EXPERT EVIDENCE ADMISSIBILITY: FROM ROCKY HIGHLANDS TO SWAMPY LOWLANDS, VIA THE MEDICAL STANDARD OF CARE

PATRICK GARON-SAYEGH*

This article proposes an alternative research program for expert evidence law scholarship. The program takes a path that diverges from the majority of writing in this field, in two main ways. First, it eschews the field's predominant epistemological stance. This stance — termed "epistemological rectitude" — primarily emphasizes fact-finding accuracy and rigorous admissibility or "gatekeeping" standards. Second, the proposed program adopts a narrower focus of inquiry than that usually taken: instead of experts in general, the program examines specific types of experts employed in specific types of cases to prove specific elements in dispute. Part I begins by presenting the current state of expert evidence law and highlighting the epistemological rectitude animating both case law and commentary. It then explains how epistemological rectitude elides the degree to which expert evidence law is highly pragmatic and contextual in its practical operation, and the problem that this entails for legal knowledge. To respond to this problem, the proposed program employs a context-driven method, presented at the end of Part II. Part III unpacks and defends this method by adopting a narrow focus: expert evidence on the medical standard of care in malpractice cases. This narrow focus is adopted to show: the limitations inherent to studying experts in general; the extent to which contextual differences matter to the law's operation; and the knowledge to be gained by narrowing inquiries in this manner. The conclusion outlines in broad terms how the proposed program can be developed.

TABLE OF CONTENTS

I. INTRODUCTION

Expert evidence scholars face a choice between two roads. The first road leads to rocky highlands. The second leads to swampy lowlands.

Scholars who head to the rocky highlands seek solid foundations for legal knowledge. These foundations mostly come in the form of rigorous admissibility rules, polished by the Supreme Court of Canada over time and designed to guide trial judges in the messy task of

* Assistant Professor, Faculty of Law, Université de Montréal. I thank Trudo Lemmens and the two anonymous reviewers for their comments on an earlier version of this article. All errors and omissions are mine.

deciding whether to allow expert testimony into evidence. The rules of expert evidence admissibility are foundational in the sense that they apply to all experts in all cases: they are like stones serving as the solid, fixed points upon which expert evidence doctrine is built. These rules are also foundational in a second sense: it is believed that, if properly followed in practice, they can secure the kinds of relevant, reliable, trustworthy evidence upon which genuinely just court decisions must be grounded. Thus, the rules can be seen as doctrinal foundations in law aimed at securing factual foundations in practice. As I argue below, the majority of expert evidence scholarship has taken the road to the rocky highlands and left the swampy lowlands largely unexplored.

The lowlands are swampy because the messy realities of everyday litigation practice drain into them, accumulating over time. The swamp is made up of trial judges' innumerable admissibility rulings, each made in light of the particular, idiosyncratic facts and exigencies of the matter at hand. The lowlands get swampier each day as parties wrangle over the details of their cases — arguing whether *this* expert or *that* element of testimony should be admitted into evidence. The swamp deepens and expands as trial judges weigh the various pros and cons of admitting or excluding testimony, doing their best to apply the rules carved by appellate judges and legal scholars in the rocky highlands, far away from the swamp.

Here I argue that expert evidence scholarship should pay more attention to the swampy lowlands of litigation practice. Paying more attention to the swamp and its particulars is justified by features of expert evidence law that are frequently overlooked. These features all relate to the fact that expert evidence law is highly contextual in its operation. Taking these features into account requires that we diversify the array of concerns addressed by expert evidence scholarship, and recalibrate our conception of this area to include a broader range of inquiries within its scope.

I begin Part II by presenting the current state of expert evidence law. I then argue that most writing in this area adopts a stance that privileges "epistemological rectitude," thereby narrowing the focus of inquiry to the issue of accurate fact-finding. Without denying the importance of accurate fact-finding, I defend the view that an alternate stance can and should be taken toward expert evidence law (at least occasionally). This alternate stance must eschew epistemological rectitude to free analysts, who should investigate the broader range of issues that arise when expert evidence law is brought down from the judicial highlands into swampy, context-laden practice.

Getting to a broader view of expert evidence law and scholarship requires that we take a seemingly counterintuitive route: that of narrowing the focus of our individual investigations. Instead of examining expert evidence law in terms of it applying to all experts in all cases, we should look more closely at how specific types of experts are employed in specific types of cases to prove specific elements of a case. This entails looking less at the trim and polished rules carved by appellate courts, whose quarries rest firmly in the judicial highlands, and more at the rough and messy use of said rules in the practice of trial courts, as they work their way through swampy particulars. In other words, we need to shift away from *what* the rules are (or should be) to *how* they are deployed in practice. In Part II, I concentrate on why this shift is warranted and propose a method to undertake it.

In Part III, I unpack the method proposed in Part II. As mentioned above, the method requires that we examine specific types of experts in specific types of cases working to prove specific elements in dispute. This entails directing our attention toward "nexus types," which I define at the beginning of Part III. I then narrow the focus by arguing that the nexus type method should be directed toward the use of medical experts to establish the standard of care in medical malpractice cases. I dedicate most of Part III to defending this as a valuable locus of investigation. In essence, examining medical malpractice is justified because the differences between expert evidence admissibility in civil litigation and criminal prosecution have become largely invisible by lack of attention. That these differences can have a significant impact on the law's operation is underappreciated because expert evidence jurisprudence and scholarship have mostly focused on criminal evidence. By examining expert evidence admissibility in the civil context, we can shed light on aspects that have received insufficient attention. This can improve our understanding of expert evidence law as it unfolds in the civil context. It can also serve as a valuable counterpoint perspective on existing knowledge grounded in the criminal context. There is also added value in focusing more specifically on the medical standard of care. I discuss this in the final subsections of Part III.

Space constraints do not allow me to wade into the swamp in this article, which is limited to proposing a research program whose concrete implementation must wait. I return to this point in the Conclusion, where I briefly sketch one possible path for future researchers to take.

II. NARROWING THE FOCUS OF INQUIRY IN EXPERT EVIDENCE LAW

A. EXPERT EVIDENCE LAW IN CANADA

The legal framework governing the admissibility of expert witness evidence in Canada consists of a two-step test, which received its most significant recent update in *White Burgess Langille Inman v. Abbott and Haliburton Co*.[1] This test began to take shape in *R v. Mohan*,[2] decided two decades earlier.[3] In *Mohan*, the Supreme Court of Canada set out four "threshold" criteria for the admissibility of expert witness evidence. They are: (1) the evidence must be relevant; (2) the evidence must be necessary; (3) the evidence must not be subject to any other exclusionary rule; and (4) the expert giving the evidence must be properly qualified.[4] Although the law has evolved since *Mohan* (as discussed below), these criteria remain central to admissibility analyses and form the bulk of the test's first step, which is aimed at evaluating threshold admissibility. Evidence that passes the first step is subject to the second discretionary "gatekeeping" step in which the judge must weigh the evidence's benefits against its costs and potential risks.[5]

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1 2015 SCC 23 at para 1 [*WBLI*].
2 [1994] 2 SCR 9 [*Mohan*].
3 See *R v Bingley*, 2017 SCC 12 [*Bingley*] ("[t]he modern legal framework for the admissibility of expert opinion evidence was set out in *Mohan* and clarified in [*WBLI*]" at para 13). See also Sidney N Lederman, Alan W Bryant & Michelle K Fuerst, *Sopinka, Lederman & Bryant: The Law of Evidence in Canada*, 5th ed (Toronto: LexisNexis Canada, 2018) at paras 12.42ff.
4 *Mohan*, *supra* note 2 at 20ff. See also *WBLI*, *supra* note 1 at para 17.
5 *R v Abbey*, 2017 ONCA 640 at paras 119ff [*Abbey* 2017]. See also *R v France*, 2017 ONSC 2040 at paras 9ff [*France*].

Since *Mohan*, the test for expert evidence admissibility — hereafter referred to as the "*Mohan–WBLI* test"[6] — and case law applying it have been deeply marked by a concern for the "special dangers" of expert evidence. Indeed, these are mentioned in *WBLI*'s opening aphorism: "Expert opinion evidence can be a key element in the search for truth, but it may also pose special dangers."[7] For the *Mohan* Court these special dangers were, *inter alia*: that expert evidence might be misused and distort the fact-finding process; that expert witnesses might usurp the judge's (or jury's) role as fact-finder; and that the "cost" of expert evidence (that is, its prejudicial impact on the trial process) might outweigh its benefit.[8]

In the years since *Mohan*, the Supreme Court of Canada's pronouncements on the law of expert evidence have "progressively tightened the rules of admissibility and enhanced the trial judge's gatekeeping role."[9] The task of the gatekeeper judge is, essentially, "to ensure that expert opinion evidence meets certain basic standards before it is admitted."[10] The guiding theory is that such standards, when properly enforced by gatekeeping judges, protect against expert evidence's special dangers.

The idea that trial judges must be gatekeepers vis-à-vis expert witness evidence was initially formulated by the Supreme Court of the United States in *Daubert v. Merrell Dow Pharmaceuticals, Inc*.[11] Handed down shortly before *Mohan*, the *Daubert* decision was a key development in US expert evidence law.[12] *Daubert* also influenced the evolution of Canadian law in decisions that followed *Mohan*.[13] Most notably, the term "gatekeeper" was adopted

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6 I use the phrase "*Mohan–WBLI* test" to emphasize that the law has evolved since *Mohan*, while recognizing the singularly important place that *Mohan* holds as a turning point in Canadian expert evidence jurisprudence. See *Abbey* 2017, *ibid* at paras 46–47; Glenn R Anderson, *Expert Evidence*, 3rd ed (Markham: LexisNexis Canada, 2014) (*Mohan* is the "Supreme Court of Canada's most important decision regarding expert evidence" at para 4.1). It should be noted that the phrase "*Mohan* test" is still in use, which could be misleading given the law's evolution since *Mohan*: see e.g. *R v McManus*, 2017 ONCA 188 at para 66; *R v Soni*, 2016 ABCA 231 at para 12; *Li v British Columbia*, 2019 BCSC 1819 at para 73.

7 *WBLI*, *supra* note 1 at para 1. See also Lederman, Bryant & Fuerst, *supra* note 3 at para 12.43.

8 *Mohan*, *supra* note 2 at 21–26. See also Anderson, *Expert Evidence*, *supra* note 6 at para 4.12 (for a list of the dangers associated with expert evidence as per *Mohan*).

9 *WBLI*, *supra* note 1 at paras 1, 16–20.

10 *Ibid* at para 1.

11 509 US 579 (1993) at 589, 597, 600 [*Daubert*]. The literature discussing *Daubert* is vast, especially when we consider that *Daubert* is the first in a trilogy of decisions. The other two decisions in the trilogy are *General Electric Co v Joiner*, 522 US 136 (1997), and *Kumho Tire Co v Carmichael*, 526 US 137 (1999). See generally David L Faigman, "The *Daubert* Revolution and the Birth of Modernity: Managing Scientific Evidence in the Age of Science" (2013) 46:3 UC Davis L Rev 893 at 910ff; David E Bernstein & Jeffrey D Jackson, "The *Daubert* Trilogy in the States" (2004) 44:3 Jurimetrics 351; Edward J Imwinkelried, "Regulating Expert Evidence in US Courts: Measuring *Daubert*'s Impact" in Paul Roberts & Michael Stockdale, eds, *Forensic Science Evidence and Expert Witness Testimony: Reliability through Reform?* (Cheltenham: Edward Elgar, 2018) 275 at 281–86.

12 *Daubert* is consistently identified as a turning point in American case law on expert evidence. See Faigman, *ibid* at 895; Margaret A Berger, "The Admissibility of Expert Testimony" in Federal Judicial Center, National Research Council, *Reference Manual on Scientific Evidence*, 3rd ed (Washington, DC: The National Academies Press, 2011) 11 (*Daubert* "ushered in a new era with regard to the admissibility of expert testimony" at 12); Paul C Giannelli, "*Daubert* 'Unbound'" (2002) 17:3 Crim Justice 55 (*Daubert* "is perhaps the most important evidence case ever decided" at 55); Anderson, *Expert Evidence*, *supra* note 6 at 163. See generally David E Bernstein, "Junk Science in the United States and the Commonwealth" (1996) 21:1 Yale J Intl L 123 at 135; Charles Nesson & John Demers, "Gatekeeping: An Enhanced Foundational Approach to Determining the Admissibility of Scientific Evidence" (1998) 49:2 Hastings LJ 335 at 337; Margaret A Berger, "What Has a Decade of *Daubert* Wrought?" (2005) 95:S1 American J Public Health S59.

13 Regarding *Daubert*'s influence on Canadian law, see generally The Honourable Mr. Justice Ian Binnie, "Science in the Courtroom: The Mouse That Roared" (2007) 56 UNBLJ 307 at 316–17; Alan D Gold, *Expert Evidence in Criminal Law: The Scientific Approach*, 2nd ed (Toronto: Irwin Law, 2009) at 37; National Judicial Institute, *Science Manual for Canadian Judges* (Ottawa: National Judicial Institute,

into the Supreme Court of Canada's expert evidence jurisprudence in *R v. J-LJ*.[14] The *J-LJ* decision is also notable for having further tightened admissibility requirements by insisting that "novel science" be subject to "special scrutiny" before being admitted as evidence.[15] Drawing on criteria developed in *Daubert*, the Supreme Court in *J-LJ* added a fifth threshold criterion — reliability — for cases in which proffered expert evidence is based on novel science.[16] Moreover, in *J-LJ* the Supreme Court reiterated concerns regarding the dangers of expert witness evidence, namely the risks associated with "junk science" and "evidence cloaked under the mystique of science."[17] Note that the reliability criterion has since become an overarching admissibility requirement for *all* forms of expert evidence, and not only evidence based on novel science.[18]

Gatekeeping, then, has been the order of the day since *Mohan*. In the words of Justice Cromwell, the "unmistakable overall trend of the jurisprudence … has been to tighten the admissibility requirements and to enhance the judge's gatekeeping role."[19] *WBLI* was yet another step in this tightening of admissibility requirements. In its reasons, the Supreme Court in *WBLI* enshrined independence and impartiality as threshold requirements for expert evidence admissibility.[20] These "new"[21] threshold requirements for admissibility now fall under the "properly qualified expert" criterion of the *Mohan–WBLI* test.[22]

2013) at 34 [NJI, *Science Manual*]. Note that Common Law rules of evidence are applicable in Quebec insofar that they are consistent with the *Civil Code of Quebec* (CCQ), the *Code of Civil Procedure* (CCP), and applicable statutes: see Jean-Claude Royer & Sophie Lavallée, *La preuve civile*, 4th ed (Cowansville: Yvon Blais, 2008) at para 459. The law governing testimonial evidence in Quebec is deeply influenced by the common law and common law precedents are an important interpretative resource in Quebec; see Royer & Lavallée, *ibid* at paras 43, 47–48, 449. See also Rosalie Jukier, "The Impact of Legal Traditions on Quebec Procedural Law: Lessons From Quebec's New Code of Civil Procedure" (2015) 93:1 Can Bar Rev 211. See e.g. *Cardinal c Bonnaud*, 2018 QCCA 1357 at 30–31, 59, 60, n 36.

