This paper examines a recent example of evidence-based decision making affecting social policy at the trial court level. It offers a close reading of *Carter v Canada (AG)*, decided by the British Columbia Supreme Court, and of Justice Lynn Smith’s careful scrutiny of the social science evidence when invalidating the *Criminal Code* prohibition on assistance in dying. Drawing on literature which examines the legal system’s use of social science evidence and expert witnesses, this paper suggests that Justice Smith’s treatment of the evidence in *Carter* provides an example of skilled judicial treatment of the extensive amounts of social science evidence typically tendered in *Charter* challenges related to controversial social issues. First, it considers the implications of the Supreme Court of Canada’s revised approach to social fact-

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finding by trial judges and the consequent need for trial judges to critically evaluate and effectively draw on the social sciences. Second, it examines certain limits to courts’ institutional capacity to evaluate the work of social scientists – specifically, the general lack of judicial training in disciplines other than law – and suggests that the trial judge’s approach in *Carter* is one to be emulated in future cases with similarly vast evidentiary records. Third, it looks at the role of the expert witness and at some of the dangers inherent in judicial reliance on expert testimony and highlights the ways in which Justice Smith’s careful consideration of the subtle effects of adversarial bias may have affected her approach to the evidence. It suggests that while some judges might struggle with common risks and challenges associated with judicial reliance on this type of evidence in the adjudication of social policy, the trial decision in *Carter* demonstrates that these difficulties may be overcome.
INTRODUCTION

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CONCLUSION: JUDGING THE SOCIAL SCIENCES AFTER CARTER
INTRODUCTION

People often speak of evidence-based decision making in matters of public policy and legislation. Since the adoption of the Canadian Charter of Rights and Freedoms (Charter), however, sensitive policy decisions have not been limited to the legislative sphere. Nor is the use of evidence in developing policy limited to our elected representatives. In some cases, the idea of approaching questions affecting social policy based on a solid evidentiary foundation characterizes the judicial task as much as it does that of the legislature. Adjudication essentially involves deciding matters based on the best available evidence.¹

In this paper, I examine a recent example of evidence-based adjudication affecting social policy, Carter v Canada (AG) (Carter BCSC).² I consider the trial judge’s use of social science expert evidence in the British Columbia Supreme Court’s 2012 decision in Carter BCSC invalidating the criminal prohibition on assisted death in Canada. That decision laid the evidentiary foundation for the Supreme Court of Canada’s unanimous ruling, in 2015, that it is unconstitutional for the law to prohibit individuals “suffering intolerably as a result of a grievous and irremediable medical condition” from deciding to end their lives on their own terms.³


² 2012 BCSC 886, 287 CCC (3d) 1 [Carter BCSC].

In looking at the trial decision in *Carter BCSC*, I offer a close reading of a fresh example of judicial reliance on social science evidence. Drawing on the literature examining the legal system’s use of social science evidence and expert witnesses, I suggest that Justice Lynn Smith’s treatment of the evidence in *Carter BCSC* provides an example of skilled judicial treatment of the extensive amounts of social science evidence typically tendered in *Charter* challenges related to controversial social issues. Given the capable treatment of the evidence, I further suggest that while some judges might struggle with common risks and challenges associated with judicial reliance on social science evidence, Justice Smith’s approach provides an example to be emulated by judges dealing with similar evidentiary records in the context of social policy disputes. Further, my reading of the case, combined with the relevant literature, enables me to suggest avenues of further research into ways to improve the adjudicative system’s use of social science evidence, so that all judges – and, by extension, litigants – may properly benefit from the valuable insights of the social sciences.

I approach this reading of *Carter BCSC* in three parts. In Part I, I examine the role of the trial judge. I posit that the trial decision in *Carter BCSC* serves as a testing ground for the Supreme Court’s new approach to social fact-finding by trial judges. In reviewing the decision, the Supreme Court refused to distinguish between adjudicative and legislative facts for the purposes of appellate review. I consider the implications of this move and the consequent need for trial judges who are able to critically evaluate and use social science evidence, given the increased weight that now rests on their shoulders. In Part II, I examine certain limits to courts’ institutional capacity to evaluate the work of social scientists – specifically, the general lack of judicial training in disciplines other than law – and suggest that the trial judge’s approach in *Carter BCSC* is one to be emulated in future cases with similar evidentiary records. In Part III, I look at the role of the expert witness. I highlight the problem of adversarial bias – one of the principal dangers inherent in judicial reliance on expert testimony, the typical vehicle

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4 As I explain below, I use the term “skilled” as it is understood and described in the relevant literature and case law.

5 *Carter SCC*, *supra* note 3 at para 109. Adjudicative facts are the specific facts of the case at hand. Legislative facts are more general in nature and help to establish the social context of a case. Previously, appellate judges were free to review legislative factual findings in the absence of demonstrated error. As I explain below, the Supreme Court recently did away with the distinction as it applies to the standard of appellate review. See Part I, below, for more on this topic.
by which social science evidence is brought to court. Here, I highlight the ways in which Justice Smith carefully considered the potential effects of bias and suggest that where judges are less discriminating in their evaluation of expert evidence, the bias that may result from the adversarial model of adjudication has the potential to delegitimize judicial review of social policy.

In approaching this project, I read the trial decision in *Carter* BCSC against a backdrop of wide-ranging literature and case law dealing with the perils and promises of social science evidence in the courtroom, both in Canada and abroad. I examined all of Justice Smith’s comments relating to the nature of the evidence before her and her treatment of it, so as to determine whether the evidentiary issues encountered resonated with the risks and challenges discussed in the literature. I sought to determine whether one experienced judge’s approach to a larger than usual evidentiary record validated or contradicted the existing literature. My evaluation of the evidentiary approaches was based on the widely accepted norms identified in the relevant literature; I looked closely at each instance of the weighing of contradictory evidence, and, as I explain below, at the considerations cited for the decision to accept one witness’s evidence over another’s. I sought out examples of the common challenges associated with judicial use of this type of evidence and attempted to highlight potentially problematic evidence – and the judge’s treatment of it – brought forward by parties on both sides of the litigation. Finally, this paper does not take a position on the many legal issues in dispute; in reading *Carter* BCSC, my focus was on the judicial reliance on and use of the evidence, and not on the substantive legal analysis.

This paper builds on the wealth of literature on the judicial use of social science evidence, and is premised on the idea that the legal system has much to gain from the social sciences, particularly with respect to rights adjudication with the potential to seriously impact social policy. Its goals,  

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however, are limited. It does not weigh in on the question of undue deference to social science evidence tendered by the government, although the decision in Carter – both at trial and at the Supreme Court – may enrich that debate. Nor does it delve into the questions related to legal education and training, which, as I suggest below, might ground further research related to the critical evaluation of empirical evidence by jurists. Rather, this paper should serve primarily to highlight the judicious treatment of the evidence in Carter BCSC, so that others may attempt to replicate Justice Smith’s capable approach. In doing so, it necessarily exposes some of the potential perils of reliance on empirical data under the current system of adjudication in Canada and identifies possible routes toward overcoming the associated challenges.

