting Jurors May Soon Be Aided by Technology Breakthrough*, Chicago Injury Lawyer Blog for Kreisman Law Offices (November 17th, 2017), available at <https://www.robertkreisman.com/injury-lawyer/selecting-jurors-may-soon-aided-technology-breakthrough/>.

simply hard to argue against the notion that the more information available to lawyers about a prospective jury, the better it will be in understanding what biases each may have and what effect those biases might have on the ultimate decision in the case. For instance, jury consultant Carol Bauss once found that a prospective juror had her own ministry and was a motivational speaker. This made it easy to conclude based on her background that the prospective juror would have a strong presence in the deliberation room with other jurors and could take on a leadership role, potentially swaying votes favourably for the client.<sup>57</sup>

---

<sup>57</sup> *Ibid.*

### C. Exploring the Implications of AI jury selection

#### *i. Eliminating Human Bias*

Evolving big data information systems have the potential to create perfectly representative juries and even generate personalized dossiers on individual jurors. Before a trial, attorneys for both sides routinely obtain the names of potential jurors on the day of jury selection. It's now possible using big-data sources to flag or score potential jurors on certain factors—fiscal and social ideology, for example, or on attitudes relevant to liability or damages—enabling lawyers to make exceedingly nuanced strikes.<sup>58</sup> For court administrators, the availability of additional information provides the potential for increased jury diversity, beyond the rough categories of race, gender, and geography. For litigants, the available information could provide a wealth of insights once only available from costly jury consultants. Big data could democratize access to information about jurors, leading to more diverse juries, and potentially less discriminatory jury selection practices.<sup>59</sup> Most importantly, the surge in information available about each potential jury member increases the litigator's ability to issue for cause challenges regarding the bias a certain panel member might have against their client. As such, litigator's with a greater amount of information on each potential jury member have more opportunities to preserve their limited peremptory challenges. Such challenges would be better used in situations where the litigator's professional opinion or perhaps even simply human gut feeling is to strike a certain potential jury member. More information would also allow for the use of peremptory strikes against potential jury members that the litigator knows to have certain qualities, interests, experiences etc. This in turn, would likely reduce the use of peremptory strikes on the current basis of simply what the litigator can see, such as race and gender.

#### *ii. Sources of Information Beyond Questionnaire*

The information gathered through social media may be used to cross-check any information that is provided by the individual in their questionnaire. With the present technology instead of reviewing the information that jurors make available to attorneys in court, jury consultants and attorneys can access piles of additional information on a juror by conducting an internet search.<sup>60</sup>

Additional data about jurors available through online sources might obviate the need for direct, embarrassing questions in court. Litigants having a dossier filled with personal information about a juror could dismiss or avoid even asking questions to certain people who

---

<sup>58</sup> Gordon, *Professor Says Data Mining Can Improve Jury Selection*.

<sup>59</sup> Ferguson, *The Big Data Jury*.

<sup>60</sup> Livesey, *Jury Selection*.



might otherwise be required to give embarrassing answers. For instance, there is no need to ask about personal bankruptcy or financial difficulties if this information was already available to the parties.

For example, a Facebook “profile” may contain a prospective juror’s:

- lists of personal connections (i.e., “friends”);
- pictures and videos;
- check-ins at real world locations;
- attending upcoming scheduled events;
- posts dating back to the creation of the user’s
- educational background;
- current city and hometown;
- membership in certain groups;
- favorite books, movies, TV shows, and news sources; and
- political preferences;

Analysis of online information for the potential jurors help lawyers make decision during the jury selection with more confidence. Including this information can have following results:

- Faster jury selection;
- Increased rate of cause strike, and;
- Peremptory strikes can be used more strategically.<sup>61</sup>

### *iii. Eliminate Lags in the Court Process and Reduce Rescheduling Costs*

Courts use metrics called the “juror utilization rate” to measure just how many potential jurors are called in unnecessarily. A infamous example of inefficiency is the juror utilization rate from the early 2000s in New York: 82% of those summoned were never selected for trial.<sup>62</sup> Sometimes a court miscalculates, and unnecessarily calls in dozens of people who lose time at work and productivity. The use of an AI system can also help limit the number of people called in for jury service by providing pre-trial analysis. In addition, the system can also help to keep rescheduling cost low by doing prior research and thus provide a pool of jury that has higher a higher probability of utilization. For example, the current system is unable to recognize a potential jury member is friends with the accused prior to their addition to the pool, court attendance and potential questioning by a litigator, revealing such a relationship leading to an obvious for cause dismissal. Such situations can be avoided through the development and implementation of an AI system.