14 2000 SCC 51 at paras 1, 28–29, 45, 61 [*J-LJ*]; note that the *J-LJ* Court interpreted *Mohan* and two other decisions (*R v Seaboyer; R v Gayme*, [1991] 2 SCR 577 and *R v Malbœuf*, [1997] OJ No 1398 (QL) (CA), leave to appeal refused, [1998] 3 SCR vii) as bearing on the judge's gatekeeping role, even though *Mohan* and these two decisions did not use the terms "gatekeeper" or "gatekeeping."

15 *J-LJ*, *ibid* at paras 29–36. See also David M Paciocco & Lee Stuesser, *The Law of Evidence*, 7th ed (Toronto: Irwin Law, 2015) at 225ff; William G Horton, "The Admissibility of Evidence Based on Novel Science" (2006) 31:4 Adv Q 469 at 485ff.

16 *J-LJ*, *ibid* at paras 33–35. Note that the Supreme Court of Canada revisited the specific question of novel science in *R v Trochym*, 2007 SCC 6 [*Trochym*] and affirmed the approach it had put forward in *J-LJ*; see *Trochym*, *ibid* at paras 27, 36–37. See also *Abbey* 2017, *supra* note 5 at para 48; *WBLI*, *supra* note 1 at para 23.

17 *J-LJ*, *ibid* at paras 25–26.

18 See the Supreme Court of Canada's and the Ontario Court of Appeal's recent formulations of the *Mohan–WBLI* test, wherein reliability is included in the second, gatekeeping stage of the admissibility test (which is discussed at note 68 and accompanying text below): *Abbey* 2017, *supra* note 5 at paras 48, 54; *WBLI*, *supra* note 1 at para 24. See also Lisa Dufraimont, "New Challenges for the Gatekeeper: The Evolving Law on Expert Evidence in Criminal Cases" (2012) 58:3&4 Crim LQ 531 at 541ff [Dufraimont, "New Challenges"].

19 *WBLI*, *ibid* at para 20.

20 *Ibid* ("a proposed expert's [duty of] independence and impartiality go to admissibility and not simply to weight and there is a threshold admissibility requirement in relation to this duty" at paras 34ff).

21 I say "new" because expert witnesses' duty of independence and impartiality was well recognized by the courts before *WBLI*, and therefore not genuinely "new": see *WBLI*, *ibid* at paras 26–35. See also Royer & Lavallée, *supra* note 13 at para 468; Lederman, Bryant & Fuerst, *supra* note 3 at para 12.105; *Alfano v Piersanti*, 2012 ONCA 297 at paras 96–120, leave to appeal to SCC refused, [2012] SCCA No 309 [*Alfano*]. One of the key questions in *WBLI* was whether the duty of independence and impartiality should be considered as a matter of admissibility or weight of expert evidence (that is, the question was not whether this duty existed): see *WBLI*, *ibid* at para 13.

22 *WBLI*, *ibid* at para 53. See also *Abbey* 2017, *supra* note 5 at para 48; Lederman, Bryant & Fuerst, *ibid* at para 12.54; *France*, *supra* note 5 at paras 14–17.

In light of the above, I can say that expert evidence jurisprudence has privileged a certain stance toward expert evidence over the past quarter century. This stance has four main features. First, it perceives expert evidence as a potential threat to the integrity of the trial process. Second, it focuses on the need to safeguard against this threat. Third, it insists on articulating rigorous admissibility standards designed to act as safeguards. Fourth, it emphasizes the trial judge's duty as gatekeeper, to apply these admissibility standards–safeguards. It should be noted that this stance is privileged in both Canadian and American jurisprudence. Indeed, the approach toward expert evidence in both countries since *Mohan* and *Daubert* is "broadly consistent."[23] The *J-LJ* decision provides some of the most visible examples of this consistency, given that the Supreme Court insisted on the term "gatekeeper" and suggested that factors listed in *Daubert* "could be helpful in evaluating … novel science."[24] There are, of course, non-trivial differences in expert evidence law's evolution in both countries since *Mohan* and *Daubert*.[25] But these differences do not diminish the consistency of the stance taken vis-à-vis expert evidence in both countries' jurisprudence.

The jurisprudence's stance since *Mohan* and *Daubert* exhibits an overriding concern for what I call "epistemological rectitude." By this I mean that the dominant concern of expert evidence jurisprudence has been to ensure that the decisions of courts are based on "true facts," or "facts proved to be true"[26] via appropriate means (experts, methods, theories, and so on). From this perspective, judges' task is keep experts in their "proper" place by policing the line — or the gate — that separates appropriate and inappropriate means of proof or, alternatively, the line between "good" science and "junk" science, or between science and non-science.[27] The rules of evidence — most notably the admissibility requirements set out in the *Mohan–WBLI* test — are there to guide judges in this task.

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23 The Honourable Stephen T Goudge, *Inquiry into Pediatric Forensic Pathology in Ontario*, vol 3 (Toronto: Ontario Ministry of the Attorney General, 2008) at 480ff [Goudge, *Inquiry*]. See generally Gary Edmond et al, "Admissibility Compared: The Reception of Incriminating Expert Evidence (i.e., Forensic Science) in Four Adversarial Jurisdictions" (2013) 3 U Denver Crim L Rev 31.

24 *J-LJ*, *supra* note 14 at para 33. See also *Trochym*, *supra* note 16 at paras 36–37.

25 See generally Gabriel Stettler, "L'administration de la preuve scientifique en droit nord-américain" (2019) 97:1 Can Bar Rev 177 at 206ff.

26 William Twining, *Rethinking Evidence: Exploratory Essays*, 2nd ed (Cambridge, UK: Cambridge University Press, 2006) at 199.

27 See generally Gary Edmond & David Mercer, "Experts and Expertise in Legal and Regulatory Settings" in Gary Edmond, ed, *Expertise in Regulation and Law* (Aldershot: Ashgate, 2004) 1; Gary Edmond & David Mercer, "The Invisible Branch: The *Authority* of Science Studies in Expert Evidence Jurisprudence" in Gary Edmond, ed, *Expertise in Regulation and Law*, *ibid*, 197; Gary Edmond, "Whigs in Court: Historiographical Problems with Expert Evidence" (2002) 14:1 Yale JL & Human 123; Gary Edmond & David Mercer, "Trashing 'Junk Science'" (1998) Stan Tech L Rev 3; Gary Edmond & David Mercer, "Keeping 'Junk' History, Philosophy and Sociology of Science out of the Courtroom: Problems with the Reception of *Daubert v. Merrell Dow Pharmaceuticals Inc*" (1997) 20:1 UNSWLJ 48.

The search for epistemologically rectitudinous facts is a central value of evidence law.[28] Consider for example the Supreme Court of Canada's statement that the "trial judge acts as gatekeeper to ensure that expert evidence enhances, rather than distorts, the fact-finding process."[29] This statement implies that there are true, or at the very least trustworthy, facts to be found regarding the reality of a case. It also implies that expert evidence can provide more or less accurate — that is, undistorted or truthful — representations of reality.[30] In fairness, however, "true" does not here refer to some kind of ultimate Truth, but rather small-t truths. The task of doing justice between opposed parties necessarily involves values other than the pursuit of truth — values such as procedural fairness and efficiency — which must be balanced against the search for truth.[31] Reference to "true facts" in the context of evidence law is, therefore, best understood as a reference to facts that are *as untainted as possible* by the competing interests of parties engaged in an adversarial dispute.[32] How much scrutiny judges can and should engage in to ensure that they obtain such untainted facts depends on what is practically achievable within the confines of the trial process (and the justice system as a whole). We can see the concern for practicality in evidence law's recent evolution, which privileges a "purposive approach" that accords a measure of flexibility and discretion to judges when deciding whether or not evidence should be admitted, based on the particular context of each case.[33] Nonetheless, even within a flexible and purposive approach, the

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28 See e.g. Lederman, Bryant & Fuerst, *supra* note 3 ("[t]he essential purpose and feature of the trial system in our society is the search for truth" at para 1.38). See also France Houle & Clayton Peterson, "The Many Faces of Truth in the Law of Evidence" (2021) 102 SCLR (2d) 173; Susan Haack, *Evidence Matters: Science, Proof, and Truth in the Law* (New York: Cambridge University Press, 2014) ("modern evidentiary procedures … presuppose that evidence may be objectively better [and] that the better a claim is warranted by the evidence, the likelier it is to be true" at 3–4; "substantive justice requires not only just laws, and just administration of those laws, but also factual truth — objective factual truth" at 27–28); Mirjan Damaška, "Truth in Adjudication" (1998) 49:2 Hastings LJ 289 ("[o]ne of the working assumptions of the practice of adjudication is that truth is in principle discoverable, and that accuracy in fact-finding constitutes a precondition for a just decision" at 289). See generally Ho Hock Lai, *A Philosophy of Evidence Law: Justice in the Search for Truth* (Oxford: Oxford University Press, 2008) at 51ff.

29 *Bingley*, *supra* note 3 at para 13.

30 Lederman, Bryant & Fuerst, *supra* note 3 ("many of the rules of evidence are concerned with ensuring the reliability or accuracy of the evidence that the court receives" at para 1.39; the terms "accuracy" and "reliability" should be treated with caution, however: while scientists can and do often distinguish between validity, reliability, and accuracy, legal writing tends "to cobble these distinct scientific concepts together" at para 12.127). See also Anderson, *Expert Evidence*, *supra* note 6 at paras 11.17–11.24. See also the notion of "veritism" — that is, "the law's concern for evaluating a factual proposition by reference to its conformance to absolute truth" — as discussed in Russell Brown, "The Possibility of 'Inference Causation': Inferring Cause-in-Fact and the Nature of Legal Fact-Finding" (2010) 55:1 McGill LJ 1 at 10, n 41, 13ff.

31 Anderson, *Expert Evidence*, *ibid* at paras 2.12–2.16; Lederman, Bryant & Fuerst, *ibid* at paras 1.45–1.49, 1.50, 1.123ff; Royer & Lavallée, *supra* note 13 at para 963; Damaška, *supra* note 28 at 301; Lisa A Silver, "Back to *Burgess*: The Impact of the *White Burgess* Expert Evidence Regime in Alberta Decisions" (2019) 57:1 Alta L Rev 1 at 24–26. This balancing must be carried out with great care, especially in the criminal context: see David M Paciocco, "Evidence About Guilt: Balancing the Rights of the Individual and Society in Matters of Truth and Proof" (2001) 80:1&2 Can Bar Rev 433 [Paciocco, "Evidence About Guilt"]; David M Paciocco, "Balancing the Rights of the Individual and Society in Matters of Truth and Proof: Part II - Evidence About Innocence" (2002) 81:1 Can Bar Rev 39 [Paciocco, "Evidence About Innocence"].

32 Sheila Jasanoff proposes the term "serviceable truth" to highlight the balancing required in the legal process' search for facts; a serviceable truth is "a state of knowledge that satisfies tests of scientific acceptability and supports reasoned decision making, but also assures those exposed to risk that their interests have not been sacrificed on the altar of an impossible scientific certainty": Sheila Jasanoff, "Serviceable Truths: Science for Action in Law and Policy" (2015) 93:7 Tex L Rev 1723 at 1730.

33 Paciocco & Stuesser, *supra* note 15 at 8ff (on the "purposive approach"); Lederman, Bryant & Fuerst, *supra* note 3 at paras 1.123ff (on flexibility and discretion exercised in context). See generally, Stettler, *supra* note 25 at 190–92. See also Lisa Dufraimont, "Realizing the Potential of the Principled Approach to Evidence" (2013) 39:1 Queen's LJ 11 at 14 [Dufraimont, "Principled Approach"].

courts have not abandoned the concern for epistemological rectitude in the fact-finding process.

