Artificial Intelligence as Evidence in Civil Proceedings: Practical Perspectives for Litigators

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With the continued advancement and adoption of artificial intelligence (AI) in our daily lives, whether personal or in business, litigators will face an increased need to contend with AI as evidence in disputes. The AI system, including its decisions or determinations, may be the subject of the dispute itself, or the AI output may be adduced in support of a party's position in a case. In this article, we aim to discuss some practical considerations for litigators in preserving, disclosing, advancing and defending challenges against AI evidence in civil proceedings.

Defining AI and AI Evidence

AI is an "intelligent" machine or computer program powered by mathematical rules or algorithms.[1] From a lay person's perspective, it is a type of technology, but in the world of computer science, AI is "an umbrella term for a number of research topics and underlying technologies aimed at furthering the application of computers to intellectual tasks, as well as the tasks themselves".[2] "Machine learning", "deep learning" and "language models" are types of these underlying technologies that make possible a number of AI applications currently in use across sectors.[3]

Many scholars have criticized the use of "intelligence" to describe lines of code.[4] This criticism can be reconciled by distinguishing between "weak AI" — like the various personal assistant applications we now use in our daily lives to turn lights on, choose music, navigate local streets, etc. — and "strong AI," quasi-human level artificial intelligence which does not yet exist.[5]

Regardless of the type of AI system, for the purpose of our article, we refer to "AI evidence" as "evidence generated by AI." Since this evidence is recorded in the form of electronic data,

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[1] John McCarthy, "What is Artificial Intelligence?" (12 November 2007), Stanford University, https://www-formal.stanford.edu/jmc/whatisai.pdf at p 2.

[2] Paul W. Grimm, Maura R. Grossman, and Gordon V. Cormack, "Artificial Intelligence as Evidence," 19 Nw J Tech & Intell Prop 9 (2021) at p 10, https://scholarlycommons.law.northwestern.edu/njtip/vol19/iss1/2.

[3] IBM, "What is artificial intelligence (AI)?" (2023), https://www.ibm.com/topics/artificial-intelligence.

[4] See philosopher John Searle's famous "Chinese Room" argument. Searle argues that, in the same way a person instructed to respond using certain Chinese characters would not necessarily understand Chinese, a machine executing commands does not understand the import of what it is doing. John Searle, "Minds, Brains and Programs" (1980), *Behavioral and Brain Sciences* **3** (3): 417–457. doi:10.1017/S0140525X00005756.

[5] IBM, "What is artificial intelligence (AI)?", *supra* note 3.

AI evidence also falls within the definition of digital evidence, or an "electronic record" under the *Evidence Act*.[6]

AI Evidence in Civil Proceedings

Despite the present novelty of AI evidence, our existing rules of civil procedure and laws of evidence should assist litigators in addressing the challenges stemming from the use of such evidence in the context of civil disputes. In the US, for example, it has been argued by some authors that the Federal Rules of Evidence are sufficient to address AI evidence, so long as judges pay special attention to an AI system's validity (its ability to do what it was designed to do) and reliability (its ability to produce consistent results when applied to similar inputs).[7] In the same vein, the Law Commission of Ontario (LCO) concluded in 2022 that, in the "short term," Ontario's *Rules of Civil Procedure* (*Rules*) and the laws of evidence did not require reforms outside of addressing the length and cost of "AI-based civil proceedings," which "rais[e] concerning questions about access to justice for all but the best-funded litigants."[8] The LCO rightfully identifies the importance of monitoring the law to consider whether AI-specific changes to the *Rules* and law of evidence should be made.[9]

The required level of scrutiny to be placed on AI evidence will depend on the nature of the case. The level of scrutiny should be at its highest when the AI system itself is the subject of the dispute. For example, a claim may center around an alleged defect in an AI system causing personal injury and economic loss to a plaintiff or a class of plaintiffs. In such cases, counsel will need to become, practically speaking, an expert on the AI system itself in order to drive strategy in proving the alleged defect or defend against such allegations. Counsel will want to grapple early on with issues such as AI evidence preservation, collection, and disclosure, and will be greatly assisted by leveraging qualified third-party experts to inform the evidentiary process and protect their client's interests. On the other end of the spectrum are cases where AI systems are being relied upon as evidence in support of legal arguments. In such cases, counsel will need to be adept at challenging or defending the use of AI evidence at trial. In the latter example, the scrutiny required to determine admissibility may not implicate the entire AI system. In this circumstance, the focus of the scrutiny may be on one aspect of the AI system, for example whether bias in the data used by the AI system impacts the reliability of the outcome generated by the AI system.