I. THE NEW WEIGHT OF SOCIAL SCIENCE EVIDENCE

The finding in Carter SCC that the criminal prohibition on physician assistance in dying is unconstitutional will have an immeasurable impact on the deaths – and lives – of Canadians suffering from incurable illnesses. But the trial judgment is meaningful for reasons beyond that aspect of the decision. The Carter case might be described as part of a new generation of Canadian adjudication: high-stakes constitutional litigation of controversial social policy issues with vast evidentiary records grounded in the social sci-


ences.\(^9\) Much of that evidence was presented by expert witnesses. This Part will suggest that the Supreme Court’s new approach to the evidence in these kinds of cases means that its critical evaluation by trial judges is paramount. It will also explain the value in examining the treatment of the evidence in *Carter* BCSC.

### A. Why critical evaluation matters

Expert evidence is valuable in elucidating complex facts, often not directly related to the parties to the litigation. Unlike adjudicative facts, which make up the “who did what, where, when, [and] how” of the case – that is, the immediate facts giving rise to the dispute – legislative facts – the social and economic facts surrounding a dispute – are often “introduced into evidence through the use of expert witnesses at trial.”\(^10\) Legislative facts rely on “social and economic data to establish a more general context for decision-making.”\(^11\) They are, in other words, the same type of facts that legislators look at in developing social policy.

The distinction between adjudicative and legislative facts was conceptualized in order to differentiate between applicable evidentiary approaches.\(^12\) Historically, this distinction extended to the different treatment of the two types of facts by appellate courts – a distinction that persisted until recently in Canada. Prior to 2013, whereas appellate courts could not, except in cases of gross error on the part of the trial judge, revisit adjudicative facts,

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\(^9\) For other examples, some dealing with health policy, see e.g. *Chaoulli v Québec (AG)*, 2005 SCC 35, [2005] 1 SCR 791 [*Chaoulli*]; *Canada (AG) v PHS Community Services Society*, 2011 SCC 44, [2011] 3 SCR 134; *Canada (AG) v Bedford*, 2013 SCC 72, [2013] 3 SCR 1101 [*Bedford*].


reviewing judges considered themselves at liberty to re-examine legislative facts. Where trial judges relied on “complex social science evidence,” their factual findings would merit less deference on the part of reviewing courts.\textsuperscript{13} Moreover, where lower courts were involved in constitutional balancing, deference to the trial judge’s factual inferences was likely to be even less, given that the determination of a Charter infringement often requires “a broad review of social, economic, and political factors in addition to scientific facts.”\textsuperscript{14} Were a trial judge to stumble over the complexities of evidence from unfamiliar disciplines – a not entirely inconceivable occurrence, as I discuss below – a low standard for intervention meant that appellate courts could come to different conclusions based on the same evidence. Recently, however, the threshold for appellate review of legislative facts was raised: in the absence of a palpable and overriding error, appellate courts are no longer free to re-evaluate a trial judge’s determinations of social, or legislative, fact.

In Canada (AG) v Bedford, the Supreme Court retreated from its earlier position on appellate review of legislative facts. It set out two principal reasons for why reviewing courts should no longer distinguish between adjudicative and legislative facts with respect to the standard of review. First, the time and resources involved in reviewing large volumes of evidence and “reconciling differences between the experts, studies and research results,” would duplicate the trial judge’s role and “increase the costs and delay in the litigation process.”\textsuperscript{15} Second, according to the Supreme Court, “social and legislative facts may be intertwined with adjudicative facts,” making it nearly impossible for appellate courts to properly distinguish between the two.\textsuperscript{16} Moreover, by 2013, constitutional rights adjudication and the associated reliance on social science evidence had “evolved significantly” since the Supreme Court established different standards of review in 1995.\textsuperscript{17} In the intervening years, the case law had favoured the presentation of social science evidence by an expert witness, the assessment of whom, both in terms of credibility and content of their testimony, fell to the trial judge.\textsuperscript{18} Further,

\begin{thebibliography}{9}
\bibitem{13} RJR-MacDonald, supra note 10 at para 79.
\bibitem{14} Ibid at para 141.
\bibitem{15} Bedford, supra note 9 at para 51.
\bibitem{16} Ibid at para 52.
\bibitem{17} Ibid at para 53.
\bibitem{18} Ibid at paras 51–53.
\end{thebibliography}
experience has demonstrated the importance of the trial judge’s role “in preventing miscarriages of justice flowing from flawed expert evidence.” Accordingly, “[t]he distinction between adjudicative and legislative facts can no longer justify gradations of deference.”

In recent years, authors have pressed for precisely this sort of end to the adjudicative-legislative fact distinction where appellate review is concerned. Michelle Bloodworth, for example, writes that the distinction between social and adjudicative facts is untenable, as all knowledge is imperfect, or subjective, whether it comes from a lay witness or an expert. Bloodworth argues that it is illogical for the Supreme Court to call for consideration of social and legislative facts when interpreting Charter rights, while simultaneously denying the trial judge’s capacity to effectively deal with this kind of evidence. Given the increased frequency with which courts rely on vast amounts of empirical data to evaluate social policy, reevaluation of the evidence by a reviewing court of its own accord does not promote judicial economy or the judicious use of resources. But is there some merit in the now outdated idea that the “privileged position of the trial judge,” does not extend to the evaluation of the kinds of facts considered in crafting legislation? Stated otherwise, what are the consequences of do-

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19 Ibid at para 53, citing The Honourable Stephen T Goudge, Report of the Inquiry into Pediatric Forensic Pathology in Ontario: Policy and Recommendations, vol 3 (Toronto: Ontario Ministry of the Attorney General, 2008) [Goudge Report]. The Goudge Report is the culmination of a commission of inquiry (the Goudge Inquiry, headed by retired Justice Stephen T Goudge of the Ontario Court of Appeal) into the problem of flawed forensic pathology, following the wrongful conviction of several individuals based on the erroneous expert testimony of Dr Charles Smith, a forensic pathologist. While the Commission’s mandate was limited to the subject of pediatric forensic pathology, the report has come to be recognized as an authority on the use of scientific expert witnesses in Canadian adjudication.

20 Bedford, supra note 9 at para 53.


22 “A Fact is a Fact is a Fact: Stare Decisis and the Distinction Between Adjudicative and Social Facts in Bedford and Carter” (2014) 32:2 NJCL 193 at 209.

23 Ibid at 210.

24 RJR-MacDonald, supra note 10 at para 79.
ing away with the distinction between adjudicative and legislative facts and enhancing the privileged status of the trial judge with respect to the evaluation of all evidence adduced in first instance?

As the first major policy-laden Charter decision reviewed by the Supreme Court since it confirmed the end of the adjudicative-legislative fact distinction, Carter SCC sheds some light on the potential effects of effectively immunizing trial judges’ evidentiary findings from appellate review, where that evidence is made up of empirical research by social scientists. The end of the distinction places an enormous weight on the shoulders of trial judges, many of whom are neither trained nor skilled in the methods of the social sciences. At the very least, the revised standard of appellate review leads to the increased importance of the role of the trial judge in admitting, evaluating, weighing, and drawing inferences from legislative and social facts.