---

<sup>61</sup> O’Mara Law Group, *Social Media Investigations*.

<sup>62</sup> Hanna Kozłowska, *Jury Duty is Still an Expensive Waste of Time, Even Though US Courts Know How to Fix It*, Quartz (April 10th, 2017), available at <https://qz.com/950121/jury-duty-is-still-an-expensive-waste-of-time-even-though-us-courts-know-how-to-fix-it/>.

Just as important, big data could be used by court administrators ahead of time for more accurate and efficient summoning by drawing up-to-date information about the jury pool, which can improve the rate of response.<sup>63</sup> An artificial intelligent system can take into consideration more diverse features when selecting an individual to serve in the jury. This system can check individual for personal bias on the issue discussed in the trial by checking his previous public history on similar issues and even look through one's social media accounts to understand his/her perspective by looking at the posts uploaded and pages followed. It is worth noting that Voltaire and similar apps do not disclose the sources of their psycholinguistic and behavioral analysis that is used by the AI system to create dossiers on the potential juror. In this paper, we suggest that the methods of human behavior studies be made known to both sides for more transparent selection process.

#### *iv. Privacy of Individual Prospective Jurors*

##### General

Informational precision that comes with the use of big data also presents real challenges to the existing system. While, it offers promises of efficiency and accuracy, however, it comes at the expense of privacy and legitimacy.

Increased big data collection of personal information involves an invasion of privacy that, if embraced by the court system, could result in significant backlash against jury service. Issues concerning juror privacy continue to increase as new technologies allow lawyers and the public to learn about the thus far anonymous citizen called to service.<sup>64</sup> An AI system can unearth a juror's thoughts, fears, passions, and plans through their browser history and social media such as Instagram or Facebook. Mobile phones can report their users' routines and even locations visited. Social media posts, connections, and comments reveal your network of friends, contacts, opinions, and activities, through both words and images. Jurors expect to arrive as anonymous citizens, do their job, and then disappear back into society as faceless, nameless members of a jury.<sup>65</sup>

In the US, where Voltaire is used, litigants regularly ask questions to determine the influence of jurors' relations with friends and loved ones, as well as the jurors' experiences and personal habits. Prospective jurors have been asked to reveal information about their victimization, their health and use of legal and illegal medications, their families and income levels, whether they have filed for bankruptcy, their religious and political beliefs, their intimate sexual relationships, their television habits, and many other potentially sensitive topics.<sup>66</sup> If this

---

<sup>63</sup> Gordon, *Professor Says Data Mining Can Improve Jury Selection*.

<sup>64</sup> Ferguson, *The Big Data Jury*.

<sup>65</sup> *United States ex rel McCann v Adams*, [1943] 126 F2d 774, (2d Cir 1943) at paras 775–76, available at <https://supreme.justia.com/cases/federal/us/320/220/>. [Adams]

<sup>66</sup> *United States ex rel McCann v Adams*, (1943).

data is collected without jurors' prior consent it might raise concerns regarding the invasion of privacy while also raising predictable negative views of jury service.