Legal scholarship on expert evidence law has largely shared the jurisprudence's overriding concern for epistemological rectitude. The literature is generally dominated by writing aimed at documenting the various threats posed by untrustworthy expert evidence and proposing solutions to overcome those threats.[34] This writing exhibits the "optimistic rationalism" described by William Twining: the belief that carefully considered recommendations can "in practice lead to significant increases in the level of rationality in adjudication."[35] We find, for example, much writing devoted to improving how the trial process handles scientific evidence, especially evidence developed within forensic sciences.[36] Other branches of the literature focus on the behaviours or biases of lawyers and expert witnesses.[37] Still other writing advocates for broader institutional interventions, for example: nonpartisan scientific organizations could produce (either alone or in collaboration) "premade, canned, modular

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34 See e.g. Stettler, *ibid* at 227–39; Paul Roberts & Michael Stockdale, eds, *Forensic Science Evidence and Expert Witness Testimony: Reliability through Reform?* (Cheltenham: Edward Elgar, 2018); Jason M Chin, "*Abbey* Road: The (Ongoing) Journey to Reliable Expert Evidence" (2018) 96:3 Can Bar Rev 422; Jason M Chin, Jan Tomiska & Chen Li, "Drawing the Line Between Lay and Expert Opinion Evidence" (2017) 63:1 McGill LJ 89; Mingxiao Du, "Legal Control of Expert Witness Bias" (2017) 21:1&2 Intl J Evidence & Proof 69; Jason M Chin & Scott Dallen, "*R. v. Awer* and the Dangers of Science in Sheep's Clothing" (2016) 63:4 Crim LQ 527; David M Paciocco, "Unplugging Jukebox Testimony in an Adversarial System: Strategies for Changing the Tune on Partial Experts" (2009) 34:2 Queen's LJ 565 [Paciocco, "Jukebox"]; Jennifer L Mnookin, "Expert Evidence, Partisanship, and Epistemic Competence" (2008) 73:3 Brook L Rev 1009; Glenn R Anderson, "Clear and Partial Danger: Defending Ourselves Against the Threat of Expert Bias" (2004) 83:2 Can Bar Rev 285. For an example in general evidence scholarship, see Lisa Dufraimont, "Regulating Unreliable Evidence: Can Evidence Rules Guide Juries and Prevent Wrongful Convictions?" (2008) 33:2 Queen's LJ 261.

35 Twining, *supra* note 26 at 79.

36 See e.g. Jason M Chin & D'Arcy White, "Forensic Bitemark Identification Evidence in Canada" (2019) 52:1 UBC L Rev 57; Jason M Chin, Bethany Growns & David T Mellor, "Improving Expert Evidence: The Role of Open Science and Transparency" (2019) 50:2 Ottawa L Rev 365; Emma Cunliffe, "A New Canadian Paradigm? Judicial Gatekeeping and the Reliability of Expert Evidence" in Roberts & Stockdale, *supra* note 34, 310; Jason M Chin & Helena Likwornik, "*R v Bingley* and the Importance of Scientifically Guided Legal Analysis" (2017) 43:1 Queen's LJ 33; Kristy A Martire & Gary Edmond, "Rethinking Expert Opinion Evidence" (2017) 40:3 Melbourne UL Rev 967; Jodi Lazare, "Judging the Social Sciences in *Carter v Canada (AG)*" (2016) 10:1 McGill JL & Health S35 at S48ff; Jennifer E Laurin, "Criminal Law's Science Lag: How Criminal Justice Meets Changed Scientific Understanding" (2015) 93:7 Tex L Rev 1751; Gary Edmond, "Forensic Science Evidence and the Conditions for Rational (Jury) Evaluation" (2015) 39:1 Melbourne UL Rev 77; Gary Edmond, Matthew B Thompson & Jason M Tangen, "A Guide to Interpreting Forensic Testimony: Scientific Approaches to Fingerprint Evidence" (2014) 13:1 L Probability & Risk 1; Gary Edmond & Kent Roach, "A Contextual Approach to the Admissibility of the State's Forensic Science and Medical Evidence" (2011) 61:3 UTLJ 343; Gold, *supra* note 13; David Paciocco, "Taking a 'Goudge' out of Bluster and Blarney: An 'Evidence-Based Approach' to Expert Testimony" (2009) 13:2 Can Crim L Rev 135 [Paciocco, "Evidence-Based Approach"]; Erica Beecher-Monas, "Reality Bites: The Illusion of Science in Bite-Mark Evidence" (2009) 30:4 Cardozo L Rev 1369; Scott Brewer, "Scientific Expert Testimony and Intellectual Due Process" (1998) 107:6 Yale LJ 1535; P Brad Limpert, "Beyond the Rule in *Mohan*: A New Model for Assessing the Reliability of Scientific Evidence" (1996) 54:1 UT Fac L Rev 65.

37 See e.g. Brandon Trask & Evan Podaima, "Blurred Lines: A Critical Examination of the Use of Police Officers and Police Employees as Expert Witnesses in Criminal Trials" (2021) 44:6 Man LJ 48; Jason M Chin, Michael Lutsky & Itiel E Dror, "The Biases of Experts: An Empirical Analysis of Expert Witness Challenges" (2019) 42:4 Man LJ 21; Gary Edmond, Kristy Martire & Mehera San Roque, "Expert Reports and the Forensic Sciences" (2017) 40:2 UNSWLJ 590; Emma Cunliffe, ed, *The Ethics of Expert Evidence* (Abingdon: Routledge, 2017); Gary Edmond, "(Ad)Ministering Justice: Expert Evidence and the Professional Responsibilities of Prosecutors" (2013) 36:3 UNSWLJ 921; Steven Lubet, "Expert Witnesses: Ethics and Professionalism" (1999) 12:3 Geo J Leg Ethics 465; Daniel J Capra, "Introduction," Symposium: Ethics and Evidence, (2007) 76:3 Fordham L Rev 1225; John Leubsdorf, "Evidence Law as a System of Incentives" (2010) 95:5 Iowa L Rev 1621; Carla L MacLean, Lynn Smith & Itiel E Dror, "Experts on Trial: Unearthing Bias in Scientific Evidence" (2020) 53:1 UBC L Rev 101.

testimony" bearing on specific topics;[38] judges and lawyers could be exposed to "the advice of peak scientific organisations and mainstream science."[39] Perhaps the most obvious institutional interventions are those undertaken by the Canadian and US federal judiciaries, to improve judges' training and access to scientific information they can use in practice, namely via "science manuals."[40]

Many of these areas of writing overlap. Any account of the field of expert evidence law scholarship simplifies it to some extent. My purpose here is not to give an exhaustive account of the entire field, but to canvass one of its dominant trends: that it is primarily concerned with securing the epistemological rectitude of expert evidence.[41]

That said, concern for epistemological rectitude is well-founded. There are too many examples of tragic miscarriages of justice attributable to shoddy expert witness evidence. A number of public inquiries[42] have made clear that this is an area of great concern, which strikes at the heart of some of our justice system's most fundamental values.[43]

However, the emphasis on epistemological rectitude — and, more generally, the sustained cultivation of optimistic rationalism — can lead us to lose sight of the pragmatic nature of expert evidence admissibility decisions.[44] These decisions must balance heterogeneous values and exigencies that arise out of the particular contexts in which they are made. They are, in other words, highly situated in time and place. Timeless and placeless epistemological standards that aim to secure access to "proper knowledge," "good science," or "more

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38 Jennifer L Mnookin, "Constructing Evidence and Educating Juries: The Case for Modular, Made-in-Advance Expert Evidence about Eyewitness Identifications and False Confessions" (2015) 93:7 Tex L Rev 1811 at 1814.

39 Gary Edmond, "Re-assessing Reliability" in Roberts & Stockdale, *supra* note 34, 71 at 104. See also Gary Edmond, "Advice for the Courts?: *Sufficiently Reliable* Assistance with Forensic Science and Medicine (Part 2)" (2012) 16:3 Intl J Evidence & Proof 263; Emma Cunliffe & Gary Edmond, "Reviewing Wrongful Convictions in Canada" (2017) 64:3&4 Crim LQ 473 [Cunliffe & Edmond, "Wrongful Convictions"].

40 NJI, *Science Manual*, *supra* note 13; Federal Judicial Center, National Research Council, *supra* note 12. For a critical discussion of an earlier version of the American manual see John M Conley & David W Peterson, "The Science of Gatekeeping: The Federal Judicial Center's New *Reference Manual on Scientific Evidence*" (1996) 74:4 NCL Rev 1183.

41 William Twining would probably go further and see this concern dominate the whole of evidence law scholarship; see generally Twining, *supra* note 26 at 35ff, 78, 171, 199 (noting how the history of secondary writing on evidence law follows what he calls the "rationalist tradition of evidence scholarship," and that this tradition is "remarkably homogeneous in respect of its basic underlying assumptions"). See also Donald Nicolson, "Truth, Reason and Justice: Epistemology and Politics in Evidence Discourse" (1994) 57:5 Mod L Rev 726.

42 See e.g. The Honourable Judith C Beaman, *Harmful Impacts: The Reliance on Hair Testing in Child Protection: Report of the Motherisk Commission* (Toronto: Ontario Ministry of the Attorney General, 2018); The Honourable Susan E Lang, *Report of the Motherisk Hair Analysis Independent Review* (Toronto: Ontario Ministry of the Attorney General, 2015); Goudge, *Inquiry*, *supra* note 23; The Honourable Edward P MacCallum, *Report of the Commission of Inquiry into the Wrongful Conviction of David Milgaard* (Saskatoon: 2008); The Honourable Patrick J LeSage, *Report of the Commission of Inquiry into Certain Aspects of the Trial and Conviction of James Driskell* (Winnipeg: Manitoba Justice Administration, 2007); The Honourable Fred Kaufman, *Report of the Kaufman Commission on Proceedings Involving Guy Paul Morin* (Toronto: Ontario Ministry of the Attorney General, 1998). See also *Re Truscott*, 2007 ONCA 575. See generally Emma Cunliffe & Gary Edmond, "What Have We Learned? Lessons from Wrongful Convictions in Canada" in Benjamin L Berger, Emma Cunliffe & James Stribopoulos, eds, *To Ensure that Justice is Done: Essays in Memory of Marc Rosenberg* (Toronto: Thomson Reuters, 2017) 129; Cunliffe & Edmond, "Wrongful Convictions," *supra* note 39; Bruce MacFarlane et al, "Anatomy of a Public Inquiry" (2013) 37:1 Man LJ 101.

43 See e.g. Stettler, *supra* note 25 at 190–92; The Right Honourable Beverley M McLachlin, "Introduction" in NJI, *Science Manual*, *supra* note 13, 11 at 12; *Trochym*, *supra* note 16 at para 1.

44 See Michael L Seigel, "A Pragmatic Critique of Modern Evidence Scholarship" (1994) 88:3 Nw UL Rev 995.

rational" decision-making must be heavily adapted as they are "brought down" into the swamp of practice. In this transition from highlands to lowlands, litigants wrestle over these standards, mobilizing the particulars of their case as best they can to convince judges that the standard should cut their way in the case at hand.

Which brings me to the following claim: a narrow focus is justified when studying expert evidence because this is an area of the law where "context is everything."[45] I explain why in the following Section, which begins by presenting two senses in which we can say that "context is everything" in expert evidence law. The first sense is general, while the second is more specific. I then insist on the second sense, explain what it entails, and why a narrow analytical focus is the appropriate stance to take in response to it.

B. CONTEXT IS EVERYTHING

The first general sense of "context is everything" applies to a great many areas of the law, perhaps even the law as a whole. The common law has grown out of innumerable decisions made by judges in particular cases over the centuries, such that the law can reasonably be described as "the product of a prolonged exercise in casuistry."[46] And for centuries, lawyers and judges have given pride of place to the study of cases and their contextual nuances. Such study was seen as "the principal mechanism whereby a person came to rank as a truly learned lawyer."[47] Understanding law was a matter of understanding cases, which served as examples of how to skillfully apply the law "to the myriad circumstances of life."[48]

The fundamental role of individual cases — and therefore of their contexts — persists to this day. It persists in the sense that cases are embedded in the law, and serve as essential interpretative resources. It also persists via the doctrine of precedent, as final decisions become authoritative statements of the law, embedding ever more cases into it.[49] Finally, the fundamental role of cases persists in the teaching and learning of the law (in common law jurisdictions at least). Since the nineteenth century, legal education has largely revolved around understanding the law in terms of leading cases, which are seen to provide the best illustrations of legal principles and rules.[50] Law students learn the law by learning how to identify issues and key facts, and thinking about how the result in a case might have differed if certain facts of the case, or its context, had been different.[51]

In general, then, "context is everything" can be said of all areas of the law and all cases, including expert evidence law. Expert evidence law is a product of the common law (even in Quebec, where common law rules and principles of evidence apply unless incompatible

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45 David M Paciocco, "Context, Culture and the Law of Expert Evidence" (2001) 24:1 Adv Q 42 at 43 [Paciocco, "Context, Culture"].

46 AW Brian Simpson, *Leading Cases in the Common Law* (Oxford: Oxford University Press, 1995) at 1. On the method of casuistry and its history, see Albert R Jonsen & Stephen Toulmin, *The Abuse of Casuistry: A History of Moral Reasoning* (Berkeley: University of California Press, 1988).

47 Simpson, *ibid*.

48 *Ibid* at 3.

49 On the intimate link between a precedent's ratio and its context, see Joseph Raz, *The Authority of Law: Essays on Law and Morality* (Oxford: Oxford University Press, 1979) at 188–89.

50 Simpson, *supra* note 46 at 3–4.

51 For critical discussions of the case method and its emergence, see Robert W Gordon, "The Case for (and Against) Harvard" (1995) 93:6 Mich L Rev 1231; Anthony T Kronman, *The Lost Lawyer: Failing Ideals of the Legal Profession* (Cambridge, Mass: Harvard University Press, 1995) at 17ff, 165ff.

with the *Civil Code of Quebec*, the *Code of Civil Procedure*, and other applicable statutes[52]). The individual cases (including their contexts) that have made up expert evidence law form an inextricable part of it. And it is because individual cases and their contexts are so inextricable from the law that David Paciocco warned us to pay close attention to the different contexts and cultures out of which expert evidence law has grown.[53] Such attention is necessary if the principles governing expert evidence admissibility are to be applied "in a discerning, relevant fashion."[54] But once again, this could be said of the law as whole and not just expert evidence law.