The following parts seek to demonstrate that the trial decision in Carter BCSC should serve as an example for other judges facing complex qualitative and quantitative evidence. At the same time, they also suggest that in the hands of a different trial judge, the case could have become a cautionary tale of the risk that layperson trial judges might misconstrue similarly vast evidentiary records. The challenges identified are, of course, not unique to first instance judges; appellate court judges are often no better equipped to evaluate complex and contradictory social facts. But as a case makes its way up the appeals process, the evidentiary record is scrutinized by increased numbers of judges at each level of court, creating a sense of safety in numbers and consensus. As the number of judges increases, so do the chances that the evidence will be examined by a judge with the requisite awareness of the risks and challenges associated with expert evidence from the social sciences. Thus, the risk of uncrirical reliance on unsound evidence, or of misapprehension of complex scientific evidence, is minimized. The new approach to appellate review of social facts, however, suggests that trial judges must now be particularly adept at dealing with large volumes of complex and conflicting empirical evidence. It is true that the questions that gave rise to the modified standard of review – the distinct roles of trial and appellate courts and the blending of different types of facts – needed to be addressed. Scarce judicial resources can inhibit access to justice and it

25 See Conrad & Lazare, supra note 8, on jurists’ general lack of extra-legal training.

26 Bedford, supra note 9 at paras 51–52.
is indeed the trial judge’s job to assess the credibility of witnesses, be they lay or expert. The concern, however, is that under the new standard of appellate review, the consequences of a trial judge misinterpreting complex evidence become graver, as the judge is given the final word on the evidentiary basis of significant decisions affecting polycentric and often divisive social policy. But the risk can be minimized. As Justice Smith’s treatment of the evidence suggests, the challenges associated with empirical evidence may be overcome.

B. Why Carter BCSC

As an example worth following, the trial decision in Carter BCSC is valuable in two respects. First, in evaluating the constitutionality of the ban on assisted death, Justice Smith scrutinized an enormous amount of empirical evidence. The “considerable evidentiary record” included 36 binders containing 116 affidavits, some of which were “hundreds of pages in length and [attached] as exhibits many secondary sources,” as well transcripts and other documents.\(^{27}\) Much of that evidence was presented by expert witnesses, totaling 57 in number, 18 of whom were cross-examined.\(^ {28}\) While the evidentiary record was vast, it was not inordinate; Charter challenges to social policy typically rely on a substantial evidentiary record and often draw heavily on empirical evidence given by social scientists.\(^ {29}\) Indeed, the absence of cogent evidence would create a risk of determining questions of “fundamental importance to Canadian society” in a “factual vacuum.”\(^ {30}\) Rights adjudication has profound effects of “the lives of Canadians.”\(^ {31}\) As such, the relevant facts “may cover a wide spectrum dealing with scientific, social, economic and political aspects.”\(^ {32}\) Thus, Carter BCSC exemplifies the judicial reliance on social science data that often goes into constitutional rights balancing.

Second, it is worth considering what factors may have contributed to Justice Smith’s thoughtful approach. Justice Smith’s lengthy career as a

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\(^{27}\) \textit{Carter} BCSC, \textit{supra} note 2 at para 114.

\(^{28}\) \textit{Ibid} at paras 114, 160.

\(^{29}\) See e.g. \textit{Bedford}, \textit{supra} note 9; \textit{Chaoulli}, \textit{supra} note 9.


\(^{31}\) \textit{Ibid}.

\(^{32}\) \textit{Ibid}.
legal academic prior to her appointment to the bench may be significant. At the University of British Columbia, she served as dean of the Faculty of Law, taught in a number of areas, including evidence, civil litigation, and the Charter, and published articles in the fields of evidence, civil litigation, and Charter equality rights.\(^{33}\) It is not surprising that she would have turned her mind to the challenges discussed below – and to ways to mitigate some of the attendant risks – before encountering them as a judge.\(^{34}\)

In addition to her academic experience, Justice Smith has served on the Board of Governors and as the Executive Director of the Ottawa-based National Judicial Institute (NJI),\(^{35}\) which is devoted to improving justice through judicial education in Canada and internationally.\(^{36}\) At the NJI, she has been involved in training judges in Canada and abroad and has led workshops on the Charter and evidence.\(^{37}\) Finally, her work in judicial and legal education has also touched on the value of judicial impartiality.\(^{38}\) This is not to say that only judges with the same history of scholarship and academic experience as Justice Smith will be equipped to deal with the intricate nature of the evidence in complex policy adjudication. Indeed, one hope of this paper is that all judges might strive to emulate the example of judicial treatment of the evidence in *Carter* BCSC. Rather, Justice Smith’s background means simply that it is not surprising that her approach provides a positive example for judges facing similarly complex and weighty evidentiary records.

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\(^{34}\) See e.g. Lynn Smith, “The Courts and Different Kinds of Objectivity” (1987) 45:1 Advocate 17 (on the importance of objectivity in judging).


\(^{36}\) National Judicial Institute, “About the NJI” (2014), online: NJI <www.nji-inm.ca/index.cfm/about/about-the-nji/>.

\(^{37}\) UBC, “Smith”, *supra* note 35.

II. THE JUDGE AS LAYPERSON

Lack of training in scientific theories and methods may constitute one of the principal barriers to law’s critical use of social science evidence. In many cases, judges and lawyers do not possess the skills required to properly evaluate complex scientific evidence stemming from disciplines traditionally understood as being outside of law. For instance, writing about the Supreme Court of the United States’ treatment of the kind of evidence typically tendered in policy-related adjudication, one American scholar describes judges’ and lawyers’ “lack of even a minimum acquaintance” with science. Another observes the “incompetence” that characterizes the judicial use of empirical evidence. When examined in light of the statistical nature of much of the evidence, as well as its contradictory and inconclusive character, the trial decision in *Carter* BCSC, while an apparent exception to these critiques, also serves to highlight some of the potential hazards of judicial reliance on the social sciences. These limits extend to the jurist’s ability to evaluate the validity and reliability of evidence from the social sciences. What we are left with, then, is a judiciary that recognizes the need to draw on empirical evidence but that, as will be discussed in this Part, may not effectively use such evidence.

There are a number of consequences of this knowledge gap, but certain risks associated with uncritical reliance on the social sciences stand out upon a close reading of *Carter* BCSC. Among them is the risk that in the absence of real knowledge about science, judges might fall prey to the “mystique of science,” and in turn struggle in their determination of what constitutes expert evidence, ultimately accepting too much potentially unreliable empirical evidence. Further, limited capacity to critically evaluate social science data in the courtroom means that judges may misinterpret

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39 See Conrad & Lazare, *supra* note 8 at 50–51, 53 for a similar argument about judicial capacity to evaluate the social sciences.


41 James R Acker, “Social Science in Supreme Court Criminal Cases and Briefs: The Actual and Potential Contribution of Social Scientists as Amici Curiae” (1990) 14:1 Law & Hum Behav 25 at 40. Recent Canadian authorities voice similar concerns, see e.g. *Goudge Report, supra* note 19 at 500–502.

the evidence or prefer evidence from one witness over another for reasons unrelated to the validity or reliability of the evidence.