### Predictions Informed by Caselaw

In contrast to the US, the privacy interests of potential jurors are of utmost importance in Canada, and judges in criminal cases have emphasized that the system should not invade the privacy of prospective jurors by having their personal lives and beliefs investigated by the Crown. With the recent decisions in Atlantic Canada courts, one of which had a jury dismissed due to evidence of Crown counsel looking up one of their LinkedIn Profiles,<sup>67</sup> it is clear that the courts remain guarded against deep prosecution researching in light of the digital age. Years of case law also supports the protection of jurors against unreasonable personality or moral questioning, prior to the great levels of internet usage seen today. For example, in *R v Latimer* [1997], the SCC held that, by creating separate questionnaires asking for their views on a number of ethical issues, and by the subsequent unrecorded RCMP discussions with these individuals regarding their answers, the prosecution's interference with prospective jurors, proved to be an 'abuse of process' which warranted a new trial.<sup>68</sup>

Furthermore, in *R v Spiers* (2012), the Crown requested "broadly worded comments and details" from the police on prospective jurors – however, the court found that the checks went beyond the valid purpose of determining the existence of convictions potentially rendering jury panel member ineligible as jurors. In fact, the court found that much of the information assembled by the police was collected in violation of the Freedom of Information and Protection of Privacy Act, R.S.O. 1990, c. F.31 and the Municipal Freedom of Information and Protection of Privacy Act, R.S.O. 1990, c. M.56."<sup>69</sup> Not only did the trial Crown admit to having relied on the information when exercising their peremptory challenges, but the accused party was not provided with disclosure of this activity, and had they known otherwise, would have acted to challenge certain jurors who were ultimately selected.<sup>70</sup> Ultimately, "but for the failure of the Crown to make disclosure of the improperly assembled information, the jury would have been differently constituted"<sup>71</sup>, and the court found there to be a miscarriage of justice since the process was unfair.

It is clear from these examples that the privacy of prospective jury members is held sacred. It would be useful then to explore how the invasive powers of AI could be accommodated given the rigid guidelines for jury array investigations. Positive instances of Crown and police deliberations during jury vetting can be found in *R v Davey* [2012]<sup>72</sup>, where

---

<sup>67</sup> Keith Doucette, *Legal Experts Ponder How Far Research on Jurors for Duty Can Go*, The Hamilton Spectator (November 23rd, 2018), available at <https://www.thespec.com/news-story/9048914-legal-experts-ponder-how-far-research-on-jurors-for-duty-can-go/>.

<sup>68</sup> *R v Latimer*, [1997] 1 SCR 217, 1997 CanLII 405 (SCC), available at <http://canlii.ca/t/1fr3w>.

<sup>69</sup> *R v Spiers*, 2012 ONCA 798 (CanLII) at para 3, available at <http://canlii.ca/t/fttk8>. [*Spiers*]

<sup>70</sup> *Ibid* at para 4.

<sup>71</sup> *Ibid*.

<sup>72</sup> *R v Davey*, [2012] 3 SCR 828, 2012 SCC 75, available at <http://canlii.ca/t/fvcd6>. [*Davey*]

the SCC decided that prior to the panel selection, the Crown has an ability to ask for an officer's general opinion on individuals they know from a jury arraylist based on what was known of potential jurors throughout the community, so long as databases were not used and disclosure was made to the defense. The court also appears to outline when disclosure is not needed for any research a prosecution team conducts for the purposes of jury vetting – per Justice Karakatsanis at paragraph 2;

“If the Crown seeks the opinion of a police officer, any information received relevant to the selection process (touching on a potential juror's eligibility, suitability, or ability to remain impartial) must be disclosed. However, general impressions, personal or public knowledge in the community, rumours or hunches, *need not be disclosed*. To the extent that the *underlying information is readily ascertainable by members of the community*, it is not linked to the prosecution's role as an agent of the state, or to the Crown's disproportionate access to resources, and *there is no onus on the Crown to bring forward information that is readily obtainable elsewhere* [emphasis added].”<sup>73</sup>

Given that AI software like Voltaire uses information posted online (authored stories, media profiles, professional pages), the Crown would potentially not need to disclose the use of AI in conducting research on juror background in making their decisions as these are ‘readily ascertainable’ by other members of the society. However, if this were the case, the privacy rights of jurors would vastly be effected as they would potentially have Crown counsel know facts about them that they thought they had kept secret or had deleted/forgotten from their online personas.