The second, more specific sense of "context is everything" refers to the *unpredictability* of expert evidence law rulings. It is often difficult to know in advance whether a specific expert (or a specific part of the evidence that an expert is supposed to give) will be found admissible by a judge in a specific case — with the exception, perhaps, of routine, "cookie cutter" expert witness evidence. This makes expert evidence admissibility an area of law where little legal certainty is to be found.[55]

The unpredictability and uncertainty of this area of the law — or the "supremacy of context" that characterizes it — is closely tied to the fact that precedents are of diminished value within it.[56] Consider, for example, the Ontario Court of Appeal's unequivocal holding that "the admissibility of expert evidence is not a question of precedent."[57] Instead of being driven by precedent, "admissibility turns on a careful, complex balance of competing considerations"[58] that are combined in "what can easily become a complex and intimidating analysis"[59] following which "there is often no right answer and no wrong answer in a particular case."[60] One cannot overstate the need to pay attention to each precedent's particular facts, and

> [e]ven once this has been done and a case matches the general area of inquiry that is needed, it must be appreciated that each case turns on its own facts and its own peculiar needs and concerns. The case law … can do no more than to identify zones of attention or concern, and provide general guidance by listing criteria for consideration.[61]

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52 *Supra* note 13.

53 Paciocco, "Context, Culture," *supra* note 45 at 48ff. See also Stettler, *supra* note 25 at 206ff.

54 Paciocco, "Context, Culture," *ibid* at 63.

55 Lederman, Bryant & Fuerst, *supra* note 3 at paras 1.123–1.31.

56 Paciocco, "Context, Culture," *supra* note 45 at 43. See also Lederman, Bryant & Fuerst, *ibid* at para 12.45; Anderson, *Expert Evidence*, *supra* note 6 at paras 13.11, 14.21, 14.26.

57 Paciocco, "Context, Culture," *ibid* at 61, citing *R v K (A)*, [1999] OJ No 3280 (CA) at para 76.

58 Paciocco, "Context, Culture," *ibid*.

59 *Ibid* at 42.

60 *Ibid* at 61. See also Lederman, Bryant & Fuerst, *supra* note 3 at para 12.46.

61 Paciocco, "Context, Culture," *ibid* at 62–63. That said, it would be incorrect to overstate the point by saying that precedent has *no* value. Indeed, to take one example, precedents can sometimes be very useful when it comes to reliability, because "[i]n some cases, the science in question is so well established that judges can rely on the fact that the admissibility of evidence based on it has been clearly recognized by courts in the past": *Trochym*, *supra* note 16 at para 31; *Bingley*, *supra* note 3 at para 43. But even such precedents must be handled with care because "the admissibility of scientific evidence is not frozen in time" and "a technique that was once admissible may subsequently be found to be inadmissible": *Trochym*, *ibid* at paras 31–32. And once again, context matters immensely because a science or technique routinely used outside the courtroom might be insufficiently reliable in court proceedings: *Bingley*, *ibid* at para 42.

Precedents, therefore, cannot be used "to show that admission of a particular kind of expert evidence is right. The most they can be used to say is that *in the particular circumstances of that case*, the admission of the evidence was not wrong."[62] Indeed, when taken on its own, the *Mohan–WBLI* test is "so general and vague, so bereft of definition," that it can only become meaningful when applied in context.[63] And as a result, "there may be no right answer or wrong answer for a particular judge in a given case."[64]

To help explain why context is supreme and precedents are of so little value when it comes to expert evidence, note three important features of this area of the law. First, the law deals with scientific and technical expertise, which is never completely settled. Scientific knowledge is never static. Even where consensus exists, it can erode or change over time. Technical methods evolve as new tools and ways of using them are developed, sometimes replacing or discrediting their predecessors.[65] As a result, proffered expert evidence needs to be up-to-date in both the tools and methods it employs, as well as its underlying rationales, lest it be found inadmissible on the grounds that the expert used outdated methods, tools, and theories, regardless of the fact that they were found admissible in an earlier case.

The second and third features of expert evidence law are interrelated, and flow from the purposive, flexible approach that has permeated this area over the past few decades,[66] which further limits the value of precedent in this area. (Note that much of my analysis here is applicable, *mutatis mutandis*, to evidence law as a whole. Indeed, to take just one example: the discretionary dimension of admissibility (discussed below) arises in many other areas of evidence law, because the purposive and flexible approach is "the order of the day … in almost every area of evidentiary regulation."[67])

The second feature is that the *Mohan–WBLI* test gives judges a pronounced degree of discretion in its second gatekeeping stage.[68] At this stage of the test, judges must enter into a cost-benefit analysis and decide whether the "benefits of admitting the evidence outweigh its potential risks."[69] Judges have so much discretion that "[d]ifferent trial judges, properly applying the relevant principles in the exercise of their discretion, could in some situations come to different conclusions on admissibility."[70] Not only do judges have discretion in how they perform this weighing (or balancing) exercise, but the nature of the risks and benefits themselves can vary markedly from case to case. Different cases raise different constellations

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62 Paciocco, "Context, Culture," *ibid* at 62 [emphasis in original].

63 *Ibid* at 48–49. Although Paciocco wrote this almost two decades ago, the observation remains as valid now as it was then. See also Lederman, Bryant & Fuerst, *supra* note 3 at paras 1.123, 1.125, 1.131 (whether expert evidence will be ruled admissible is unpredictable; decisions in this area of the law have little precedential value; "it all depends upon the context"). Speaking of evidence law in general, Justice Richard A Posner writes that "knowing the rules of evidence and applying them are two very different things, and . . . in fact you can learn them only by applying them, and not by studying them . . . because their meaning and significance emerge only in the context of a trial": Richard A Posner, "Clinical and Theoretical Approaches to the Teaching of Evidence and Trial Advocacy" (2003) 21:4 Quinnipiac L Rev 731 at 731–32.

64 Paciocco, "Context, Culture," *ibid* at 62.

65 This is noted by the Supreme Court of Canada in *Trochym*, *supra* note 16 at 31ff.

66 See *supra* note 33 and accompanying text.

67 Dufraimont, "Principled Approach," *supra* note 33 at 14.

68 See *WBLI*, *supra* note 1 at 24; *Bingley*, *supra* note 3 at 16; *Abbey* 2017, *supra* note 5 at para 47.

69 *Abbey* 2017, *ibid* at para 48.

70 *R v Abbey*, 2009 ONCA 624 at para 79 [*Abbey* 2009], leave to appeal to SCC refused, 2010 CanLII 37826 (SCC).

of conflicts between the heterogeneous values (or policy goals) that must guide judges' evidentiary rulings. These values include, *inter alia*, that judges must seek to

- avoid unreliable evidence;[71]
- avoid unreliable witnesses;[72]
- ensure that the accused receives a fair trial;[73]
- ensure the efficiency of the trial process;[74]
- limit the use of privileged information and communications;[75]
- encourage settlements;[76] and
- preserve the integrity of the administration of justice (notably by excluding illegally obtained evidence).[77]

The *Mohan–WBLI* test offers no formal or structured guidance for the weighing exercise it prescribes.[78] Judges must weigh competing values against each other on a case-by-case basis. When these values are in conflict — and they often are — it can be difficult to articulate the foundational principle that should govern, or specify which value should take precedence over others. This makes the outcomes of individual weighing exercises all the more debatable.[79] Moreover, judges "do not typically list the factors they might consider in evaluating admissibility. When judges do list the factors considered, they are non-exhaustive, unstructured, and vary significantly."[80] Such lists, when provided in judgments, can only offer general guidance and cannot be taken as limiting the "considerable leeway" that judges have in coming to their decisions on expert evidence admissibility.[81]

There is, then, a variety of values that can be at stake in any given case. And there is no formal structure governing how these various values are to be weighed. This leads to the third feature of expert evidence law that limits the value of precedent: the balance of competing considerations will not always lean toward the same conclusions because no two cases are exactly alike. Although cases may raise the same competing values, these values

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71 Lederman, Bryant & Fuerst, *supra* note 3 at paras 1.39–1.42.
72 *Ibid* at paras 1.43–1.44.
73 *Ibid* at para 1.45.
74 *Ibid* at para 1.46.
75 *Ibid* at para 1.47.
76 *Ibid*.
77 *Ibid* at paras 1.48–1.49. See also Richard CC Peck, "The Adversarial System: A Qualified Search for the Truth" (2001) 80:1&2 Can Bar Rev 456 at 469ff. For additional value considerations and policy goals that can play a role in judges' assessment of the risks and benefits of proffered evidence, especially in the criminal context, see Lederman, Bryant & Fuerst, *ibid* at paras 1.74ff. On balancing, see generally Paciocco, "Evidence About Guilt," *supra* note 31; Paciocco, "Evidence About Innocence," *supra* note 31.
78 I would add further that, if we are to privilege a purposive–flexible approach, the weighing exercise cannot be structured or formalized because there is no way to formalize the weighing of competing values without establishing: a fixed hierarchy between them; rules specifying which values must be sacrificed against which others; and rules regarding when and how values must be sacrificed. Establishing such a hierarchy and rules would be contrary to having a purposive-flexible approach. Charles Perelman, *Logique juridique: Nouvelle rhétorique*, 2nd ed (Paris: Dalloz, 1999) at paras 49–50, 54 [Perelman, *Logique juridique*]; Chaïm Perelman, *Éthique et droit*, 2nd ed (Brussels: Éditions de l'Université de Bruxelles, 2012) at 437–66, 507–15, 563–68; Chaïm Perelman, *L'empire rhétorique: Rhétorique et argumentation* (Paris: Librairie Philosphique J Vrin, 2012) at 46–50; Chaïm Perelman & Lucie Olbrechts-Tyteca, *Traité de l'argumentation*, 6th ed (Brussels: Éditions de l'Université de Bruxelles) at 99–111.
79 Lederman, Bryant & Fuerst, *supra* note 3 at para 1.50.
80 Anderson, *Expert Evidence*, *supra* note 6 at para 11.69.
81 *Ibid* at para 11.70.

will not necessarily have the same weight, given each case's particularities. The different weight accorded to the same values will often be most obvious when comparing civil cases and criminal cases.[82] Furthermore, identical value sets may not always conflict in exactly the same way, since "[d]iffering challenges may be mounted case-to-case and the evidentiary record of each prosecution constitutes a case-specific context for the relevant inquiries and balancing of factors which the court is obliged to undertake."[83] Jurists must therefore treat precedents with caution for they cannot rely on trends and on general statements of principle in matters of admissibility.[84]

C. CONTEXT AND KNOWLEDGE

In the previous Section I argued that context is everything in expert evidence admissibility debates because they resist neat right or wrong answers and their outcomes are difficult to predict.

This poses a knowledge problem because it leaves most jurists in an analytically unsatisfying position. The position is unsatisfying for those jurists who have a "foundationalist"[85] view when it comes to law and legal knowledge. Foundationalists seek to "found" or "ground" knowledge in that which is generalizable and invariable across contexts. Foundationalists routinely point to certain things as providing the solid grounding that they seek, such as: the plain or ordinary meaning of the text; brute empirical facts; the structure of language; and mathematical calculation. What foundationalists ultimately choose as their grounds for knowledge depends on their discipline, of course. But regardless of discipline, foundationalists share the same core view of research and knowledge production: they should be based in general, context-independent methods that specify the grounds of knowledge and the procedures to follow in order to produce correct results.[86]

Jurists are often likely to have a foundationalist orientation because the law itself tends to espouse foundationalist values such as coherence, intelligibility, certainty, generality, and regularity.[87] Indeed, legal certainty and security are prime values associated with the Rule

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82 See Paciocco, "Context, Culture," *supra* note 45 at 49.

83 *R v C (G)* (1997), 8 CR (5th) 21 (Ont Gen Div) at 35 cited with approval in *R v K(A)*, *supra* note 57 at 76.

84 Paciocco, "Context, Culture," *supra* note 45 at 61.

85 Stanley Fish, *Doing What Comes Naturally: Change, Rhetoric, and the Practice of Theory in Literary and Legal Studies* (Durham: Duke University Press, 1989) at 342ff. See also, for a helpful summary of Fish's theory and its relation to law, Michael Robertson, "Picking Positivism Apart: Stanley Fish on Epistemology and Law" (1999) 8:2 S Cal Interdisciplinary LJ 401 at 402–407, 429ff [Robertson, "Picking Positivism Apart"]; Michael Robertson, *Stanley Fish on Philosophy, Politics, and Law: How Fish Works* (Cambridge, UK: Cambridge University Press, 2014) at 179ff.

86 Fish, *ibid* at 342–43. See also Nicolson, *supra* note 41 at 727, 729.

87 These can be seen, for example, in the "eight kinds of legal excellence" described by Lon Fuller: see Lon L Fuller, *The Morality of Law*, rev ed (New Haven: Yale University Press, 1969) at 41. See also Raz, *supra* note 49 at 212–18. For a general discussion of coherence in legal reasoning, see Julie Dickson, "Interpretation and Coherence in Legal Reasoning" in Edward N Zalta, ed, *The Stanford Encyclopedia of Philosophy*, winter 2016 ed, online: <plato.stanford.edu/archives/win2016/entries/legal-reas-interpret>.

of Law,[88] and it is difficult to imagine how legal certainty and security could exist in the absence of coherence, intelligibility, certainty, generality, and regularity.

The generally foundationalist orientation of legal thought can also be observed in the importance it gives to authorities. By "authorities," I especially mean precedents (of the highest court possible) but also renowned treatises. That authorities are important in law is obvious — the "first instinct of any lawyer is to find authority."[89] It is a foundationalist instinct to seek authorities. Lawyers seek authorities to mount their cases. Judges draw on authorities to justify their reasons. Legal scholars study authorities to develop their doctrinal syntheses or theories. Authorities are understood to have a reasonably coherent, stable, certain meaning that can be applied across different contexts.[90] Authorities are thereby seen as providing a secure foundation upon which to build knowledge of the law and, via the doctrine of stare decisis, build the law itself.

Thus, a foundationalist view of knowledge plays a central role in law.[91] It also plays a significant role in evidence law, as epistemological rectitude and foundationalism go hand in hand.[92] And yet expert evidence jurisprudence and scholarship tell us that foundations — in the form of authorities — are hard to come by. Expert evidence admissibility questions are in many respects antithetical to the kind of secure, authoritative legal knowledge instinctively sought by lawyers, judges, and legal scholars. Therein lies the knowledge problem that comes with "context is everything."