A. Discerning reliability in Carter BCSC

In dealing with expert evidence, trial judges play what has come to be known as a “gatekeeping” role. As gatekeepers, trial judges should “screen out proposed evidence whose value does not justify the risk of confusion, time and expense that may result from its admission.” What constitutes admissible expert evidence has developed incrementally. Trial judges’ determinations are now directed by a four-step test. To be admissible, evidence must be relevant and it must be “of necessity in assisting the trier of fact.” Proposed expert evidence must also not be excluded by another rule of evidence – for example, the general rule that in criminal proceedings, the Crown cannot lead evidence to impugn the character of the accused. Last, the evidence must be given by a “properly qualified expert” – that is, “a witness who has shown to have acquired special or peculiar knowledge through study or experience in respect of the matters on which he or she undertakes to testify.” These four steps are to be followed by a holistic weighing of the costs and benefits associated with the evidence. At this stage, in the criminal context in which the test has been substantially developed, the judge must determine whether the probative value of the evidence outweighs its prejudicial effect on the accused. Experience suggests, however, that applying this test to evidence about human behaviour – that is, to much of the evidence in Carter BCSC – is an exceedingly difficult task, even for trained scientists. That judges with little to no training in the social sciences would find the exercise challenging is unsurprising.

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44 Mohan, supra note 42 at 20.


46 Ibid at 25.

47 WBLI, supra note 43 at para 19.

48 Ibid.

The inability, on the part of some judges, to evaluate empirical evidence has led to increased amounts of social science experts being permitted to present their evidence in Canadian courtrooms. Referring to social scientists, experienced litigator Marlys Edwardh observed two decades ago “an explosion of areas of expertise and of expert opinions.” Others write: “our courtrooms have become ‘the showcase for the latest syndromes and theories offered by the scientific community.'” Most recently, Justice Doherty, of the Ontario Court of Appeal, observed that “a deluge of experts has descended on the criminal courts ready to offer definitive opinions to explain almost anything,” particularly where human behaviour is concerned. As explained above, Carter BCSC was no exception to the proliferation of expert opinions about human behaviour. The decision is emblematic, in fact, for its reliance on a legion of experts, all bringing distinct and contrasting points of view on the questions before the court.

This explosion of expert knowledge, and the consequent pressure on parties to support their arguments using expertise, creates the risk that courts will be flooded with an excess of specialized knowledge and, in some cases, knowledge that goes beyond the scope of a witness’s expertise. Aware of this risk, the Supreme Court has consistently warned that “trial judges must be vigilant in monitoring and enforcing the proper scope of expert evidence.” Where an expert’s evidence contains anecdotal evidence that “does not speak to the particular facts before the Court,” or where it otherwise “strays


52 R v Abbey, 2009 ONCA 624 at para 72, 97 OR (3d) 330; leave to appeal to SCC refused, 33656 (8 July 2010) [Abbey]. Note that while Doherty JA was referring to criminal courts and a specific type of sociological evidence, similar observations about the volumes of experts offering scientific explanations may be applied in the civil context, particularly where legislation is being challenged under the Charter.


beyond its proper scope, it is imperative that the trial judge not assign any weight to the inadmissible parts.”55 The Supreme Court has not however precluded the admissibility of such evidence, thus creating the risk that this kind of evidence of limited value might affect the trial judge’s reasoning.

In Carter BCSC, Dr. Hendin, a psychologist, provided expert testimony for the Attorney General. He was called for his expertise in suicide prevention and the effects of the legalization of physician-assisted dying in certain jurisdictions. On the issue of whether depression might affect an individual’s desire to request assisted death, he testified “that a number of studies have shown that general practitioners are not reliably able to diagnose depression, let alone determine whether depression is impairing [a patient’s] judgment.”56 As an expert in suicide prevention however, and not in competence assessment, he was not, in the opinion of Justice Smith, equipped to provide compelling evidence on the assessment of competence to choose assisted death, as he was called to do.57 Instead, Justice Smith preferred the plaintiffs’ evidence, including that of Dr. Smith, a psychiatrist and clinical professor, with “a great deal of experience in assessing cognitive functioning.”58

Likewise, Justice Smith remarked on the limits of evidence given by a clinical psychologist and associate professor with respect to an individual’s competence to request assisted death, as the witness stated on cross-examination that he had never, in his professional capacity as a psychologist, “been involved in assessing someone’s capacity to make medical decisions and that he is unfamiliar with the test for medical decision-making capacity.”59 Moreover, the studies relied on by that witness “did not involve people actually seeking physician-assisted dying,” but rather, dealt with “traditionally-defined suicide among older adults.”60 This stood in opposition to the plaintiffs’ evidence on the same question, which included evidence from Dr. Donnelly, a “specialist and Associate Professor of geriatric psychiatry” with

55 Sekhon, supra note 53 at para 48.
56 Carter BCSC, supra note 2 at para 794.
57 Ibid at para 796.
58 Ibid at paras 778, 795.
59 Ibid at paras 768–769.
60 Ibid at para 827.
“extensive practical experience doing competency assessments” and “who teaches in that area.”

Justice Smith was ostensibly adept at identifying – and mitigating – the risks that flow from the presentation of unreliable evidence and the acceptance of evidence beyond a witness’s field of expertise. She did so by carefully and expressly considering the extent and limits of the witnesses’ expertise in the subject at hand, both in terms of their experiences and the methods by which they reached their conclusions. For example, with respect to the “feasibility of physicians assessing competence in the context of physician-assisted death, [Justice Smith noted] the expertise and experience of the psychiatrists” called by the plaintiffs, as contrasted with the expertise of some of the witnesses called by the Attorney General of Canada.

Further, aware that the value of the evidence tendered varied according to differing levels of expertise among the experts, Justice Smith did not appear to place a disproportionate amount of weight on the evidence of one particular witness. Rather, her reasons refer to her analysis and weighing of the evidence “taken as a whole.” While this approach appears commonsensical, the possibility remains that other judges may fall short in distinguishing between similar but distinct fields of specialized knowledge.

B. Seeing beyond credentials in Carter BCSC

Appellate courts have long been aware of the danger that trial judges, with little background on which to base their evaluation of a witness’s qualifications, might fail to distinguish between a competent expert and one who boasts impressive credentials but lacks the requisite knowledge for the case at hand. Unreliable evidence may be given undue weight when “submitted through a witness of impressive antecedents.” The risk is that, deferring to credentials, some judges might abdicate their responsibility for the ultimate decision; it is much easier to rely on a pre-eminent expert in a given field than to engage in a critical evaluation of the evidence presented.

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61 Ibid at para 762.
62 Ibid at para 795.
63 Ibid at paras 796, 797.
64 Ibid at paras 115, 798.
65 Mohan, supra note 42 at 21.
Judging the Social Sciences in Carter v Canada (AG)

In the CARTER case, the risk of undue deference to demonstrated expertise may not have been realized. But the potential for uncritical regard for expert qualifications was present, given the list of witnesses put forward by parties on both sides of the litigation. Justice Smith heard evidence from veteran physicians in a number of medical fields ranging from gerontology, neurology, psychiatry, palliative care, and cardiology, as well as experienced professors of sociology, psychology, human rights, law, bioethics, and public health. Experts were affiliated with institutions such as Cornell University, Harvard University, the University of Toronto, and a number of other respected universities. The plaintiffs, for example, tendered the evidence of Dr. Marcia Angell, a physician and senior lecturer at Harvard Medical School and the former editor-in-chief of the New England Journal of Medicine, as well as Professor Sheila McLean, an emeritus professor in law and ethics at the University of Glasgow and a former vice-chairperson of the International Bioethics Committee of UNESCO. Likewise, the Attorney General of Canada relied on the evidence of Dr. Harvey Chochinov, a distinguished professor of psychiatry at the University of Manitoba and “the only Canada Research Chair in palliative care.” It is not difficult to understand the temptation for a layperson judge to simply defer to the expertise of such an impressive roster of witnesses, many of whom spent years accumulating knowledge in the field of assisted dying.