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[6] *Evidence Act*, RSO 1990, c E.23, s 34.1(1): "'electronic record' means data that is recorded or stored on any medium in or by a computer system or other similar device, that can be read or perceived by a person or a computer system or other similar device…".

[7] Grimm et al., "Artificial Intelligence as Evidence," *supra* note 2.

[8] Law Commission of Ontario, *LCO Final Report: Accountable AI*, June 2022, https://www.lco-cdo.org/wp-content/uploads/2022/06/LCO-Accountable_AI_Final_Report.pdf at p 75 [*Accountable AI*].

[9] *Ibid* at p 79.

Preservation

The technical complexities of AI evidence require parties and prospective parties in litigation to take due care in discharging their evidentiary preservation obligations. The duty to preserve entails taking "reasonable and good-faith steps to preserve potentially relevant electronically stored information" relevant to a pending or reasonably anticipated litigation.[10] In the context of AI evidence, this may well require early involvement of third-party experts to assist with educating counsel on the AI technology itself and identification of relevant evidence that will be required to be preserved. This may include the source code, data used to build and test the underlying algorithm, validation data, summary of error codes, internal and external studies undertaken prior to commercializing the AI technology, and associated manuals and guidelines that may accompany the specific technology.[11] Importantly, these efforts in the context of AI evidence may also necessitate the preservation of associated hardware and software required to interpret such AI evidence. The *Ontario Guidelines on Preservation of Electronic Documents* may well be of assistance to inform the preservation process for counsel.[12] A key consideration in this regard is ensuring that counsel issue appropriate instruction to their client to suspend personal practices that could somehow compromise the integrity of the AI system and/or lead to destruction of necessary evidence.

Discovery and Production

Relevance and proportionality are the two guiding principles in the context of disclosure obligations in civil disputes. In Ontario, Rule 30.02(1) specifically requires parties to a dispute to make disclosure of every "document" relevant to any matter in issue in the action that is in their power, possession, or control. The *Rules* define "document" to include "data and information in electronic form". Further, the *Rules* define "electronic" as including documents "created, recorded, transmitted, or stored in digital form or in other tangible form [...]".[13] The disclosure obligation under the *Rules* does not however extend to "fishing expeditions" or production of documents relevant only to the issue of credibility.[14]

The principle of proportionality informs the extent of disclosure obligations and requires a recognition that the time and expense related to any civil proceeding must be proportionate both to the quantum of damages and the importance of the issues in dispute.[15] As demonstrated in the case of *SecurityinChina International Corp v Bank of Montreal*, the Court will consider

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[10] The Sedona Conference, *The Sedona Canada Principles Addressing Electronic Discovery, Third Edition*, 23 Sedona Conf J 161 (2022) at p 190, Principle 3, 2022 CanLIIDocs 1167. See *Rules of Civil Procedure*, RRO 1990, Reg 194, r 29.1.03(4): "In preparing the discovery plan, the parties shall consult and have regard to the document titled 'The Sedona Canada Principles Addressing Electronic Discovery' developed by and available from The Sedona Conference."

[11] Jesse Beatson, Gerald Chan, and Jill R. Presser, *Litigating Artificial Intelligence* (Toronto: Emond Publishing, 2020), Chapter 3, "Algorithmic Technology and Criminal Law in Canada," p 152, fn 353.

[12] Ontario Bar Association, *Guidelines for the Discovery of Electronic Documents in Ontario* (2004), online: http://www.oba.org/en/pdf_newsletter/E-DiscoveryGuidelines.pdf.

[13] *Rules of Civil Procedure*, RRO 1990, Reg 194, r 1.03(1).

[14] *SecurityinChina International Corp v Bank of Montreal*, 2019 ONSC 7183 at para 8 [*SecurityinChina*].