It would be incorrect, however, to conclude that writing on expert evidence admissibility eschews attempts at providing foundations. Doctrinal writers deploy valiant efforts to establish a minimum amount of order and provide lawyers and judges with reasonably dependable hooks on which to hang their hats as they work through specific admissibility questions.

These doctrinal efforts come in two essential modes. The first mode can be termed "conceptual analysis." Writing in this mode works with the broad concepts of expert

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88 Neil MacCormick, *Rhetoric and the Rule of Law: A Theory of Legal Reasoning* (Oxford: Oxford University Press, 2005) at 12. See also Jeremy Waldron, "The Rule of Law" in Edward N Zalta, ed, *The Stanford Encyclopedia of Philosophy*, spring 2020 ed, online: <plato.stanford.edu/archives/spr2020/entries/rule-of-law/> (see under "Formal Aspects"). On the link between foundationalism and a commitment to the rule of law, see generally Allan C Hutchinson, *It's All in the Game: A Nonfoundationalist Account of Law and Adjudication* (Durham: Duke University Press, 2000) at 10ff.

89 Paciocco, "Context, Culture," *supra* note 45 at 62. Note also that authorities are key to the law in a second sense: "authorities" can refer to persons or institutions charged with making, interpreting and enforcing the law.

90 See generally the justifications for precedent discussed in Grant Lamond, "Precedent and Analogy in Legal Reasoning" in Edward N Zalta, ed, *The Stanford Encyclopedia of Philosophy*, spring 2016 ed, online: <plato.stanford.edu/archives/spr2016/entries/legal-reas-prec/>.

91 Hutchinson, *supra* note 88 at 10–16, 42–52, 166 (arguing that most legal scholarship has a foundationalist view). Robertson goes further by stating that a foundationalist view of knowledge stretches far beyond law: see Robertson, "Picking Positivism Apart," *supra* note 85 ("[c]ontemporary common sense gets its shape from the foundationalist tradition" at 406). He is in good company on this point, as numerous other scholars have discussed the extent to which foundationalism has been at the core of dominant views of knowledge since the Enlightenment: see generally Stephen Toulmin, *Return to Reason* (Cambridge, Mass: Harvard University Press, 2001); Charles Taylor, "Overcoming Epistemology" in Kenneth Baynes, James Bohman & Thomas McCarthy, eds, *After Philosophy: End or Transformation?* (Cambridge, Mass: MIT Press, 1987) 464; Richard Rorty, *Philosophy and the Mirror of Nature* (Princeton: Princeton University Press, 1979).

92 Nicolson, *supra* note 41 at 727, 729. See also Seigel, *supra* note 44 at 998–99.

evidence law — notably, those set out in the *Mohan–WBLI* test — in an attempt to flesh them out and make them easier to apply to specific problems.[93] The second mode can be termed "factor listing." Writing in this mode lists factors that courts have invoked to justify their admissibility rulings.[94] Or it can list briefly described admissibility decisions or holdings (along with the minimal context required to understand them), which can be organized thematically.[95]

Both of these modes are complementary and foundationalist in orientation. But they are ultimately unsatisfying from a foundationalist perspective because they do not provide the kinds of grounds that foundationalists desire. That is to say: lists of factors and conceptual analyses do not provide consistent, replicable, authoritative grounds that would make case-specific admissibility rulings more predictable. Lists of factors are neither complete nor coherent. They are incomplete because they cannot list all the factors that courts have considered and will consider. They are not fully coherent because some factors can contradict others and they can be weighted differently depending on the case. As for conceptual analysis, it cannot do away with the supremacy of context described above. Concepts such as "necessity," "reliability," and "expert qualifications" (to take three of the *Mohan–WBLI* criteria) can only become practically meaningful when used in a particular factual context. These concepts are indeterminate in that they provide judges with a wide margin of discretion when it comes to their interpretation and application from case to case, which always leaves open the possibility that they will be interpreted and applied differently in new contexts.[96]

D. A CONTEXT-DRIVEN METHOD

I have argued that expert evidence law is inherently swampy. Despite best efforts by jurists in the rocky highlands, who valiantly toil to carve out solid concepts and factors, lawyers and judges have few firm foundations upon which they can confidently stand in the swamp.

In the rest of this article, I propose an alternate path for studying expert evidence law, one that embraces swampiness — or supremacy of context — as a central premise. To walk this path without getting lost, two initial steps are required. First, we ought to shift from studying experts in general to discussing specific types of experts in specific types of cases working to prove specific elements in dispute. Second, we ought to concentrate on how admissibility is contested and achieved (or not) vis-à-vis such specifics. This second step emphasizes description over prescription in order to highlight how the operation of law is impacted by cases' particulars.

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93 See e.g. Anderson, *Expert Evidence*, *supra* note 6 at paras 5.18ff; Lederman, Bryant & Fuerst, *supra* note 3 at 12.56ff.

94 See e.g. Anderson, *Expert Evidence*, *ibid* at paras 12.32, 12.37, 12.49–12.51, 12.66–12.67, 12.72–12.76, 12.86, 12.90–12.95. Writing in this mode can also list factors that courts *should* consider, even though courts may not have mentioned those factors in the past; see e.g. Paciocco, "Evidence-Based Approach," *supra* note 36 at 146–47, 149–50.

95 See e.g. Anderson, *Expert Evidence*, *ibid* at paras 13.3ff (chapter 13 of this treatise mostly consists of long lists of admissibility holdings); Donald Béchard & Patrick Boucher, *L'expert*, 2nd ed (Montreal: Yvon Blais, 2019).

96 For a discussion of indeterminate concepts, or "*notions à contenu variable*," and the role they play in law and legal reasoning, see Perelman, *Éthique et droit*, *supra* note 78 at 788–802.

Here, the chosen focus is on medical expert evidence on the standard of care in malpractice cases. The rest of this article, therefore, focuses on only one of the four elements of liability for medical malpractice. Recall that a successful medical malpractice action is one where the plaintiff has proven: (1) that the defendant physician owed the plaintiff a duty of care; (2) that the defendant breached the applicable standard of care; (3) that the plaintiff suffered damages; and (4) that there was a causal link between the defendant's conduct and the damages.[97] Recall further that the standard of care is that of a reasonable physician (or, "the conduct of a prudent and diligent doctor in the same circumstances") and that a specialist's "behaviour must be assessed in light of the conduct of other ordinary specialists, who possess a reasonable level of knowledge, competence and skill expected of professionals in Canada, in that field."[98]

As explained in the previous Sections, the supremacy of context that characterizes expert evidence law entails that it is perilous to make general statements about this area. No matter how sophisticated and subtle the conceptual analyses that lead to them, general statements always run the risk of either falling flat before cases' unanticipated contextual features, or becoming subject to so many qualifications that they lose their usefulness as (or cease to be) general propositions. Jurists who wish to make general statements that will stand the test of time must therefore craft their statements in broad, abstract terms. Such terms will provide little concrete guidance on how to handle a specific controversy in context. But they will have the advantage of being safe, in the sense that they have less chance of being rejected by courts or contested by colleagues.[99] The other safe option for jurists is to list factors, since factor lists (like general statements made in abstract terms), also tend to stand the test of time. Factor listing is safe for two reasons. First, jurists can always defend the inclusion of specific factors in a list by pointing to the specific cases from which the factors were taken. If a court justified its admissibility decision using such and such factors, then it is true that such factors *can* serve as grounds for admissibility decisions (that is, if it happened once, it can happen again). Second, jurists can be agnostic as to the likelihood that the factors listed will be used as grounds for future admissibility decisions (that is, it happened once, but it need not happen again).

Conceptual analysis and factor listing play an important role in the analysis of expert evidence law. The "safety" of the propositions they yield is a virtue: it allows us to make general statements about expert evidence law without which we could have no evidence law doctrine as we know it. But when we approach the law in these modes, we lose the subtle

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97 Gerald B Robertson & Ellen I Picard, *Legal Liability of Doctors and Hospitals in Canada*, 5th ed (Toronto: Thomson Reuters, 2017) at 268.

98 *Ter Neuzen v Korn*, [1995] 3 SCR 674 at para 33 [*Ter Neuzen*]. See also *Sylvester v Crits*, [1956] OR 132 (CA) (a physician "is bound to exercise that degree of care and skill which could reasonably be expected of a normal, prudent practitioner of the same experience and standing, and if he holds himself out as a specialist, a higher degree of skill is required of him than of one who does not profess to be so qualified by special training and ability" at para 13).

99 As far as safety goes, the broader a statement's terms, the safer it tends to be. This phenomenon can most clearly be seen in adages, aphorisms, maxims, and proverbs: it is their broadness or abstractness that allows them to maintain their value as general truths through time. For one can never *prove* an adage–aphorism–maxim–proverb (for example, "what goes around comes around"; "better safe than sorry"; "justice demands that all sides be heard") to be *completely* false or wrong. At most, one can show that its truth does not obtain in certain cases. See generally Kenneth Burke, *A Grammar of Motives* (Berkeley: University of California Press, 1969) at 417–18; Paul D Goodwin & Joseph W Wenzel, "Proverbs and Practical Reasoning: A Study in Socio-Logic" (1979) 65:3 QJ Speech 289 at 291; Frank J D'Angelo, "Some Uses of Proverbs" (1977) 28:4 College Composition & Communication 365.

interplay that occurs between a case's specific facts and the substantive law. We lose sight of a significant part of the law's operation.

In contrast, the approach proposed here emphasizes the law's operation in specific contexts by focusing on a particular kind of expert evidence on a particular kind of material issue, namely, medical expert evidence on the medical standard of care. Such an approach may seem excessive. One might ask: why narrow the focus by using both the type of expertise and the material issue? Why not just one or the other? Because admissibility can only be achieved by establishing a *nexus* between two elements: the content of the expert's opinion, on one hand, and the material issue in dispute, on the other.[100] By narrowing the focus using both the type of expert evidence and the type of material issue, we can focus on a *type* of nexus. Focusing on a type of nexus allows us to generalize beyond a specific nexus, which is bound to the context of a specific case (including the exact content of the expert's opinion). But it also tethers our attention closely enough to specifics to prevent our generalizations from becoming too abstract to offer concrete guidance.

III. WHY THE MEDICAL STANDARD OF CARE IN MALPRACTICE?

I announced above that the rest of this article concerns a type of evidentiary nexus: medical expert evidence (type of expertise) on the physician's standard of care in malpractice (the material issue in dispute). In this Part, I respond to the possible objection that the chosen type of nexus might seem exceedingly narrow, that is, that medical expert evidence on the physicians' standard of care could be seen as too niche a topic. My response to the narrowness objection will help to further elucidate what nexus types are, and how they differ from other ways of studying expert evidence law.

A. UTILITY OF NEXUS TYPES

Studying expert evidence law by nexus type entails seeing it through a narrower lens than usual. The purpose of focusing on a nexus type is, once again, twofold: (1) to achieve a balance between specificity and generality; and (2) to provide more finely-tuned conceptual resources for jurists faced with particular admissibility problems without getting lost in a haystack of particulars.

One might object to such a narrow focus and ask: could one achieve this twofold purpose by narrowing the focus to medical expertise *in general* (which would be narrower than all experts, but not as narrow as medical expertise on the standard of care)? The answer is no. To understand why, two distinctions must be made: (1) that between a *specific nexus* and a *type of nexus*; and (2) that between *type of nexus* and *type of case*. These distinctions can be put on a continuum between two poles: generality and specificity. The specific nexus is the most specific, the case type is the most general, and the nexus type occupies a level of generality that is in-between the two.

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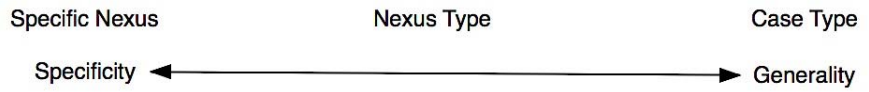
[100] Lederman, Bryant & Fuerst, *supra* note 3 at para 12.62.



A specific nexus exists in the context of a specific case. There are as many specific nexuses as there are cases. What a specific nexus *is* is best understood via illustration. Assume a plaintiff claims to have been infected by a virus as the result of undergoing a medical procedure, and that the defendant physician was negligent in administering the procedure.[101] A proffered medical expert's opinion, produced two years after the plaintiff's procedure, states that the defendant physician failed to follow the standard of practice for the prevention of the defendant's viral infection. This opinion is immaterial in the absence of a factual basis demonstrating that the *current* practice is identical (or sufficiently similar in its materially relevant aspects) to the standard practice *at the time* the alleged medical procedure was administered.[102] If such a factual basis is established, a specific nexus comes into being between the expert's opinion and the material issue in dispute, that is, the defendant's standard of care. Note that this illustration of a specific nexus possesses some degree of generality, in the sense that it does not provide all of the factual details that a real-life nexus and case would have. The idiosyncrasy or particularity of a nexus and case will typically increase — and its generality, therefore, decrease — in proportion to the amount of relevant factual details provided in its description. Nonetheless, the illustration provided here is of a much lesser degree of generality than a nexus type or a case type.

Case types exist at the opposite end of the continuum. There are, of course, many types of cases, and we could imagine endless different classification schemes to sort cases into various types. We could, for instance, classify cases based on parties' demographic data, the monetary amount at stake, jurisdiction, and so on. But here, "case type" refers to the common practice of classifying a case based on the area of substantive law that applies to it. For example, when we distinguish between a medical malpractice case, an assault case, and a defamation case, we are distinguishing between case types. Of course, the facts of a single dispute can be classified in different ways, such that the dispute falls under many case types. This is especially true when we take the perspective of jurists (typically lawyers and judges) who are *in the process of litigating a dispute*, as opposed to jurists who are taking a case *post judgment*, wherein the facts have been given authoritative legal qualification.[103] Lawyers in the process of litigation often present the facts of a dispute in ways that lend themselves to the broadest possible spectrum of legal qualifications, so as to be able to maximize the range of alternative pleadings open to them (when possible, of course, because sometimes the facts of a dispute do not readily lend themselves to more than a single legal qualification). For example, *Ter Neuzen* was argued both as a medical malpractice (tort) case and an implied warranty under contract case.[104] However, *Ter Neuzen* is now primarily understood as a

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101 This example is loosely based on *Ter Neuzen*, *supra* note 98.