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68 CARTER BCSC, supra note 2 at para 160.

69 Ibid.

70 Ibid.
That reasonable temptation underscores the importance of looking past an expert’s credentials. Indeed, Justice Smith looked beyond the witnesses’ statuses as “impressive, respected researchers,” focusing instead on less obvious markers of reliability. For example, in evaluating Baroness Finlay’s evidence on whether safeguards can effectively prevent abuse of vulnerable individuals, Justice Smith focused not on the witness’s membership in the House of Lords, her “leading role in the debate about assisted suicide and euthanasia in the United Kingdom,” or her status as a “very well-respected palliative care physician.” Instead, in placing little weight on Baroness Finlay’s critique of the opposing evidence, Justice Smith pointed to the non-empirical methodology underlying her evidence. Justice Smith’s capacity to see past this long list of credentials might be attributable to her experience with judicial education and training. But in such a situation, judges can hardly be faulted for the natural temptation to uncritically defer to expert witnesses, rather than attempt to look beyond the often wide-ranging credentials of experts to assess the substantive merit of their evidence. This is not to deny the relevance of the educational background of expert witnesses, but rather, to encourage, in addition to an assessment of their credentials, the critical evaluation of their actual experience and of the methodologies they employ.

C. How Carter BCSC differentiates empirical methodologies

The difficulty that many judges might face in evaluating empirical data does not end once an expert’s professional qualifications and the subject matter of the evidence have passed the gatekeeping stage. Commentators in the United States have characterized judges as “[ranging] from closet Einsteins to proud Luddites” in their knowledge of scientific methodologies. More than being untrained in the sciences, American judges have been known to resist instruction in matters with which they should have

71 Ibid at para 651.

72 Ibid at para 664. See ibid at para 160 for the reference to the House of Lords.

73 Ibid at para 664.

74 CBA, “Smith”, supra note 33.

at least some familiarity. Professors Conley and Peterson, experienced in training judges in science, recount judges’ statements that “studying methodology is too abstract, mere theory.” The professors’ “uniform experience with hundreds of judges at every level is that the judges think methodology is something for academics to worry about.” While the same resistance has not been documented in Canada, it remains true that many judges have no background in the social or natural sciences.

Judicial inexperience with scientific concepts and methodologies has obvious consequences with respect to the evaluation of empirical evidence. The case law demonstrates that some trial judges, untrained in the differing methodologies of distinct areas of inquiry, may confuse evidentiary reliability and scientific validity, and hold evidence to an inappropriate standard. In *R v Abbey*, for example, the trial judge was found to have misinterpreted expert evidence because he applied the language of quantitative research methods – “error rates,” “random sampling,” “peer review,” and “[replication of] findings” – to evidence based on qualitative sociological research, clinical experience, and “familiarity with the relevant academic literature.” The Ontario Court of Appeal wrote that “[i]t was unhelpful to assess [the expert’s] evidence against factors that were entirely foreign to [the expert’s] methodology.” The trial decision in *Abbey* is a fitting example of the judicial mistreatment of empirical evidence due to its complex or technical nature. The result is the risk that trial judges may decide policy-related questions based on evidence that they may not fully grasp.

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77 Conley & Peterson, *supra* note 75 at 1206.

78 See e.g. The Honourable Mr. Justice Ian Binnie, “Science in the Courtroom: The Mouse That Roared” (2007) 56 UNBLJ 307 at 309. See also *Goudge Report, supra* note 19 at 500–02 (recommending the development of judicial training programs on the scientific method).

79 *Supra* note 52, at paras 105, 108.

80 *Ibid*.

81 Note that the trial decision in *Abbey* was corrected on appeal. Thus, like *Carter BCSC, supra* note 2, Justice Doherty’s reasons at the Ontario Court of Appeal might be considered an example worth following of judicial treatment of social science evidence, albeit in the criminal law context. Moreover, that the trial judge’s error in *Abbey* was corrected on appeal underscores the increased
Justice Smith’s reasons contain a number of signs that she was proficient at understanding the empirical evidence before her. Alongside her comments on statistical or empirical studies are references to the methodologies employed by the authors and how those methodologies affected the data relied on. For example, with respect to the “Ganzini Depression Study,” relied on as part of her survey of legislative regimes governing assisted dying in Oregon and Washington, Justice Smith demonstrated an acute awareness of the limitations of quantitative studies. She explicitly recognized that the reliability of such studies depends in part on response rates, as acknowledged by the authors of the study themselves.\(^82\) Where sample sizes for another qualitative study were small, she recognized this among other limitations, ascribing an appropriate amount of weight to such evidence and using the study to provide context for the related quantitative data.\(^83\) Likewise, Justice Smith acknowledged further instances where the generalizability of data flowing from quantitative studies was limited by sample size and other factors, and accordingly relied on some of this evidence as part of the broader context of the litigation rather than for its specific content.\(^84\) Further, Justice Smith distinguished between more and less reliable evidence, according to the methods by which it was gathered or obtained. For example, the weight of evidence was weakened where it was based on second-hand knowledge only, of an article or a film.\(^85\) Finally, Justice Smith was explicit about placing more weight on an expert opinion based on “evidence-based thinking” than on one that that departed from the mainstream.\(^86\)

Justice Smith does not appear to have deferred unquestioningly – to either experts or their evidence – in the face of conflicting empirical data from disciplines outside of the law. This is unsurprising given her extrajudicial writings, wherein she acknowledges the limits of certain types of quan-

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82 Carter BCSC, supra note 2 at para 434.
83 Ibid at para 496.
84 Ibid at paras 445, 496.
85 Ibid at para 504. Justice Smith found parts of Professor Hendin’s expert evidence problematic partly because they were based on an article written in Dutch.
86 Ibid at para 796.
titative data, stemming from ethical restrictions, the creation of simulated situations, and the inability to corroborate results.\textsuperscript{87} Indeed, the reasons in \textit{Carter} BCSC make a number of references to the inconclusive nature of the evidence and the impossibility of arriving at firm conclusions on certain matters, such as the potential impact on palliative care of legalizing physician-assisted death in Canada.\textsuperscript{88} Thus, in her reasons in \textit{Carter} BCSC and elsewhere, Justice Smith demonstrates a keen awareness of both the usefulness and the limits of social science evidence generally, by accepting that controversial social policy matters will rarely lend themselves to clear or discrete answers.

Justice Smith’s other work also sheds light on the rationale behind her methodical review of the immense evidentiary record in \textit{Carter} BCSC. In a 2011 speech at the University of New Brunswick, the judge spoke at length about the importance of writing reasons.\textsuperscript{89} Reasons that contain a detailed and clear explanation of the evidence itself, as well as of the judge’s reasoning in distinguishing between stronger and weaker evidence, confer a sense of legitimacy on the ultimate decision.\textsuperscript{90} The effect of this approach is that the more complicated and lengthy the evidentiary record, the longer the resulting decision. The evidence in \textit{Carter} BCSC was far from straightforward. That the record contained several differing and contradictory points of view, stemming from distinct areas of inquiry, and dealing with a number of questions related to legalizing physician-assisted death in Canada and abroad, helps to explain the length of the decision, which spanned 1416 paragraphs and almost 400 pages.