Lawyers already do not have to indicate to potential jurors what the reason for their rejection is (other than under questioning in a challenge for cause). And, as *Davey* stands, the Crown would also not need to disclose to the *accused party* the AI methods used in their jury panel evaluation *unless* the defence can prove that the AI's mixed use of both internet files and *government forms* (such as financial/real estate/voter registration) warrants the need for disclosure. Since Voltaire currently goes beyond online posts and has the ability to retrieve sensitive documents of the individual's identity or ownership of property/insurance, these can indeed be linked to the prosecution's role as an agent of state, as they are not publicized or necessarily readily available. Thus, assuming the court does not consider the sources of Voltaire's information gathering on a separate basis, the overall use of AI in jury research could thus be included in the disclosure to defense, but this is a very small and particular distinction to make.

In addition, although the court in *Davey* does not extend into a discussion of AI program use as relevant to selection process, there is also drastic difference in amount and speed of

---

<sup>73</sup> *Ibid.*, at para 2.

manpower of information gathering in contrast with what a human researcher is capable of for an entire list of potential jurors. The lack of balance should also be taken into consideration when courts determine the importance of protecting juror privacy and informed selection by lawyers. If AI were to be used for jury selection in criminal trials, the authors of this paper support both the disclosure to the defence but also an advisement to the prospective jurors themselves, as they will be searched by the Crown in a more comprehensive manner than the current process.

With brief reference to civil trials, the same burden of disclosure based on use of state power does not apply since the litigants involve plaintiff and defendants instead. Jury consultants and social media are indeed used in civil litigation, in limited degrees.<sup>74</sup>

As the AI system has the potential to go above and beyond these initial searches, the requisite notice to prospective jurors, stating that their public online account activity are liable to be searched, should still be given in jury selection procedures. This can be done by adding in a disclaimer to the initial jury pool questionnaire, adding notice indicating that individuals submitting their answers may be subject to passive AI research procedures.

#### *v. Balancing Bias with Transparency in the AI system*

Even the smallest irregularities and biases can produce a measurable difference in the risk-assessment and jury selection process. The critical issue is that problems like racial bias, gender bias and structural discrimination are commonly noticed in world around us.

For instance, there is evidence that, despite similar rates of drug use, black Americans are arrested at four times the rate of white Americans on drug-related charges. Even if engineers were to faithfully collect this data and train a machine learning model with it, the AI would still pick up the embedded bias as part of the model. Bolukbasi et. al show that, if left unchecked, machine learning models can learn outdated gender stereotypes, such as “doctors” being male and “receptionists” being female.<sup>75</sup> In a similar fashion, AI models trained on images of past US presidents have been shown to predict exclusively male candidates as the likely winner of the presidential race.

To avoid unfair bias, all subjects should have an equal chance of being represented in the data. Sometimes this means that underrepresented populations need to be thoughtfully added to any training datasets. For instance, Google’s “Quick, Draw!” experiment had the engineering team intentionally seek out additional training examples of other shoe types, like high heels and crocs, to compensate for gaps in representation since the system was recognizing only sneakers

---

<sup>74</sup> McKee & McIntyre, *Jury Consultants in Canada*.

<sup>75</sup> Tolga Bolukbasi, Kai-Wei Chang, James Zou, Venkatesh Saligrama, & Adam Kalai, *Man is to Computer Programmer as Woman is to Homemaker? Debiasing Word Embeddings*, Boston University (2016) available at <https://papers.nips.cc/paper/6228-man-is-to-computer-programmer-as-woman-is-to-homemaker-debiasing-word-embeddings.pdf>.

as shoes.<sup>76</sup>

Further, in order to preserve the accused's right to a fair trial and ability to make a full answer in defence, the training data that the Voltaire AI uses in order to make the psychoanalysis and personality summaries based on the juror profiles (such as what socio-psychology studies were used in the pool) should be made public in order to keep up to date with current and most accepted scientific theories.

One must also keep in mind that some online information is not necessarily reliable, as people sometimes lie in order to pose as having certain moral dispositions or opinions that they may not actually endorse. AI system developers should keep this in mind when screening some information available from the internet.