102 Because the physician's standard of care "must be determined with reference to the circumstances as they existed at the time of the alleged negligence"; Robertson & Picard, *supra* note 97 at 305 [emphasis omitted].

103 On the distinction between the presentation or description of facts and the legal qualification of facts, see Perelman, *Logique juridique*, *supra* note 78 at para 23.

104 *Ter Neuzen*, *supra* note 98.

medical malpractice case; in terms of sheer number of citations, it is mostly (by far) cited as a medical malpractice case, not an implied warranty under contract case.

Nexus types fall between the case type and the specific nexus. A nexus type is the conceptual unit formed by the combination of: (1) a legal element that the applicable substantive law requires be proven for legal consequences to obtain; and (2) a type of expert evidence proffered to establish the factual basis of said legal element.

For example, in medical malpractice (and torts, generally), four elements need to be established: (1) duty of care; (2) standard of care; (3) damages; and (4) causation.[105] Each of these elements may be established with different kinds of evidence, expert or otherwise.[106] When a given kind of expert evidence is proffered to establish one of these elements, nexus type comes into play. Medical expert evidence on the standard of care is one nexus type. Expert evidence by an actuary or employability expert on damages (lost wages) is another nexus type. An epidemiologist's evidence on causation is yet another nexus type; and so on.

In light of the above, I can say that medical expertise, though narrower than expertise *tout court*, is too broad a topic. Medical expertise comes in many shapes and sizes. It can be proffered in very different case types, *inter alia*: medical malpractice; workplace injury compensation; toxic torts; consent, capacity and involuntary confinement; and criminal offences. Each of these types of cases can involve significantly different forms of medical and non-medical expertise. As for medical expertise in medical malpractice, it is also too broad because each of the four elements required by the substantive law raises distinct evidentiary issues that may need to be established using different evidentiary means — including, on occasion, different types of experts. For example: a given medical expert's testimony may be admissible on the standard of care, but not on causation[107]; a psychologist's or psychiatrist's testimony may be admissible on damages and causation to prove psychological harm caused by an orthopedic surgeon's negligence, but would most likely be inadmissible on fault (standard of care).[108]

Note that the concept of nexus type is proposed for *methodological*, and not doctrinal, purposes. As discussed in the conclusion, the aim of thinking in terms of nexus types is that of building repertoires of case studies of nexus types that are found to be of particular interest by researchers. The accumulation of case studies of a given nexus type can yield a form of knowledge that is different from knowledge yielded by doctrinal analyses, but also complementary to it: knowledge that is akin to that developed in practice by practitioners who have worked on many similar cases using the same kinds of experts to prove the same kinds of issues.

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105 Robertson & Picard, *supra* note 97 and accompanying text.

106 The Ontario Court of Appeal has pointed out that "medical evidence" and "expert evidence" are "not the same thing": *Samms v Moolla*, 2019 ONCA 220 at para 45. Medical evidence in a malpractice trial can include documentation, material evidence, and testimony emanating from persons other than expert witnesses. Moreover, medical malpractice trials can involve non-medical experts, such as experts in employability when the plaintiff's damages include lost future revenues: see e.g. *Dufour c Tanios Hanna*, 2018 QCCS 4434 at para 170.

107 See e.g. *Cheesman v Credit Valley Hospital*, 2019 ONSC 1907 [*Cheesman*].

108 See e.g. *Frazer v Haukioja*, 2010 ONCA 249.

B. UTILITY OF THE MEDICAL STANDARD OF CARE

I focus here on three reasons why medical expert evidence on the standard of care in medical malpractice merits closer attention. First, the law has evolved (in Canada) such that expert evidence in the civil context tends to receive far less attention than in the criminal context. This emphasis on the criminal law conceals meaningful and important differences between criminal and civil expert evidence which ought to receive more attention. Second, the task of proving the standard of care in malpractice cases has its own unique dynamics, making it a valuable locus of study to contrast with other situations in which expert witnesses are called upon. Third, the standard of care in *medical* malpractice stands out vis-à-vis malpractice in other professions.

Note that medical expert evidence on the standard of care is here taken as an example. Much of my analysis can be applied, *mutatis mutandis*, to other professions and nexus types. I am therefore not arguing that this nexus type should be studied to the exclusion of all others, but showing how nexus types can have unique dynamics meriting closer attention. Other professions and nexus types can and should be studied, insofar that they possess unique dynamics.

1. INVESTIGATING CIVIL EVIDENCE

The law of expert evidence in Canada developed in the context of criminal cases. Aside from *WBLI*, the jurisprudential corpus that shaped the *Mohan–WBLI* test is largely composed of criminal cases.[109] Expert evidence case law, therefore, developed along lines of reasoning that emphasized concerns endemic to the criminal law. The same can be said of the scholarship: by and large, its main focus has been on expert evidence in the criminal context.

Two concerns standout when thinking about expert evidence admissibility in the criminal context. The first is the "inequality of arms" between the prosecution and the defence. The prosecution is typically at an advantage in terms of the resources it has for gathering and administering evidence. Even though the burden of proof rests entirely on the prosecution, and even though this burden is higher than in civil cases, it remains that individual defendants can rarely (if ever) deploy resources that are comparable to those of the prosecution, which is backed by the state. Forensic science looms large here, as much of it is produced for the purpose of supporting criminal prosecutions, often by state agents or

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[109] See Paciocco, "Context, Culture," *supra* note 45 ("the law of expert evidence in Canada is the product of criminal cases" at 49ff). Note that in his treatise on expert evidence (published before *WBLI*), Anderson identifies seven appellate-level cases as "Mohan's Progeny," only two of which are civil cases: *Alfano*, *supra* note 21 and *Masterpiece Inc v Alavida Lifestyles Inc*, 2011 SCC 27: see Anderson, *Expert Evidence*, *supra* note 6 at paras 4.86, 4.89. Moreover, even though the leading Supreme Court of Canada case is *WBLI*, *supra* note 1 — a civil case — it remains that the majority of the Supreme Court of Canada's leading decisions on expert evidence admissibility before *WBLI* were criminal cases, most notably: *Mohan*, *supra* note 2; *J-LJ*, *supra* note 14; *R v DD*, 2000 SCC 43 (on the necessity requirement); *Trochym*, *supra* note 16 and *R v Sekhon*, 2014 SCC 15 (on the judge's ongoing duty to ensure that expert evidence remains within its proper scope throughout the testimony). To these cases can be added the Ontario Court of Appeal's decision in *Abbey* 2009, *supra* note 70 — also a criminal case — which introduced the two-step structure of the *Mohan–WBLI* test, adopted in *WBLI* (see paras 22ff). Important criminal cases post-*WBLI* include *Abbey* 2017, *supra* note 5 and *Bingley*, *supra* note 3. Thus, although the *Mohan–WBLI* test applies to both civil and criminal cases, most of the law's evolution has been driven by criminal cases.

affiliates.[110] This entails risks, namely: the risk of systemic biases in the production and administration of forensic science evidence; and, the associated risk of wrongful convictions.[111] These risks should be factored into judges' assessments of expert evidence admissibility in criminal cases.

The second concern relates to the value of protecting individual liberty and avoiding wrongful convictions.[112] The criminal law is largely moulded by liberty-regarding principles. Among these principles, we find the "presumption of innocence, the right to full answer and defence, and the principle of a specific allegation."[113] These principles "define the criminal law" and "colour its rules about proof."[114] And though this "colouring" might seldom affect the *definition* of the applicable rules of proof (that is, statements as to what the rules are), we must keep in mind that it can often affect the *operation* of said rules, as their application is debated in relation to a case's specifics.[115] For example, the value of truth in adjudication gains heightened importance when dealing with the admissibility of incriminating evidence, because of the paramount importance of the presumption of innocence and the need for proof beyond a reasonable doubt.[116] In other words, insisting on the epistemological rectitude of expert witness evidence — especially that proffered by the prosecution — can be vitally important in the criminal context.

The dynamics in civil litigation are different. The search for truth still plays an important role, of course, "but the reality is that pragmatics can be allowed to play a larger role in the settlement of private disputes."[117] A person's liberty is typically not at stake in civil litigation. Nor does civil litigation usually carry the same potential for social stigma as criminal prosecution. Problems associated with the inequality of arms also have a different shape. And though these problems raise important access to justice concerns, a more laissez-faire attitude toward admissibility can be seen as reasonable in the civil context — within limits, of course.[118] Taking medical malpractice as an example, we could say that access to justice concerns might justify being somewhat more permissive when it comes to admitting the

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110 See generally Kent Roach, "Forensic Science and Miscarriages of Justice: Some Lessons from Comparative Experience" (2009) 50:1 Jurimetrics 67 at 81; Gary Edmond & Emma Cunliffe, "Cinderella Story?: The Social Production of a Forensic 'Science'" (2016) 106:2 J Crim L & Criminology 219 at 271; Committee on Identifying the Needs of the Forensic Sciences Community, National Research Council, *Strengthening Forensic Science in the United States: A Path Forward* (Washington, DC: National Academies Press, 2009) at 36, 183.

111 On bias, see generally Paciocco, "Jukebox," *supra* note 34. On forensic science and wrongful convictions, see generally Simon A Cole & William C Thompson, "Forensic Science and Wrongful Convictions" in C Ronald Huff & Martin Killias, eds, *Wrongful Convictions and Miscarriages of Justice: Causes and Remedies in North American and European Criminal Justice Systems* (New York: Routledge, 2013) 111; Gary Edmond, "The 'Science' of Miscarriages of Justice" (2014) 37:1 UNSWLJ 376; Jane Campbell Moriarty, "Symposium Foreword," Symposium: *Daubert*, Innocence, and the Future of Forensic Science, (2007) 43:2 Tulsa L Rev 229.

112 Here we can recall the old and well-known adage that it is better to let a guilty person go free than to condemn an innocent person: see e.g. Vidar Halvorsen, "Is it Better that Ten Guilty Persons Go Free than that One Innocent Person Be Convicted?" (2004) 23:2 Crim Justice Ethics 3.

113 Paciocco, "Context, Culture," *supra* note 45 at 49.

114 *Ibid*.

115 *Ibid*.

116 *Ibid*.

117 *Ibid*.

118 *Ibid*. Note that the opposite seems to be the case in the US: "civil expert evidence [is] more closely scrutinized for admissibility by the courts than criminal expert evidence, [and] criminal prosecutors and civil defendants appear to be treated more favourably than criminal defendants and civil plaintiffs": Déirdre Dwyer, "(Why) Are Civil and Criminal Expert Evidence Different?" (2007) 43:2 Tulsa L Rev 381 at 396. On the significance of differences between the legal–political contexts and cultures of Canada and the US, see Paciocco, "Context, Culture," *ibid* at 48, 52.

plaintiff's expert evidence, given the difficulties of proving malpractice in many cases.[119] Such differences in emphasis between the criminal and civil context (along with many others that cannot be reviewed here due to space constraints) merit closer examination insofar that they can significantly impact how the law operates in practice.

2. STANDARD OF CARE'S VALUABLE CHARACTERISTICS

I have just argued that expert evidence in civil litigation has its own distinct dynamics and that these dynamics are largely overlooked because Canadian case law and commentary mostly focus on the criminal law context. But even if one considers the use of expert evidence in civil litigation alone, the field remains too vast and diverse. Further narrowing is needed in order to strike a reasonable balance between generality and specificity. In this section and the next I argue that the medical standard of care in malpractice has peculiar characteristics that justify singling it out as a locus of study.

The first characteristic is that proving the medical standard of care is an "old" evidentiary problem. This contrasts markedly with most expert evidence jurisprudence and commentary, whose attention tends to be directed toward "new" evidentiary problems. By new evidentiary problems, I mean problems that are tied to the mode of proof or type of evidence used to establish facts regarding a material issue in dispute. The newness usually emerges as a result of relatively recent scientific and technological change (technoscientific change for short). A new evidentiary problem can emerge even though there is nothing new about the substantive question or material issue in dispute. For example, the substantive criminal law requirement of establishing both the *actus reus* and *mens rea* is a long-standing constant. But technoscientific change in forensic methods leads to the emergence of new evidentiary problems as new forensic methods are mobilized to prove the *actus reus* and *mens rea*.[120] Conversely, new evidentiary problems can emerge as a result of modifications to substantive law, or as a result of pressure on substantive law created by technoscientific change. Toxic torts are an example of this latter situation (as when a new type of industrial activity or product generates new types of health and environmental hazards, knowledge of which may be patchy).

The evolution and proliferation of forensic techniques is a prominent source of new evidentiary problems.[121] Courts, who are often on the cutting edge of this technoscience-driven change, must manage it as best they can.[122] In this context, it is understandable that new forensic techniques end up facing increased scrutiny on appeal, because of the

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119 See generally Robertson & Picard, *supra* note 97 at 510ff.

120 See e.g. Jennifer L Mnookin, "The Image of Truth: Photographic Evidence and the Power of Analogy" (1998) 10:1 Yale JL & Human 1 (the emergence of photography as a mode of proof is a good historical example: it was a new means of establishing facts that, until then, could only be established via other modes (mostly testimony)).

121 The forensic technique known as "DNA-profiling" is a classic example: see e.g. Michael Lynch & Sheila Jasanoff, "Contested Identities: Science, Law and Forensic Practice" (1998) 28:5&6 Social Studies Science 675. Chief among the new problems faced raised by forensics is the growing recognition that they are not reliable: see Edmond & Roach, *supra* note 36; Gary Edmond, "What Lawyers Should Know About the Forensic 'Sciences'" (2015) 36:1 Adel L Rev 33.