Canadians should expect, as a matter of course, that judges tasked with adjudicating social policy should be adept at sifting through voluminous records and evaluating not only the evidentiary claims put forward by the parties but also the means by which these claims were reached. But it should be evident at this stage that many Canadian judges are, by no fault of their own, not always equipped to make these difficult determinations where empirical data from qualified experts in fields far from the judge’s legal expertise point in multiple directions and the law seeks a single an-


\textsuperscript{88} See e.g. \textit{Carter} BCSC, supra note 2 at paras 647, 649, 731, 732.

\textsuperscript{89} Smith, supra note 87 at 30–33.

\textsuperscript{90} \textit{Ibid}; Binnie, supra note 78 at 21.
swer. Faced with the same value-laden social policy question that Justice Smith was confronted with in *Carter* BCSC, it is easy to imagine that some judges might have more difficulty in drawing the factual conclusions that will form the basis of their decisions. Indeed, experience and scholarship indicate that many judges may not have fared as well.91 The severity of the problem becomes clear when considering that under the Supreme Court’s new approach to reviewing legislative facts, absent a serious error, a single judge has the final say on how empirical evidence is to be interpreted, even where the evidence is contradictory or where expert opinions are derived from methodologies foreign to the judge.

The trial decision in *Carter* BCSC suggests that these issues, while serious, are not insurmountable. Nor are these issues novel, although they may be exacerbated by the Supreme Court’s new approach to legislative facts. *Carter* BCSC demonstrates that with cautious deliberation, missteps can be avoided. Further, as I discuss briefly below, the legal system might move toward mitigating the risks. But before thinking about ways forward, the following Part will draw out some further challenges to adjudicating social policy, the source of which lies not in the judicial role but in the role of the expert witness.

### III. Tackling the Perils of Expertise

Thus far, this paper has set out some of the principal dangers inherent in judicial reliance on empirical evidence arising out of the lack of judicial expertise in evaluating empirical research. It has highlighted the presence of those dangers and suggested that Justice Smith’s approach in avoiding some of the typical missteps in the judicial treatment of social science evidence is one to be emulated. This Part will shift the focus away from the judge and onto the expert witness in order to draw out similar institutional difficulties with litigating social facts. Specifically, it examines the existence of bias among expert witnesses, with “bias” being defined as the “predisposing influences that can tincture the accuracy of expert testimony” resulting from a lack of independence or impartiality,92 and demonstrates how these issues were overcome in *Carter* BCSC.

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91 See e.g. Katherine Swinton, “What Do the Courts Want from the Social Sciences?” in Sharpe, *supra* note 10 at 187; Conley & Peterson, *supra* note 75; Binnie, *supra* note 78.

92 David Paciocco, “Unplugging Jukebox Testimony in an Adversarial System:
Due to its heavy reliance on social science evidence, *Carter* BCSC is fertile ground for exploring the typical delivery of that evidence in the form of expert testimony. The role of the expert witness is to “provide assistance to the court in understanding matters which are beyond the expertise of the trier of fact.” While experts are called by parties to the dispute, their duty is to provide a neutral and independent opinion on the issue before the court, and not to advocate for the party that retained them. The nature of the adversarial system, however, wherein parties pay for an expert’s service, might naturally affect their independence. Indeed, the *Carter* BCSC decision is a prime example of the ways in which bias, conscious or unconscious, can creep into the courtroom as an inevitable consequence of the adversarial system of adjudication. While Justice Smith appears to have weeded out much of the problematic evidence, giving less weight to lower value testimony, the decision suggests that the potential for bias was present at trial and that the same potential biases will continue to arise as long as courts rely on experts, a necessary corollary to the use of empirical evidence. The following paragraphs will examine some of the ways in which expert bias manifests itself in the trial process. The hope is that mere awareness on the part of lawyers and trial judges of the ways in which bias can flow from trial proceedings – and the ways in which its impacts may be mitigated – will encourage caution and deliberation on the part of trial judges in accepting and relying on the evidence of social science experts.

**A. Adversarial litigation and the polarization of opinions in Carter BCSC**

The adversarial system has been characterized by the “polarization of opinions” it produces. Nowhere is this polarization more evident than in

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94 Horton & Mercer, supra note 93 at 165.

95 Ibid.

96 The Honorable Geoffrey L Davies, “Court Appointed Experts” (2005) 5:1
the competing testimony of opposing expert witnesses testifying on the same subject but expressing conflicting opinions. The trial in *Carter BCSC* typified the phenomenon of expert witnessing, as Justice Smith heard testimony from 57 experts. This is unsurprising given the controversial and divisive nature of the issues in *Carter BCSC* and the role of the expert in assisting the court by bringing clarity to complex information. Often however, rather than reveal the truth or illuminate the subject for the judge, the polarization of views may have the effect of distorting the subject matter.97 Indeed, “duelling experts make bad teachers.”98 Further, the difficulty of uncovering the facts from what is presented by experts is compounded by the “natural human tendency to feel the need to do your best for the side you represent.”99 This kind of adversarial bias is “an almost inevitable consequence” of giving evidence within the current adversarial context,100 and it has the potential to turn impartial experts into advocates for the retaining party’s case.101

Where adversarial bias may be most deceptive and likely to affect honest witnesses is in its creation of confirmation bias or, the “unconscious tendency of those who desire a particular outcome to search for things that support that outcome and to ignore or reinterpret contradictory information.”102 The spin or selective presentation that may result from confirmation bias can be particularly dangerous for witnesses who depend on “subjective judgment or experience rather than objective science to achieve their opinions.”103 Even where evidence is conclusive, which it often is not, testimony may be “[coloured] either consciously or subconsciously by personal and professional prejudices.”104

Queensland U of Technology L & Justice J 89 at 90.


98 Binnie, *supra* note 78 at 324.

99 Davies, *supra* note 96 at 91.

100 *Ibid* at 89.


102 *Ibid* at para 17.

103 *Ibid*.

Finally, the adversarial system of adjudication fosters confirmation bias by encouraging the sharing of theories and objectives between parties and their experts. The system thus promotes a “sense of joint venture” or “esprit de corps.” 105 One social scientist experienced in giving expert testimony confirms this idea: in helping counsel organize their case, “[e]xpert witnesses do not merely give their opinions; they join a company.” 106 Experts will often work with counsel on multiple aspects of the case, and not always limit their involvement to the distinct point on which they testify. 107 This sense of cooperation gives rise to the phenomenon of “noble cause distortion [or] corruption,” that is, “the distorting effect that can occur from believing that you are on the side of the good.” 108 According to this phenomenon, “[e]xpert witnesses who think that they are serving the public interest by testifying, particularly by combating reprehensible practices or conduct, can fall victim to this form of partiality.” 109 The brief biographies of the experts in Carter BCSC demonstrate that many had devoted lengthy careers to researching and writing about physician-assisted death, some clearly sitting on one side of the debate. 110 It is only natural that some might have come to the case with preconceptions of what constitutes the good.

Of course it is not possible to measure the level of bias that resulted from the use of partisan experts in Carter BCSC. But the potential existence of bias – and the care with which Justice Smith approached the expert testimony – should nevertheless serve as both a caution and a lesson to parties and to triers of fact faced with lists of carefully selected experts on controversial social matters.