### **III. Recommendations and Guidelines: Use of AI in Jury Selection Process in Canada**

The use of AI in jury selection should be examined with regards to the legal value that the court system holds in the vetting process. Without a change via common law or statute, AI would not be able to be properly accommodated into the legal process. This paper has discussed the current elements of jury selection and the implications of both 'peremptory challenges' and 'challenge for cause', as well as explored the potential of AI use in researching prospective jury members given the deliberations in previous relevant case law. In the US, scholars can conduct studies by interviewing jury members after a trial and they allow for pre-selection juror consultants to help lawyers make informed juror choices, whereas Canada, and Ontario specifically, holds jury array and panel member privacy with much high regard. Regardless, for the appropriate use and development of AI in jury selection in Canada through applications such as Voltaire, we propose the following recommendations for changes to be made within federal and provincial government, Voltaire, and the legal system as a whole:

- 1) A replacement of the current paper-based system of selecting jury pools with an Jury Automated System and online questionnaire, both to be integrated with a government sponsored AI jury research program
- 2) AI jury research software should be provided by the court system and available to litigators to opt in or opt out of, as well as accessible to self-represented litigants. Funding by the government and universal access would ensure equal access to justice for all participants of the Canadian justice system.
- 3) Explicit changes to the Ontario *Juries Act* to ensure compliance with federal privacy legislation;
- 4) Require disclosure of socio-psychological basis used by Voltaire or similar AI applications, to be examined by experts for further improvement and more robust

---

<sup>76</sup> Vyacheslav Polonski, *Mitigating Algorithmic Bias in Predictive Justice: 4 Design Principles for AI Fairness*, Towards Data Science - Medium (November 23rd 2018), available at <https://towardsdatascience.com/mitigating-algorithmic-bias-in-predictive-justice-ux-design-principles-for-ai-fairness-machine-learning-d2227ce28099>.



analysis in order to keep up to date with current social and psychological scientific methods

- 5) Require disclosure to opposing party whenever AI is used, in order to give sufficient notice and provide time to form strategy in selection of jury members if so needed
- 6) Although current applications of AI in jury selection would mean the ability to use more instances ‘challenge for cause’ and thus save the amount of ‘peremptory challenges’ left, we also suggest further research and possible reconsideration of ‘peremptory challenges’ altogether.
- 7) For AI jury research apps to consider building into its system the ability to:
  - a) Build into the training data previous cases where juries were used; enter basic facts of the individual case for which a lawyer is looking at potential jury members, in order to make a contextual application of the individual juror qualities gathered,
  - b) For the linguistic, psychological, and human behaviour analysis can be combined with hypothetical simulations of court proceedings against the evidence that we have at hand in order to create informed estimations of a prospective juror’s opinion, and
  - c) Provide a warning to the lawyer using this ‘simulation’ function that further exposure of AI to jury cases is needed in practice in order to exponentially learn.
- 8) The government should provide notice to prospective jury members in the array that they might be subjected to online search by an AI system, informing them of the privacy invasion realistically involved in participating in the modern jury selection process.
- 9) Allowance for jury research in Canada solely for the purpose of investigating the impact of AI in jury vetting processes.
- 10) Other changes as the honourable courts and the Canadian government see fit in order to integrate AI jury selection into the legal system.

## **Conclusion**

Overall, the current jury selection process is riddled with both logistical and substantial problems that are owed to the involvement of both traditional methods and inescapable human prejudice. Due to the lack of information on potential jury members, modern litigators use peremptory strikes to eliminate unfavourably biased potential jurors on the sole grounds of visible characteristics such as race and gender. This leads to a reduction of diversity on racist or sexist grounds, reduces the representativeness of juries, and arguably represents a failure to provide a jury of the accused peers. We support the use of AI in jury selection processes, as it helps to eliminate human bias, provides sound background of potential jurors and expedites the process to provide timely justice. However, we recognize the potential for privacy concerns given previous Supreme Court of Canada decisions, as well as the limitations that systems such as Voltaire currently may face in light of the differing rules of the involved jurisdictions.