[15] *Meuwissen v. Perkin*, 2013 ONSC 2732 at para 48.

the principle of proportionality in the context of production motions. The case dealt with alleged unauthorized access to the plaintiff's account leading to 87 alleged unauthorized transfers out of the plaintiff's account, totalling approximately $150,000 over a ten-month period. The plaintiff's disclosure request also included production of documents related to the defendant's security system applied to its website, which was interpreted as "conceivably" including "disclosure of the bank's software coding and algorithms." In refusing this request, the Court found that at the stage in the proceeding such request was both premature and disproportionate to the damages at stake.[16] Further, the Court also identified the grave risks associated with such disclosure for the defendant, which were viewed as incapable of being alleviated through a confidentiality agreement or a sealing order.

As highlighted in *SecurityinChina International Corp*, counsel may consider seeking a sealing order[17] or confidentiality agreement as part of any disclosure associated with an AI system. In fact, in the context of a motion for production of data associated with an owner's AI system, the party defending such a motion may well wish to bring a cross-motion to protect such interests in the event the Court orders disclosure of the requested AI system records.

Where the relevant AI evidence sought to be produced is not in the possession, power, or control of the parties to the litigation, counsel will want to carefully consider the appropriateness of a motion to compel third party productions.[18] Given the complexities associated with AI systems and the potential that third party owners of such systems do not reside in Canada, parties may well wish to engage in such efforts early on in the proceeding and well in advance of trial.

Authentication and Admissibility of AI Evidence

The complexities of the AI system and the evidence it generates will require close examination for the party seeking to admit or challenge the admissibility of such evidence at trial.

Authenticity, while generally a low threshold, should not be taken for granted in the context of AI evidence. Ultimately, the person seeking to introduce AI evidence has the burden of proving that such evidence is what the person purports it to be.[19] This can be established either by direct evidence — *i.e.* testimony or affidavit — or circumstantial evidence.[20] The Ontario *Evidence Act* also codifies the "best evidence rule" for electronic documents — that the evidence "accurately reflects the original information that was input" into the record.[21] The best evidence rule can be satisfied by proving the "integrity of the electronic record" or the system in which it was stored.[22] This may require leading evidence about what information was

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[16] *SecurityinChina*, *supra* note 14 at para 28.
[17] See the well-known test from *Sierra Club of Canada v. Canada (Minister of Finance)*, 2002 SCC 41 at para 53.
[18] See *Rules of Civil Procedure*, RRO 1990, Reg 194, rr 30.10, 31.10.
[19] *Evidence Act*, RSO 1990, c E.23, s 34.1(4).
[20] Gerald Chan and Susan Magotiaux, *Digital Evidence: A Practitioner's Handbook* (Toronto: Emond Montgomery, 2018) at 165 [*Digital Evidence*].
[21] David M. Paciocco, "Proof and Progress: Coping with the Law of Evidence in a Technological Age" (2013) 11:2 CJLT 181 at 193, https://digitalcommons.schulichlaw.dal.ca/cjlt/vol11/iss2/1/.
[22] See *Evidence Act*, RSO 1990, c E.23, ss 34.1(5)-(10).

inputted into an algorithm to generate the result being led, as well as how that subsequent result was electronically stored, and protected from any risk of being manipulated.

Authentication may, however, be particularly complicated in the case of AI evidence generated through machine learning or deep learning, where the system itself led to the creation of such evidence outside the parameters set by its programmers. In such contexts expert evidence may prove useful to challenge the authenticity of AI evidence.

Although in the context of a judicial review in Federal Court, the recent decision in *Barre v Canada (Citizenship and Immigration)*, serves as a reminder of the importance of challenging authenticity.[23] In that case, two Somali women were stripped of their refugee status on grounds of fraud, relying on photos that compared the women with two Kenyans admitted on student visas. The applicants objected to such photographic evidence on grounds that the Canada Border Services Agency failed to disclose the source of the photo comparison and asserted that the Minister used facial recognition software in this process.