B. Rising above bias in Carter BCSC

There is no effective means of evaluating the degree to which the expert testimony in Carter BCSC was affected by bias. But the nature of the case

105 Paciocco, “Jukebox Testimony”, supra note 92 at 579.


107 Ibid.

108 Paciocco, “Jukebox Testimony”, supra note 92 at 582.

109 Ibid.

110 See Carter BCSC, supra note 2 at para 160.
and some of the evidence tendered suggest that it was not immune from the typical dangers of expert evidence. Confirmation bias may well have been present at trial. Recall that confirmation bias may be especially dangerous where evidence does not stem from an “objective science.”¹¹¹ Some authors would not characterize the social sciences as an objective science; they have been described as the “least accurate scientific evidence,” and serious doubt has been expressed as to their probative value.¹¹² Justice Binnie has written that the “softer sciences, such as psychology,” lend themselves less easily to “testing, critique and the generation of error rates.”¹¹³ Similarly, Professor Dworkin argues that the social sciences are more “fragile” than harder sciences.¹¹⁴ At the same time, it must be recognized that social science studies can be more or less rigorous depending on the methodology used and the sample size. Many social science experts whose research involves quantitative and statistical analysis would dispute the idea that their work is less accurate or should have less probative value than the data produced by the physical sciences. When it comes to assessing scientific rigour, statistical inquiry and quantitative research should not be lumped together with qualitative research based on interviews of small sample groups.¹¹⁵ But the observations of Justice Binnie and Professor Dworkin may nevertheless hold true with respect to certain forms of social science evidence. By its nature, given that it is less easily replicated and confirmed by further research, qualitative

¹¹¹ Paciocco, “Jukebox Testimony”, supra note 92 at 578.

¹¹² Thompson, supra note 104 at 41.

¹¹³ Binnie, supra note 78 at 322. Note that I do not adopt or endorse the “hard/soft” science distinction. Rather, I take Justice Binnie’s reference to “soft” science to refer to the behavioural sciences, insofar as they are distinct from the natural, or physical, sciences. See generally Nicholas Bala & Jane Thomson, “Expert Evidence and Assessments in Child Welfare Cases” (December 2015) Queen’s Law Legal Research Paper Series No 063 at 12, 14 (on distinctions between “hard sciences” as “biological, medical and physical sciences” and “soft” or “social and behavioural sciences”).


¹¹⁵ See e.g. Robyn Mounsey, “Social Science Evidence as Proof of Legislative Fact in Constitutional Litigation: A Proposed Framework for a Reliability Analysis” (2013) 32:2 NCJL 127 at 140–41 (on the distinction between the natural and social sciences for the purposes of evidentiary reliability being a “false dichotomy”).
social science evidence, which constituted a significant portion of the record in *Carter* BCSC, heightens the risk of confirmation bias.

Much of the evidence admitted by Justice Smith came from psychologists, ethicists, sociologists, human rights experts, and legal researchers specializing in assisted dying. Moreover, the evidence given by some of the medical doctors had less to do with physiological processes, that is to say objectively verifiable data, and more to do with their experiences treating patients at the end of life. At a general level, the experts in *Carter* BCSC cannot be described as the prototypical “jukebox witness” – that is, as witnesses who “would play any tune in [their] testimony that [they were] paid to play.”116 Indeed, many of them testified based on years of experience researching physician-assisted death and did not appear to change their opinions to suit the party who had retained them. But the risks described above suggest that this sort of evidence may nevertheless be vulnerable to the subtle ways in which adversarial bias creeps into trial proceedings.

Justice Smith was aware of the potential for personal bias to affect expert testimony. In evaluating the evidentiary value of the Battin et al. study on whether safeguards in place in the Netherlands and Oregon effectively prevent abuse of vulnerable individuals, she expressed her doubt with respect to the impartiality of a critic of the study. Testifying for the Attorney General of Canada on the Battin et al. study, Dr. Pereira had spoken “from his deep and sincere conviction that assisted death is wrong and unnecessary.”117 Referring to another witness for the Attorney General, Dr. Hendin, Justice Smith wrote that “his passion on the topic, left [her] in some doubt as to his impartiality.”118 The Battin et al. study, on the other hand, was conducted by “highly qualified empirical researchers” who conducted a “rigorous” analysis, according to Professor Battin.119 Further evidence on the same question was presented by Dr. Ganzini, a witness for the plaintiffs, whose objectivity was bolstered by the fact that her views on best practices with respect to certain types of patient requests had changed over the course of her long-term study of assisted death.120 This sort of distinction suggests

116 Paciocco, “Jukebox Testimony”, *supra* note 92 at 566.
118 *Ibid*.
119 *Ibid* at para 651.
120 *Ibid*. 
that Justice Smith was attuned to the warning signs of bias and to the idea that “dogmatism is an important indicator of bias or partiality.”  

Indeed, “[e]xpert witnesses betray their predispositions by being uncompromising and unwilling to modify their opinions when factual assumptions are changed or when compelling opposing positions are presented.” Justice Smith thus accepted the evidence that “the availability of assisted death in those jurisdictions has not inordinately impacted persons who might be seen as ‘socially vulnerable.’”

Similarly, the case was not immune to the risk that subjective judgment or experience might taint an expert’s neutrality. Some of the opinions expressed by medical experts were anecdotal, based as they were on personal involvement with patients rather than on statistical or empirical data. Dr. Bentz, for example, testifying for the Attorney General of Canada on the inefficiency of safeguards in place in Oregon, based his evidence on his experience with a terminally ill patient. Such anecdotal evidence is problematic in at least two interrelated ways. First, evidence based on personal experience cannot be relied on as representative overall. When considering evidence for the purpose of evaluating social policy, one individual’s experience on a particular occasion does little to illuminate the broader issues and will therefore be of little assistance to the judge. Second, necessarily subjective in nature, anecdotal evidence offers only an individualized perspective on the question at hand. Without more than a personal view, the evidence cannot be tested or confirmed in order to draw generalized conclusions on broader societal views or interests. Indeed, in the accepted hierarchy of scientific evidentiary sources, opinions based on the expert’s personal experience rank the lowest. Contrasted with the statistical evidence tendered on the same subject, Justice Smith identified Dr. Bentz’s evidence as anecdotal, preferring the plaintiff’s evidence stating that the oversight process works

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121 Paciocco, “Jukebox Testimony”, supra note 92 at 608

122 Ibid.

123 Carter BCSC, supra note 2 at para 662.

124 Ibid at para 410.

125 Steven N Goodman, “Judgment for Judges: What Traditional Statistics Don’t Tell You about Causal Claims” (2007) 15:1 JL & Pol’y 93 at 106. Note that Goodman’s remarks are directed at evidence of injury causation in the context of tort law. The idea that evidentiary strength and reliability will vary according to the methodology, however, is applicable to areas other than tort causation.
fairly well in Oregon.\textsuperscript{126} Justice Smith did not expressly reject Dr. Bentz’s evidence, but she was attuned to the dangers of anecdotal, or experiential, evidence given by experts and to the importance of relying on “evidence-based expert evidence”\textsuperscript{127} over evidence based on personal experience.