Thus, we have made recommendations in this paper to enact legislative change as well as changes to the AI jury research field itself in order to make way for a more comprehensive use of AI in the process. In addition, although this paper did not explore a strong position in depth, the authors believe it would worthwhile to further explore through studies: (a) the continued existence of peremptory strikes in the Canadian jury selection process (b) giving AI the ultimate power to select the jury and removing the function of human lawyers to make challenges altogether, and; (c) the potential for AI's to replace juries themselves as decision makers and triers of fact.

#### REFERENCES

#### **LEGISLATION**

*Canadian Charter of Rights and Freedoms*, Part I of the *Constitution Act*, 1982, being Schedule B to the *Canada Act 1982 (UK) 1982*, c11, s 92(14), available at <https://laws-lois.justice.gc.ca/eng/const/page-4.html#h-19>.

*Criminal Code*, RSC 1985, c C-46, available at <http://canlii.ca/t/53gxz>.

*Juries Act*, RSO 1990 c J3, available at <https://www.ontario.ca/laws/statute/90j03>.

## CASE LAW

### Canada

*R v Church of Scientology of Toronto*, [1997] OJ No 1548 (QL), 1997 CanLII 16226 (ONCA), available at <http://canlii.ca/t/6hxy>.

*R v Cornell*, 2017 YKCA 12, [2017] YJ No 374 (QL) (CanLII) available at <http://canlii.ca/t/h568n>.

*R v Davey*, [2012] 3 SCR 828, 2012 SCC 75, available at <http://canlii.ca/t/fvcd6>.

*R v Gayle*, [2001] 54 OR (3d) 36, 2001 ONCA 4447 (CanLII), available at <http://canlii.ca/t/1fbrf>.

*R v Kokopenace*, 2015 SCC 28, [2015] 2 SCR 398, available at <https://scc-csc.lexum.com/scc-csc/scc-csc/en/item/15373/index.do>.

*R v Latimer*, [1997] 1 SCR 217, 1997 CanLII 405 (SCC), available at <http://canlii.ca/t/1fr3w>.

*R v Sherratt*, [1991] 1 SCR 509, available at <https://scc-csc.lexum.com/scc-csc/scc-csc/en/item/734/index.do>.

*R v Spiers*, 2012 ONCA 798 (CanLII) at para 3, available at <http://canlii.ca/t/fttk8>.

*R v Stanley*, 2018 SKQB 27 (CanLII), available at <http://canlii.ca/t/hr0w8>.

### United States

*Batson v Kentucky*, [1986] 476 US 79, available at <https://supreme.justia.com/cases/federal/us/476/79/>.

*The People of the State of California v Orenthal James Simpson*, (1995) Cal Super Ct LA County No BA097211.

*United States ex rel McCann v Adams*, [1942] 126 F2d 774, (2d Cir 1942) at paras 775–76, available at <https://supreme.justia.com/cases/federal/us/320/220/>.

## SECONDARY SOURCES

Abdigir, Ebyan; Bijons-Ebacher, Kvesche; Mangat, Palak; Cribb, Robert & Rankin, Jim. *How a Broken Jury List Makes Ontario Justice Whiter, Richer and Less Like Your Community*, The Toronto Star (February 16th, 2018), available at <https://www.thestar.com/news/investigations/2018/02/16/how-a-broken-jury-list-makes-ontario-justice-whiter-richer-and-less-like-your-community.html>.

Bolukbasi, Tolga; Chang, Kai-Wei; Zou, James; Saligrama, Venkatesh & Kalai, Adam. *Man is to Computer Programmer as Woman is to Homemaker? Debiasing Word Embeddings*, Boston University (2016) available at <https://papers.nips.cc/paper/6228-man-is-to-computer-programmer-as-woman-is-to-homemaker-debiasing-word-embeddings.pdf>.

Canadian Broadcasting Corporation (CBC), *Jury duty: Unfair Burden or Civic Obligation?*, Canada News (March 6th, 2012), available at <https://www.cbc.ca/news/canada/jury-duty-unfair-burden-or-civic-obligation-1.994514>.

Department of Justice, *Canada's System of Justice: The Role of the Public - Jury Duty*, Government of Canada (October 16, 2017), available at <https://www.justice.gc.ca/eng/csj-sjc/just/12.html>.