122 Notable examples are: *J-LJ*, *supra* note 14; *Trochym*, *supra* note 16. See also Emma Cunliffe & Gary Edmond, "Gaitkeeping in Canada: Mis-Steps in Assessing the Reliability of Expert Testimony" (2013) 92:2 Can Bar Rev 327 [Cunliffe & Edmond, "Gaitkeeping"].

normative uncertainty that surrounds them.[123] It is also understandable that both jurisprudence and legal commentary seek to provide courts and lawyers (whether they work for the defence or prosecution) with some guidance in a complex and ever shifting field. But these dynamics keep much attention directed toward these new evidentiary problems at the expense of older ones.[124]

The emphasis on newness can also be observed in how judicial and scholarly commentary tends to portray the problems associated with expert evidence. These problems are often cast "as a late twentieth-century pathology that threatens to escalate out of control."[125] With this portrayal comes a malaise, and the sentiment that these new problems need to be stemmed before they undermine cherished institutions and principles.[126] The Supreme Court of Canada's opening aphorism in *WBLI* — referring to the "special dangers" of expert evidence[127] — can be seen as a relatively recent expression of this malaise and sentiment.

But while it is correct that the "debate concerning what was the proper standard for the admissibility of scientific evidence intensified during the late 1980s and early 1990s,"[128] it is a mistake to see the problems associated with expert witness evidence as a recent phenomenon. Challenges associated with the use of scientific evidence in court have been around for centuries,[129] and the thrust of most contemporary reform proposals is very similar

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123 See generally Steven Shapin, *The Scientific Life: A Moral History of a Late Modern Vocation* (Chicago: University of Chicago Press, 2008) ("[t]he closer you get to the leading edges of technoscientific change, the greater the degree of normative uncertainty" at 269); Sheila Jasanoff, ed, *Reframing Rights*: *Bioconstitutionalisim in the Genetic Age* (Cambridge, Mass: MIT Press, 2011) at 61–63, 287ff (technoscientific advances both discover and remake aspects of nature, thereby raising a host of challenges to normative analysis).

124 I do not wish to suggest that it is *wrong* for jurisprudential and scholarly attention to be directed in this manner. There are two distinct questions here. The first is a question of legal research ethics: what is the appropriate amount of attention to invest in criminal law and forensics? The second relates to our understanding of the field of expert evidence law: how is our understanding of this field affected by the fact that most of the attention within it is directed toward criminal law and forensics? I am only concerned with the second question.

125 Tal Golan, "The History of Scientific Expert Testimony in the English Courtroom" (1999) 12:1 Science in Context 7 at 27 [Golan, "History"]. See also Tal Golan, "Revisiting the History of Scientific Expert Testimony" (2008) 73:3 Brook L Rev 879 [Golan, "Revisiting History"] ("Much of the current scholarship portrays the controversies surrounding scientific expert testimony as a late twentieth-century development, the result of the difficulties of the courts … in handling the growing volume and complexity of modern science" at 881). See e.g. Peter W Huber, *Galileo's Revenge: Junk Science in the Courtroom* (New York: Basic Books, 1991); Marcia Angell, *Science on Trial: The Clash of Medical Evidence and the Law in the Breast Implant Case* (New York: WW Norton, 1996); "Confronting the New Challenges of Scientific Evidence" (1995) 108:7 Harv L Rev 1481 ["Confronting the New Challenges"]; Stephen Breyer, "Introduction" in Federal Judicial Center, National Research Council, *supra* note 12 at 1; McLachlin, *supra* note 43 ("[s]cientific developments impact justice and the courtroom as never before" at 12).

126 Tal Golan, *Laws of Men and Laws of Nature: The History of Scientific Expert Testimony in England and America* (Cambridge, Mass: Harvard University Press, 2004) at 4, 261 [Golan, *Laws of Men*].

127 *WBLI*, *supra* note 1 at para 1.

128 Golan, *Laws of Men*, *supra* note 126 at 261; Golan, "Revisiting History," *supra* note 125 at 881, 933. Compare Paciocco, "Context, Culture," *supra* note 45 at 44ff.

129 Golan, "History," *supra* note 125 at 27; "Confronting the New Challenges," *supra* note 125 at 1481. See also Sheila Jasanoff, "Making Order: Law and Science in Action" in Edward J Hackett et al, eds, *The Handbook of Science and Technology Studies*, 3rd ed (Cambridge, Mass: MIT Press, 2008) 761 at 766; Jennifer L Mnookin, "Idealizing Science and Demonizing Experts: An Intellectual History of Expert Evidence" (2007) 52:4 Vill L Rev 763; Elizabeth Fee & Theodore M Brown, "'A Doctors' War': Expert Witnesses in Late 19th-Century America" (2005) 95:S1 American J Public Health S28; Stephan Landsman, "One Hundred Years of Rectitude: Medical Witnesses at the Old Bailey, 1717-1817" (1998) 16:3 L & Hist Rev 445; Stephan Landsman, "Of Witches, Madmen, and Products Liability: An Historical Survey of the Use of Expert Testimony" (1995) 13:2 Behav Sci & L 131; Christopher Hamlin, "Scientific Method and Expert Witnessing: Victorian Perspectives on a Modern Problem" (1986) 16:3 Social Studies Science 485. See e.g. Learned Hand, "Historical and Practical Considerations Regarding

to that of proposals made in the nineteenth century.[130] Emphasizing newness makes it easy to lose sight of this.

The new problems emphasized by expert evidence jurisprudence and scholarship contrast with the "old" problem of the medical standard of care. By "old," I mean that physicians have been called upon to testify on the standard of care since the nineteenth century (at least).[131] While technoscientific progress has drastically changed several aspects of medical practice since that time, much of the substance of medical malpractice law has essentially remained unchanged. This is especially true of the medical standard of care.[132] For regardless of how medical practice may change, proving medical malpractice will always require that a norm — the standard of care — be proven to exist. Indeed, it is difficult to establish that a given action is *mal*practice without pre-existing practices against which the defendant physician's conduct can be measured. Barring a revolution in the substantive law governing medical malpractice, the need for medical expert witnesses will remain central to establishing the standard of conduct to which physicians should be held in particular circumstances. This gives the problem of proving the medical standard of care a degree of timelessness that is lacking in many other areas of expert evidence law.[133]

The second valuable characteristic is that the medical standard of care is not a scientific question.[134] This needs to be unpacked, as the term "medicine" can mean different things and has for many become bound up with the term "science."[135] For present purposes, it is helpful to distinguish between "clinical medicine" and "bench medicine."[136] Clinical medicine is a practical, applied discipline. It is what practising physicians do in their day-to-day job of caring for patients. It has become more mathematical over the twentieth century — mostly via statistics. But it's mathematical and theoretical dimensions are not as sophisticated as foundational scientific disciplines such as physics, chemistry, and biology. Bench medicine, on the other hand, is closer to these foundational disciplines. It includes areas such as genetics, immunology, biochemistry, and physiology: theoretically sophisticated disciplines that deploy a rich array of mathematical tools going beyond statistics.[137]

Expert Testimony" (1901) 15:1 Harv L Rev 40; William L Foster, "Expert Testimony, — Prevalent Complaints and Proposed Remedies" (1898) 11:3 Harv L Rev 169.

130 These proposals include: the self-regulation of experts; the appointment of experts by the courts, the keeping of pre-approved expert lists, scientific tribunals; and expert juries; see Golan, "Revisiting History," *supra* note 125 at 937.

131 R Blake Brown, "Canada's First Malpractice Crisis: Medical Negligence in the Late Nineteenth Century" (2017) 54:3 Osgoode Hall LJ 777; George J Annas, "Doctors, Patients, and Lawyers — Two Centuries of Health Law" (2012) 367:5 New Eng J Med 445; James C Mohr, *Doctors and the Law: Medical Jurisprudence in Nineteenth-Century America* (New York: Oxford University Press, 1993) at 109–21.

132 Robertson & Picard, *supra* note 97 at 286. Compare, for example, Robertson & Picard's treatment of the medical standard of care with that found in an article on the same topic published half a century earlier: Irvin Sherman, "The Standard of Care in Malpractice Cases" (1966) 4:2 Osgoode Hall LJ 222 at 223, 225.

133 Robertson & Picard, *ibid* at 286, n 101 and accompanying text.

134 Paciocco, "Context, Culture," *supra* note 45 ("Professionals testifying to standards of care within their profession are doing nothing scientific" at 57).

135 See generally Alex Broadbent, *Philosophy of Medicine* (New York: Oxford University Press, 2019) at 3ff.

136 R Paul Thompson & Ross EG Upshur, *Philosophy of Medicine: An Introduction* (Abingdon: Routledge, 2018) at 2–3. This distinction is similar to that between "scientific professions" and "practising professions": see Dorothy Nelkin, "Scientists and Professional Responsibility: The Experience of American Ecologists" (1977) 7:1 Social Studies Science 75 at 77.

137 Thompson & Upshur, *ibid.*

The medical standard of care is a matter of *clinical* medicine: it is about what physicians do — and what they *should* do — *in practice* as they go about their job of caring for patients. Knowledge developed within bench medicine can be relevant to the standard of care, of course, but this relevance is established in ways that are multiple, subtle, and contingent. Physicians' clinical reasoning — that is, reasoning in practice — is a fluid mix of inductive and deductive reasoning that incorporates highly heterogeneous elements and considerations in order to reach a decision in conditions of great uncertainty.[138] Ultimately, the precise mix of clinical and bench medicine relevant to a particular case will hang on the case's specifics and how the medical expert witnesses present their opinions and reasoning to the court.

The medical standard of care's practical and non-scientific character is valuable because it entails that expert witness evidence on the standard often sidesteps many of the issues that preoccupy most of the expert evidence jurisprudence and scholarship. The sidestepped issues revolve around three of the *Mohan–WBLI* criteria: (1) relevance; (2) necessity; and (3) reliability.

Relevance and necessity are rarely contested when it comes to proving the medical standard of care. Indeed, the standard *must* be proven, and proving it typically requires an expert:

> In a medical malpractice action, the central issue is whether or not the defendant physician met the appropriate standard of care. To support allegations of negligence, the plaintiff is required to lead expert evidence of a physician practising in that area of medicine attesting to the defendant's failure to meet the standard of care required in the circumstances; absent such evidence, the plaintiff will have "no hope of success."[139]

Relevance and necessity are therefore easy to satisfy in most medical malpractice actions, when the proffered expert evidence aims to prove the standard of care.

As for reliability,[140] it is rarely an issue when it comes to proving the medical standard of care because the standard of care is, once again, a practical question. Physicians testifying on the standard of care are testifying based on their practical knowledge of a given area of medicine. Even though this practical knowledge is infused with knowledge derived from general scientific principles and evidence, it is rarely helpful or even possible to disentangle the two in practice. Reliability analyses "should be tailored to the nature of the expertise,"[141] but also to the material issue in dispute — hence, the utility of the nexus concept. The medical standard of care is about how medicine is and should be practised in a particular context by a reasonable physician. A medical expert witness testifying on this issue is

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138 *Ibid* at 121–45. See also Alain C Masquelet, *Le raisonnement médical* (Paris: Presses Universitaires de France, 2006) at 119–23; Maël Lemoine, *Introduction à la philosophie des sciences médicales* (Paris: Hermann, 2017) at 151–66.

139 *Walker v Canada*, 2019 ONSC 4578 at para 10. See also Robertson & Picard, *supra* note 97 at 287, 502; *Alakoozi Estate v Hospital for Sick Children*, 2004 CanLII 8394 (Ont CA) (in cases involving complicated medical questions, plaintiffs are required to provide expert evidence on the standard of care; failure to do so will lead to the dismissal of the plaintiff's claim).

140 Reliability takes up much space in expert evidence jurisprudence and scholarship; see Dufraimont, "New Challenges," *supra* note 18 ("[t]he most dramatic recent development in the law on expert evidence has been the emergence of reliability as a central criterion — arguably *the* central criterion — for admissibility" at 541 [emphasis in original]).

141 *Ibid* at 547.

reliable insofar that they can reliably speak *as a medical practitioner* to what medical practice is in the relevant context. The reliability of a given science, theory, method, or technique rarely, if ever, comes into play here.

Therefore, a medical expert's admissibility to testify on the standard of care will essentially hinge, in most cases, on the "properly qualified expert" criterion.[142] This criterion may seem straightforward at first glance since the medical profession has a high degree of internal and formal differentiation: there are different *kinds* of physicians, and the differences between them are established by a formal credentialing system. In light of this, one could be tempted to think that a "properly qualified medical expert" is simply one who possesses formal credentials that "match" those of the defendant physician. But the matter of physicians' qualifications cannot be reduced to matching, as medical expert evidence can be admissible even when the expert witness' credentials and qualifications do not match those of the defendant.[143]

The admissibility of a physician's testimony depends on the subject matter at issue and the physician's training and experience.[144] This is justified because medical practice can vary considerably according to a number of contextual factors,[145] and these can make the difference between a warranted and unwarranted variation from standard practice.[146] Indeed, medical malpractice is ultimately an exercise in scrutinizing medical decision-making, which straddles ethics and epistemology in equal parts.[147] Whether medical decisions are warranted or unwarranted is therefore not solely a question of timeless and placeless scientific knowledge, but also a question of the context in which the decisions are made.[148] Determining whether a given physician's expert testimony is admissible may therefore require an analysis of the respective contexts in which the physician–expert and the physician–defendant practise, and what their concrete clinical experience consists of. Similarity or dissimilarity in practice contexts can weigh in favour or against admissibility, depending on the case. This significantly complicates the issue of the "properly qualified expert" criterion in medical malpractice cases, and makes it an interesting focal point of study.

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142 Robertson & Picard, *supra* note 97 (this is synergistic with the fact that the standard of care "expected of a doctor is directly related to his or her qualifications" at 289).