The judge’s critical approach to evidence based on personal experience was later reinforced by the Supreme Court. In \textit{Carter SCC}, the Supreme Court was asked to evaluate fresh evidence submitted by the Attorney General on the slippery slope argument against the decriminalization or legalization of physician-assisted death. Specifically, the Attorney General sought to advance evidence that permitting the practice will result in illegitimate deaths of “decisionally vulnerable” patients and send Canada down “the slippery slope into euthanasia and condoned murder.”\textsuperscript{128} The evidence consisted of an affidavit from Professor Montero, a bioethics professor called as an expert on euthanasia in Belgium, which detailed “a number of recent, controversial and high profile cases of assistance in dying in Belgium which would not fall within the parameters suggested in [the Supreme Court’s] reasons.”\textsuperscript{129} In addressing the affidavit, the Supreme Court cautioned against judicial overreliance on anecdotal or individualized evidence, which may not be generalizable to the legal and social context of the case. The Court endorsed Justice Smith’s detailed analysis of the evidence as a whole: “[t]he resolution of the issue before us falls to be resolved not by competing anecdotes, but by the evidence.”\textsuperscript{130} Thus the Supreme Court confirmed the need for careful attention in mitigating some of the potential dangers of expertise, particularly where expert evidence is anecdotal in nature.

The contrast between the different types of evidence tendered on the same question – anecdotal on the one hand and statistical/empirical on the other – illustrates how the above-described dangers associated with expert testimony make their way into the adjudicative process and that certain forms of evidence are more likely to give rise to a greater risk of bias. As Justice Smith’s treatment of the evidence demonstrates, however, awareness

\textsuperscript{126} \textit{Carter BCSC}, supra note 2 at para 653.

\textsuperscript{127} \textit{Goudge Report}, supra note 19 at 479. See also \textit{Sekhon}, supra note 53 (on the Supreme Court’s general rejection of the reliability of anecdotal expert testimony).

\textsuperscript{128} \textit{Carter SCC}, supra note 3 at paras 114, 120.

\textsuperscript{129} \textit{Ibid} at para 111.

\textsuperscript{130} \textit{Ibid} at para 120.
of the distorting effects of bias and express acknowledgement of this danger can go a long way toward mitigating its potential destructive impacts on judicial decision making.

**CONCLUSION: JUDGING THE SOCIAL SCIENCES AFTER CARTER**

In *Charter* disputes about controversial social policy affecting large numbers of Canadians, the Supreme Court often has the final judicial say. But the fact that two appellate courts will normally review the trial decision does not diminish the significance of the trial judge’s role. In exercising the gatekeeping function and determining what weight to ascribe to each piece of evidence, it is the first instance judge who creates the evidentiary basis both for her decision and for subsequent appeals. Given that appellate courts are no longer at liberty to review a trial judge’s findings of legislative fact, it follows that today more than ever it is essential that trial judges treat social science evidence correctly and effectively. However, as I have suggested, the adversarial method of presenting evidence does not always facilitate correct and effective treatment of empirical evidence.

The trial decision in *Carter* BCSC demonstrates that the challenges flowing from adversarial adjudication need not undermine the reasoned resolution of disputes about social policy. The risks diminish as judges demonstrate greater sensitivity to the difficulties associated with judging large amounts of conflicting empirical data. Justice Smith’s approach to the record in *Carter* BCSC enabled her to avoid some of the characteristic missteps associated with judicial reliance on contested evidence about human behaviour. But demonstration alone is rarely an effective pedagogical tool and questions remain about how the legal system can assist judges in applying the same discriminating approach to similar evidence.

Precise methods of creating discriminating users of empirical evidence are beyond the limited scope of this paper, which aims simply to highlight one example of thoughtful treatment of this kind of evidence. Nevertheless, in reading *Carter* BCSC, some methods of promoting judicial capacity to evaluate empirical data come to mind. For instance, the common law on the independence of expert witnesses might benefit from a stricter threshold for admissibility. The Supreme Court recently ruled that an obvious lack of independence on the part of an expert witness should affect the admissibility
of that expert’s evidence.131 But only in the clearest of cases does an expert’s inability to provide objective evidence render the evidence inadmissible – for example, where an expert “assumes the role of an advocate … ”132 Given the subtle and nuanced ways that bias can creep into adversarial proceedings, particularly in social policy cases where judges hear from large numbers of partisan experts, the line between expertise and advocacy can be difficult to trace.133 By maintaining a “not particularly onerous” threshold for admissibility, according to which a personal, professional, or financial interest alone does not preclude admissibility,134 the law provides little help in mitigating the risks associated with expert testimony.

On a more rudimentary level, the legal system as a whole might do more to foster familiarity among lawyers and judges with the methods of other intellectual disciplines, particularly those on which the law regularly draws.135 Law schools would do well to instil in students a sense of literacy with respect to the complex evidentiary concepts they may encounter as jurists, by creating courses that aim to “enable students to become more sophisticated consumers of science and understand its relationship with law.”136

131 WBLI, supra note 43.
132 Ibid at para 49.
133 See e.g. Bedford v Canada (AG), 2010 ONSC 4264 at para 182, 327 DLR (4th) 52 (where the trial judge was “struck by the fact that many of those proffered as experts … had entered the realm of advocacy … ”).
134 WBLI, supra note 43 at para 49.
135 See Conrad & Lazare, supra note 8.
136 Glenn R Anderson, Science and the Law, Syllabus (Schulich School of Law, Dalhousie University, Fall 2015) at 1, online: <www.dal.ca/content/dam/dalhousie/pdf/law/Academic%20Information%20Syllabi%20Moots%20Regulations/Syllabi/Science%20and%20the%20Law%20Outlines%20Fall%202015%20Course%20Outline%204%20pp.pdf>. See also Université du Québec à Montréal, Health Sciences and Law, Course Description, online: <www.etudier.uqam.ca/cours/sigle=CIN5000&p=7308>, which introduces students to different types of expert testimony related to environmental science as well as basic principles in varied disciplines such as toxicology, medicine, epidemiology, physiology, psychology, and neuropsychology [translated by author]. While these two courses stand out, the emphasis in similar courses at most Canadian law school courses does not appear to be on creating competent users of scientific research, but rather on the laws of evidence and procedural rules related to expert testimony.
What such courses might look like and where they would fit into the law school curriculum are questions for further reflection.\textsuperscript{137}

Canadian judges are regularly called upon to decide divisive questions affecting social policy and impacting the lives of many. To do so effectively, they must regularly rely on the work of empirical researchers who study human behaviour and evaluate the impact of laws and social policies. As in \textit{Carter} BCSC, rights adjudication with wide-ranging effects requires judges to critically appraise the work of empirical researchers, in the form of expert evidence, so as to establish the factual bases for their often controversial decisions. In the preceding pages, I have attempted to demonstrate that while judicial reliance on social science data is vital to the interpretation of \textit{Charter} rights and freedoms, institutional limits and the structure of adjudication may give rise to a danger that complex evidence will be misconstrued or misinterpreted by trial judges. This danger is all the more serious in a context where a single trial judge typically has the final word on the significance of the varied and often inconclusive evidence. But as the treatment of the evidence at trial in \textit{Carter} BCSC makes clear, this danger can be overcome.

\textsuperscript{137}This suggestion should not be understood as endorsing an exclusively vocational view of the law school. I am of the view that law faculties can deliver both an intellectual and a professional education. Moreover, there is value, outside of the professional context, in studying the languages and mechanisms of disciplines outside of the law. See Conrad & Lazare, \textit{supra} note 8 at 62.