Doucette, Keith. *Legal Experts Ponder How Far Research on Jurors for Duty Can Go*, The Hamilton Spectator (November 23rd, 2018), available at <https://www.thespec.com/news-story/9048914-legal-experts-ponder-how-far-research-on-jurors-for-duty-can-go/>.

Friesen, Joe & Fine, Sean. *What You Need to Know About Juries, Challenges and Potential Reforms*, The Globe and Mail (February 12, 2018), available at <https://www.theglobeandmail.com/news/national/what-you-need-to-know-about-juries-challenges-and-potential-reforms/article37957170/>.

Galloway, Gloria. *Liberals to Examine Jury-Selection Rules After Acquittal in Boushie Killing*, The Globe and Mail (February 13th 2018), available at <https://www.theglobeandmail.com/news/politics/colten-boushies-family-meets-federal-ministers-after-stanleys-acquittal/article37939245/>.

Gordon, Leslie A. *Professor Says Data Mining Can Improve Jury Selection*, ABA Journal (September 2016), available at [http://www.abajournal.com/magazine/article/big\\_data\\_improve\\_jury\\_system](http://www.abajournal.com/magazine/article/big_data_improve_jury_system).

- Greene, Justice Mara & Grill, Gary J. *Jury Selection*, Lecture Notes for “Criminal Procedure”, Osgoode Hall Law School (November 2018).
- Grossman, Maura R. & Cormack, Gordon V. *Technology-Assisted Review in E-Discovery Can Be More Effective and More Efficient Than Exhaustive Manual Review*, 17(3) Rich. J.L. & Tech 11 (2011), available at <http://scholarship.richmond.edu/jolt/vol17/iss3/5>.
- Iacobucci, Honourable Frank. *Independent Review of First Nations Representation on Ontario Juries*, Report for the Legislative Assembly (February 2013) available at <http://www.ontla.on.ca/library/repository/mon/27002/321038.pdf>.
- Kozlowska, Hanna. *Jury Duty is Still an Expensive Waste of Time, Even Though US Courts Know How to Fix It*, Quartz (April 10th, 2017), available at <https://qz.com/950121/jury-duty-is-still-an-expensive-waste-of-time-even-though-us-courts-know-how-to-fix-it/>.
- Kreisman, Robert. *Selecting Jurors May Soon Be Aided by Technology Breakthrough*, Chicago Injury Lawyer Blog for Kreisman Law Offices (November 17th, 2017), available at <https://www.robertkreisman.com/injury-lawyer/selecting-jurors-may-soon-aided-technology-breakthrough/>.
- Lachman, Roy. *AI, Decision Science, and Psychological Theory in Decisions about People: A Case Study in Jury Selection*, 19 AI Magazine 1 (1998), available at <https://www.aaai.org/ojs/index.php/aimagazine/article/download/1357/1257>.
- Livesey, Sean. *Jury Selection: How Social Media is Changing the Game*, Blog Post for Rich. J.L. & Tech (November 16, 2016), available at <https://jolt.richmond.edu/2016/11/16/jury-selection-how-social-media-is-changing-the-game/>.
- Macnab, Aidan, *Stanley Acquittal Should Not Lead to Scrapping Peremptory Challenges*, Say Criminal Lawyers, Canadian Lawyer Magazine, Thomson Reuters (February 14th, 2018), available at <https://www.canadianlawyermag.com/legalfeeds/author/aidan-macnab/stanley-acquittal-should-not-lead-to-scrapping-peremptory-challenges-say-criminal-lawyers-15332/>.
- Muldoon, Chairman Francis. *The Jury in Criminal Trials*, Working Paper 27, Law Reform Commission of Canada (1980) at page 54.
- IMBD, ‘Bull’ TV Show Synopsis, CBS Productions (2016 - ongoing), available at <https://www.imdb.com/title/tt5827228/>.
- McKee, Gordon & McIntyre, Caitlin. *Jury Trial Consultants in Canada*, for *Mock Juries: Not Just for Trial Outcome*, IADC Mid-Year Meeting Program (February 15, 2017), available at [http://www.iadcmeetings.mobi/assets/1/7/26.2 - McKee-Jury\\_Consultants\\_in\\_Canada.pdf](http://www.iadcmeetings.mobi/assets/1/7/26.2 - McKee-Jury_Consultants_in_Canada.pdf).