143 See e.g. *Parliament v Conley and Park*, 2019 ONSC 3044 at paras 21–28 [*Parliament*]; *Cheesman*, *supra* note 107 at paras 24ff.

144 *Parliament*, *ibid*. See also *Timlick v Heywood*, 2017 MBCA 7 at paras 46–47; *Robinson v The Sisters of St. Joseph of the Diocese of Peterborough*, 1999 CanLII 2199 (Ont CA) at para 1; Robertson & Picard, *supra* note 97 at 494–96.

145 See generally Ashley N Corallo et al, "A Systematic Review of Medical Practice Variation in OECD Countries" (2014) 114:1 Health Policy 5; Klim McPherson, "Why Do Variations Occur?" in Tavs Folmer Andersen & Gavin Mooney, eds, *The Challenges of Medical Practice Variations* (London, UK: MacMillan Press, 1990) 16 at 19–23.

146 See generally Mathew Mercuri & Amiram Gafni, "Examining the Role of the Physician as a Source of Variation: Are Physician-Related Variations Necessarily Unwarranted?" (2018) 24:1 J Evaluation in Clinical Practice 145.

147 Lemoine, *supra* note 138 at 152–53.

148 See generally Charles L Bosk, *Forgive and Remember: Managing Medical Failure*, 2nd ed (Chicago: University of Chicago Press, 2003).

3. WHY MEDICAL MALPRACTICE STANDS OUT

There are at least two aspects of medical malpractice that make it stand out vis-à-vis malpractice in most other professions. The first is that medical malpractice litigation is very costly to the public, making it particularly salient from a policy perspective. The financial cost of medical malpractice litigation mainly arises because physicians' malpractice insurance is paid for by the public purse, and the price of this insurance has risen significantly in recent years.[149] There are also significant human costs, given the delays that plaintiffs must endure before they receive compensation — *if* they receive compensation. Medical malpractice cases are often very complex, which prevents their expeditious disposition and taxes both the civil litigation system and the parties involved.[150] These costs have prompted calls for the implementation of no-fault schemes to compensate patients injured in the course of receiving medical care.[151]

The second reason is that there are striking parallels between the emergence of the gatekeeper role in expert evidence law and the emergence of the "Evidence-Based Medicine" (EBM) movement. Both the gatekeeper judge and EBM arose in the early 1990s, when both expert evidence law and medicine were facing criticism: the law for judges' lack of rigour in assessing scientific expert evidence, and medicine for physicians' lack of rigour in clinical decision-making. At that time, actors in both law and medicine turned to science and scientific method as solutions. Gatekeeping judges had to ensure that only "good" or "real" science was allowed into the trial, EBM physicians had to base their practices on not just any evidence, but *scientific* evidence. Both expert evidence law and EBM integrated simplistic conceptions of science with practical considerations, resulting in inconsistent norms and yielding mixed results.[152] Moreover, EBM makes strong normative claims within both medicine and law: just as EBM's clinical practice guidelines are put forward as guides for clinical decision-making, so can they be invoked as guides to determining the medical standard of care in malpractice litigation.[153]

Invoking science as salutary authority in decision-making is not limited to expert evidence law and EBM; it is undoubtedly a common theme in many other areas of professional and even political decision-making.[154] Once again, many of the arguments and points I make here

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149 Honourable Stephen Goudge, Ontario, Ministry of Health and Long Term Care, *Report to Ontario Ministry of Health and Long Term Care Re: Medical Liability Review*, (29 December 2017) at 1–2, 8, online: <www.health.gov.on.ca/en/common/ministry/publications/reports/medical_liability/docs/medical_liability_review_en.pdf>.

150 *Ibid* at 44.

151 Elaine Gibson, "Is It Time to Adopt a No-Fault Scheme to Compensate Injured Patients?" (2016) 47:2 Ottawa L Rev 307.

152 David Mercer, "Science, Legitimacy, and 'Folk Epistemology' in Medicine and Law: Parallels between Legal Reforms to the Admissibility of Expert Evidence and Evidence-Based Medicine" (2008) 22:4 Social Epistemology 405.

153 See generally Nicholas Léger-Riopel, "La réception judiciaire des directives encadrant les activités cliniques des médecins" (2011) 90:2 Can Bar Rev 301; Dylan Kozlick, "Clinical Practice Guidelines and the Legal Standard of Care: Warnings, Predictions, and Interdisciplinary Encounters" (2011) 19 Health LJ 125; Harvey Teff, "Clinical Guidelines, Negligence, and Medical Practice" in Michael Freeman & Andrew DE Lewis, eds, *Law and Medicine* (Oxford: Oxford University Press, 2000) 67; Daniel Jutras, "Clinical Practice Guidelines as Legal Norms" (1993) 148:6 CMAJ 905; Ann MacLean Massie, "In Defense of the Professional Standard of Care: A Response to Carter Williams on 'Evidence-Based Medicine'" (2004) 61:1 Wash & Lee L Rev 535 at 548ff.

154 See generally Heather E Douglas, *Science, Policy, and the Value-Free Ideal* (Pittsburgh: University of Pittsburgh Press, 2009); Sheila Jasanoff, *The Fifth Branch: Science Advisers as Policymakers* (Cambridge, Mass: Harvard University Press, 1990) at 229ff.

can be applied, *mutatis mutandis*, to other professions, occupations, or areas of activity. There is certainly work to be done on the standard of care of engineers, lawyers, architects, and other professions (or, more broadly, technically specialized occupations). However, and despite my reluctance to indulge in medical exceptionalism,[155] it seems impossible to deny that medicine holds a singularly important place in our contemporary culture. This seems as good a reason as any to focus on how lawyers, judges, and medical experts scrutinize medical actions in order to articulate the legal standards that physicians must live up to in practice.

IV. CONCLUSION

I began this article with a critique of expert evidence law and scholarship. The critique drew attention to the overriding concern for epistemological rectitude exhibited by the law and most scholarship in this area. This concern is valid. The law should aim for epistemological rectitude in both its formal rules (embodied in the *Mohan–WBLI* test) and their application in practice. However, unremitting concern for this overarching goal leads the literature to underappreciate how pragmatic considerations permeate expert evidence law, in both principle and practice. In other words, as concern for epistemological rectitude keeps legal thought on expert evidence in the rocky highlands, it directs our sights away from the swampy lowlands which constitute such a significant part of expert evidence law.

Expert evidence law is swampy because of its deeply pragmatic character, hence my insistence on "context is everything." Context is everything in this area because pragmatic considerations require judges to consider particulars case-by-case. Such considerations include: the type of dispute the parties are in; the kind of proffered evidence being debated; how the use of judicial resources could be affected; whether and how a given decision might benefit one party at the expense of another; the point in the proceedings at which the admissibility debate occurs; and so on. As a result, jurists face considerable uncertainty and unpredictability as to the outcome of specific admissibility debates. Expert evidence doctrine and commentary primarily rely on two foundationalist modes of analysis (conceptual analysis and factor listing) which cannot provide certainty and predictability. At best, they produce open-ended lists of often-competing considerations, which must be balanced against each other on a case-by-case basis. Epistemological rectitude, then, gets bogged down as it runs into the swamp of context — it cannot set foot on the certainty and predictability that its followers seek to reach.

Uncertainty and unpredictability create a knowledge problem. In light of the above, the problem can be summed up in a question: is it possible to study expert evidence law in a way that takes greater account of how it is pragmatically applied in context? My critique of epistemological rectitude raised this question and underscored the need to address it. With this done, I shifted from critique to constructive proposal.

Instead of the rocky highlands of conceptual analysis and factor listing, we ought to develop a third mode for studying expert evidence law. This third mode revolves around nexus types, which constitute the backbone of the proposed research program. Nexus types

[155] Michael Bliss, "Medical Exceptionalism" (2012) 55:3 Perspectives in Biology & Medicine 402.

can be defined as the conceptual unit formed by the combination of a legal element that the applicable substantive law requires be proven for legal consequences to obtain, and a type of expert evidence proffered to establish the factual basis of said legal element. Nexus types occupy a midpoint between generality and specificity. This midpoint is attained by combining three types of things — type of case, type of expert, and type of issue in dispute. The combination narrows our analytical focus enough to be more concrete, while also allowing for a measure of generalization. In other words, nexus types invite us to study expert evidence law with greater attention to contextual particularities, while also inviting us to generalize within limits that help us avoid the overly abstract generalizing that often accompanies studying the law as a whole (that is, as it applies to all experts in all types of cases).

To make this more concrete, I used a single nexus type as an example: expert evidence on the standard of care in medical malpractice cases. I argued that studying this nexus type can teach us not only about the kinds of considerations that might come into play in medical malpractice disputes, but also about expert evidence law as a whole. This nexus offers an important civil counterpoint to a criminally-slanted area of inquiry. It also possesses unique characteristics which make it stand out from other areas of civil litigation, including malpractice in other professions.

In sum, I have identified a shortfall in current writing on expert evidence law and proposed a path to help us move beyond it. The path leads into and snakes through the contextual swamp of particularity and pragmatism that characterizes expert evidence law. But this only sketches a general trajectory, and the path itself remains to be drawn. Space constraints prevent me from providing a concrete illustration of what walking this path entails (whether it be for studying the nexus type discussed herein, or another). Illustrative examples — which are necessary to both advance the proposed program and exhibit its utility in more tangible terms — must be left to future work. Since I have already undertaken but not yet shared some of this work, I now close by briefly describing how it can best be carried out.

Recall that nexus types occupy a midpoint between generality and specificity. By occupying this midpoint consistently and systematically, we can produce legal knowledge based on *exemplars*.[156] Simply put, exemplars are individual cases from which we can learn.[157] It is important, however, to keep in mind that the study of exemplars envisaged here does not involve "extracting" general principles (or ratios) from cases to construct a body of knowledge which can then be "applied." Indeed, knowledge of exemplars is *not* a form of propositional knowledge, nor is the ability gained from it. Rather, the knowledge and ability

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156 See Donald A Schön, *The Reflective Practitioner: How Professionals Think in Action* (New York: Basic Books, 1983) at 138–39, 183–84. I am also indebted to Schön for the rocky highlands versus swampy lowlands metaphor; see Schön, *ibid* at 43. For a recent discussion of Schön's work and its relevance to legal knowledge and practice, see Jeffrey Lipshaw, *Beyond Legal Reasoning: A Critique of Pure Lawyering* (Abingdon: Routledge, 2017) at 36–37, 129–30, 138, 144, 163.

157 While not inspired by my proposed method nor specifically aimed at producing exemplars of the kind discussed here, recent work by Emma Cunliffe and Gary Edmond is notable for its detailed analyses of specific cases, which the authors put to fruitful use: see Emma Cunliffe & Gary Edmond, "Justice Without Science? Judging the Reliability of Forensic Science in Canada" (2021) 99:1 Can Bar Rev 65; Cunliffe & Edmond, "Gaitkeeping," *supra* note 122.

gained should be seen as "tacit knowledge."[158] Knowledge of exemplars is therefore obverse to viewing knowledge "as a body of established propositions derived from research."[159] This latter view of knowledge is foundationalist: it refers to the kind of knowledge produced in the rocky highlands, knowledge that this article argues we should eschew pursuing (at least sometimes) because it flounders in expert evidence law's swampiness. Exemplars, on the other hand, are well adapted to swampiness because of their concreteness and particularity. They are especially useful for studying expert evidence law because they help to cultivate the type of knowledge that artfully competent lawyers and judges develop in the course of their practice: knowledge-in-action.[160]

Knowledge of exemplars, then, can be gained via practical experience in problem solving. The other way to develop this kind of knowledge is via richly detailed case studies.[161] It is this second method that can be used to develop the program proposed here. Well-made case studies are closer to real life than rule-based studies because they bring out the "multiple wealth of details" that we find in real life situations. Good case study scholarship need not be prescriptive; it need not provide rules nor tell its readers what to do. A case study need only provide a detailed exemplar for reflection and discussion, and show how particular constellations of facts were framed and argued over by the different parties, as well as how the arguments were resolved by the judge. Multiple exemplars of the same nexus type allow us to build a form of expert knowledge akin to that of specialized practitioners who have had multiple experiences in dealing with the same types of cases, expert witnesses, and issues in dispute.

By studying exemplars, we learn to recognize similarities and differences between concrete situations and the problems they contain.[162] We can then use the relationships of similarity and difference that we discern to group problem situations into "similarity sets," which can in turn serve to frame and solve new problems as they present themselves to us.[163] Exemplars therefore allow — and empower — their readers to decide for themselves what to carry over to future situations. And in the swamp of expert evidence law, that just might be the most solid ground we can hope for.

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158 Thomas S Kuhn, *The Structure of Scientific Revolutions*, 50th ann ed (Chicago: University of Chicago Press, 2012) at 190. Note that Kuhn is drawing here on Michael Polanyi's influential idea of tacit knowledge, following which "we can know more than we can tell": see Michael Polanyi, *The Tacit Dimension* (Chicago: University of Chicago Press, 2009) at 4.

159 Schön, *supra* note 156 at 48–49.

160 *Ibid* at 19, 49–59.

161 See generally Bent Flyvbjerg, "Five Misunderstandings About Case-Study Research" (2006) 12:2 Qualitative Inquiry 219; Lee Peter Ruddin, "You Can Generalize Stupid! Social Scientists, Bent Flyvbjerg, and Case Study Methodology" (2006) 12:4 Qualitative Inquiry 797; Gary Thomas, "Doing Case Study: Abduction not Induction, Phronesis not Theory" (2010) 16:7 Qualitative Inquiry 575; John Forrester, "If *p*, then what? Thinking in Cases" (1996) 9:3 History Human Sciences 1.

162 Schön, *supra* note 156 at 138–39. See also Kuhn, *supra* note 158 at 187, 191.

163 Kuhn, *ibid* at 199. See also Schön, *ibid* at 40, 138–39.

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