On review, Justice Go was critical of the lack of disclosure of "the methodology used in procuring the evidence" to respond to claims that the photo comparison was based on an AI-generated photo comparison or otherwise.[24] Justice Go also highlighted the "danger of relying on facial recognition software."[25] If this AI technology was indeed used, Justice Go held, "it may call into question the reliability of the Kenyan students' photos as representing the Applicants, two women of colour who were viewed as being more likely to be misidentified by facial recognition software than their white cohorts as noted by the studies submitted by the Applicants."[26] Indeed, a 2018 paper found that facial recognition technology has an error rate up to 34% higher for darker-skinned females, compared to lighter skinned males.[27]

The rule against hearsay[28] also has application to AI evidence. While some computer data is entirely auto-generated, and therefore is not an "out-of-court statement,"[29] most AI systems require a human to input data to produce a result. Thus, to avoid the hearsay rule, counsel may wish to make available the individual who inputted the data to provide that evidence directly, and be made available for cross-examination.

But even if AI evidence is otherwise admissible, a court can exclude it if it is more *prejudicial* to a party than *probative* of the issues.[30] Prejudice is an area that counsel will want to carefully consider in the context of AI evidence, particularly where one is able to establish inherent bias

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[23] *Barre v. Canada (Citizenship and Immigration)*, 2022 FC 1078 [*Barre*]
[24] *Ibid* at para 31.
[25] *Ibid* at para 46.
[26] *Ibid* at para 56.
[27] Joy Buolamwini and Timnit Gebru, "Gender Shades: Intersectional Accuracy Disparities in Commercial Gender Classification," *Proceedings of Machine Learning Research* 81:1–15, 2018 Conference on Fairness, Accountability, and Transparency, http://proceedings.mlr.press/v81/buolamwini18a/buolamwini18a.pdf.
[28] Out-of-court statements adduced for the truth of their contents with no opportunity for contemporaneous cross-examination: *R. v. Khelawon*, 2006 SCC 57 at para 35.
[29] Chan and Magotiaux, *Digital Evidence*, *supra* note 20 at 176.
[30] David Paciocco & Lee Stuesser, *The Law of Evidence*, 2d ed (Toronto: Irwin Law, 1999) at 26-29.

in the data used by the AI system to generate a particular outcome, and said bias is relevant to the matters in issue.

Finally, much AI evidence may well need to be introduced through expert opinion — or arguably, the AI evidence itself might constitute opinion evidence. The AI evidence would thus need to follow the criteria for admissibility of expert evidence set out in *R v Mohan*.[31] As the LCO wrote:

> When litigating an AI system – particularly anything more complex than a very basic algorithm – the proceedings risk becoming a battle of experts. Depending on the issue at hand, experts could be required to explain the source code of an AI system, the data the system relies on, the training method, the factors and their weighting, scoring, validation, efforts at correction for bias and discrimination, maintenance, and explainability of a particular system.[32]

Further, per *Mohan*, "expert evidence which advances a novel scientific theory or technique is subjected to special scrutiny to determine whether it meets a basic threshold of reliability and whether it is essential in the sense that the trier of fact will be unable to come to a satisfactory conclusion without the assistance of the expert. The closer the evidence approaches an opinion on an ultimate issue, the stricter the application of this principle."[33] Thus, AI evidence, which often evinces a novel scientific theory or technique, is more likely to be subjected to special scrutiny by the trier of fact.

When evaluating the soundness of AI generated evidence, counsel may want to consider challenging such evidence by considering:

(a) whether the AI system has been sufficiently tested;
(b) whether the AI system has been subjected to peer review and publication;
(c) the known or potential rate of error or the existence of applicable standards; and
(d) whether the AI system's reliability is generally accepted.[34]

Concluding Remarks

The increased use of AI technology in our daily lives is likely to result in a proliferation of AI evidence in disputes and, therefore, in our courts. This will call on litigators to properly address the use of such evidence within the framework imposed by our existing laws of evidence, the *Rules*, and the jurisprudence. Whether the proliferation of such evidence will require specific changes to the current framework remains to be seen. In the meantime, litigators are best to engage with this type of evidence by doing what they do best: asking detailed questions and educating themselves about the technology they are confronting or attempting to rely upon.

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[31] *R v Mohan*, 1994 CanLII 80 (SCC), [1994] 2 SCR 9 at 20.
[32] Law Commission of Ontario, *Accountable AI*, *supra* note 8 at p 78.
[33] *R v Mohan*, *supra* note 31 at 25.
[34] Adapted from *R v J.-L.J.*, 2000 SCC 51, [2000] 2 SCR 600 at para 33, citing *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 US 579 at 593-94 (1993). See also Grimm et al., "Artificial Intelligence as Evidence," *supra* note 2.