Margolick, David. *Issues of Race Are Raised In Simpson Jury Selection*, The New York Times (October 28th, 1994), available at <https://www.nytimes.com/1994/10/28/us/issues-of-race-are-raised-in-simpson-jury-selection.html>.

Ministry of the Attorney General, *The Annual Jury Selection Process*, Court Services, Queen's Printer for Ontario (September 6, 2018), available at [https://www.attorneygeneral.jus.gov.on.ca/english/courts/jury/jury\\_selection\\_process.php](https://www.attorneygeneral.jus.gov.on.ca/english/courts/jury/jury_selection_process.php).

O'Mara Law Group, *Social Media Investigations*, Media Consultants - O'Mara Law Firm (2015) available at <http://www.omaralawgroup.com/social-media-investigations-for-jury-selection.html>.

Panish, Brian. *Artificial Intelligence in the Courtroom*, Jury Analyst Blog (2016) available at <https://juryanalyst.com/blog/artificial-intelligence-in-the-courtroom/>.

Perkel, Colin. *Ontario Ministry Scrambled to Deal with Jury Form Error*, The Star Toronto Newspaper (April 26, 2016), available at <https://www.thestar.com/news/canada/2016/04/26/ontario-ministry-scrambled-to-deal-with-jury-form-error-records-show.html>.

Piovesan, Carole & Ntiri, Vivian. *Adjudication by Algorithm: The Risks and Benefits of Artificial Intelligence in Judicial Decision-Making*, The Future of Advocacy (2018), available at [https://marcomm.mccarthy.ca/pubs/Spring-2018-Journal\\_Piovesan-and-Ntiri-article.pdf](https://marcomm.mccarthy.ca/pubs/Spring-2018-Journal_Piovesan-and-Ntiri-article.pdf).

Polonski, Vyacheslav. *Mitigating Algorithmic Bias in Predictive Justice: 4 Design Principles for AI Fairness*, Towards Data Science - Medium (November 23rd 2018), available at <https://towardsdatascience.com/mitigating-algorithmic-bias-in-predictive-justice-ux-design-principles-for-ai-fairness-machine-learning-d2227ce28099>.

Rabner, Honorable Chief Justice Stuart. *Trends in State Courts: Using Technology to Improve Jury Service*, National Center for State Courts (2014), available at [https://www.ncsc.org/~media/microsites/files/future%20trends%202014/using%20technology%20to%20improve%20jury%20service\\_rabner.ashx](https://www.ncsc.org/~media/microsites/files/future%20trends%202014/using%20technology%20to%20improve%20jury%20service_rabner.ashx).

Roccamo, Justice Giovanna Toscano. *Report on Jury Selection in Ontario*, Canadian Judicial Council (June 2018), available at <https://www.cjc-ccm.gc.ca/cmslib/general/Study%20Leave%20Report%202018%20June.pdf>.

Smith, Dale. *Jury Selection Report Shows System Biased, Say Lawyers*, Law Times, Thomson Reuters (June 18, 2018) available at <https://www.lawtimesnews.com/author/dale-smith/jury-selection-report-shows-system-biased-say-lawyers-15880/>.

Worthington, Peter, *How to Avoid Jury Duty*, Huffington Post (March 12th, 2012), available at [https://www.huffingtonpost.ca/peter-worthington/avoid-jury-duty\\_b\\_1199045.html](https://www.huffingtonpost.ca/peter-worthington/avoid-jury-duty_b_1199045.html).



Zayyad, Abby & Clarke, Tim. *The Peremptory Challenge: A Racially Discriminatory Tool in the Criminal Legal System*, in Judge William G. Young's "Advanced Trial Practice" (2016), available at <http://socialaw.com/docs/default-source/judge-william-g.-young/advanced-trial-practice---fall-2016/the-preemptory-challenge-zayyad-clarke.pdf?sfvrsn=4>.