

**ADMISSIBILITY OF NOVEL SCIENTIFIC OPINION
- UNUSUAL BEDFELLOWS AND INTERDISCIPLINARY STORIES -**

by

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ABSTRACT

The utterances and narrative acts by scientists, lawyers, judges, and other courtroom actors may constitute a "telling" of one or several interdisciplinary stories (between scientific facts and legal norms). Under the law of evidence, the judge scrutinizes the form and content of novel scientific opinion. The value-laden communications by scientists may bolster the apparent validity and reliability of their opinions. Scientists normatively (and politically) engage the judge and jury in construction of interdisciplinary stories. Under the poethical method, the judge would consider the purported objectivity of scientific opinion, where the scientist narrates in a third-person, omniscient voice, as well as authorial responsibility (the "ethics") over "telling" an interdisciplinary story (the "poetics"), in light of the situated audience of judge and jury. Each judge and juror has a similar responsibility over listening to interdisciplinary stories, in light of the situated scientist. The judge would apply admissibility criteria under a poethics of telling and listening to interdisciplinary stories. The judge assesses the "probative value" and "prejudice" to jurors' fact-finding based not only on what scientists say, but also how they say it. Beyond or within the *Mohan* criteria of relevancy and necessity, the judge would consider accessibility to the norms and practices which generate novel scientific opinion. In doing so, the judge screens the form and content of interdisciplinary stories, in light of stories about telling these stories. The poethical method re-frames the concept of relevancy (and thus *prima facie* admissibility) and the hypothetical question, encouraging judges to think beyond the rationalist separation of logic from values, fact from law. Admissibility decisions, however, always materialize under the norms and politics of judges. An inquiry into "Law and Literature" draws upon a "story jurisprudence", illustrating a plurality of ways to make sense of admissibility criteria and interdisciplinary stories.

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FOR GAIL
(also known as G.G.)

CHAPTER ONE: RETHINKING EVIDENTIARY GATEWAYS

After one of the most sensational murder trials in recent Canadian history, Paul Bernardo was found guilty of the first degree murders of 14-year-old Leslie Mahaffy and 15-year-old Kristen French.¹ Bernardo had also been accused though not tried for a series of rapes around the City of Scarborough, Ontario. He received a life sentence, with eligibility for parole after 25 years. Bernardo's ex-wife and co-accused, Karla Homolka, had earlier plea bargained for a 12 year sentence on charges of manslaughter, with eligibility for parole after 4 years. At trial, Homolka admitted her participation in the sexual assaults of the two girls. She also testified that, on separate occasions at their St. Catherine's home, Bernardo had strangled each of the two girls with a black electrical cord. Bernardo's testimony starkly contrasted. He said that the two girls had been sexually assaulted, but subsequently died by accident while left alone with Homolka, Leslie, from the combined effects of drugs and alcohol, and, Kristen, from self-strangulation while struggling with a cord wrapped around her neck. During his five and half days of rather articulate and witty testimony, Bernardo accused his ex-wife of making up a "bizarre" story. "Karla's just trying to portray herself as a victim", Bernardo elaborated. "She's trying to redefine the whole relationship," he said. "Karla has her motivations for saying what she's saying." In response to counsel's assertion that Homolka had been alienated from her family, Bernardo replied, "If anyone was isolated, it was me, but I'm not crying victim here." The trial ventured back and forth in a heated struggle between opposing legal counsel who sought to

¹ The following composite story derives from the legal judgment, *infra*, and several external sources: Maclean's (August 28, 1995); The Globe & Mail (August 31, September 14 & 16, November 4 & 7, 1995); The Vancouver Sun (August 22 & 23, September 21, 1995). See also S. Williams, *Invisible Darkness: The Strange Case of Paul Bernardo and Karla Homolka* (Toronto: Little, Brown and Co., 1996); F. Davey, *Karla's Web: A Cultural Investigation of the Mahaffy-French Murders* (Toronto: Viking, 1994).

characterize Karla Homolka as an abused victim, or co-murderer. Ray Houlahan, lead counsel for the Crown, argued victimization, calling several expert witnesses to assist the jury in their assessment of Homolka's testimony. Karla had testified with "seeming nonchalance" and "flat affect" about past events, despite experiencing some memory loss. She otherwise appeared before the judge and jury as a "most bright, articulate and responsive witness".

Dr. Angus McDonald is an experienced and qualified psychiatrist; he has testified in hundreds of homicide cases and over forty dangerous offender applications. In this case, Dr. McDonald's report on Homolka's state of mind was not shown to the jury, but referred to Justice LeSage who to some extent relied on the report for other admissibility decisions. For apparent strategic reasons, the Crown did not request admissibility for this specific report. Dr. McDonald concluded from his two prior interviews with Homolka, and subsequent observations of her testimony at trial:²

"Unfortunately, Ms. Homolka is unable or unwilling to acknowledge any deviant sexual interests. Thus it is impossible to have diagnostic certainty on this issue, yet her behaviour to my mind simply cannot be explained solely on the basis of intimidation or abuse from Paul Bernardo, although this certainly must have played a role and with increasing frequency over the years of their relationship (p.3)

Her relatively aggressive presentation at times does not seem consistent with the view of her as a fearful, terribly dominated individual, lacking the spine to stand up for herself. Some of this (new found?) feistyness could be reactive to her growing realization that her earlier lack of backbone led her into an untenable, even life threatening set of circumstances. (p.5/6)

Karla Homolka remains something of a diagnostic mystery. Despite her ability to present herself very well, there is a moral vacuity in her which is difficult if not impossible to explain" (p.8).

Justice LeSage acknowledged that he was "somewhat influenced" by Dr. McDonald's report.

² *R. v. Bernardo [Evidence - Psychiatric - Karla-Homolka]* [1995] O.J. No.2249 (Ont. Ct. of J. (Gen. Div.)), (all references are to Quicklaw paragraphs) at paras9 & 42.

The Crown was permitted to introduce other expert opinion, but only to define and explain Battered Spouse Syndrome, theories of Normalization, and Post Traumatic Stress Disorder.³ Justice LeSage, however, ruled inadmissible the expert opinion which directly applied to Homolka's testimony.

At the close of evidence and counsels' arguments, Justice LeSage instructed the jury: "She [Homolka] may well have a bias, but she also testified before you for a period in excess of three weeks. You will be in a better position to assess her evidence than anyone else." Justice LeSage also caveated the jurors not to be unduly influenced by the expert witnesses, particularly the two psychiatrists led by the Crown to discuss Battered Spouse Syndrome. Justice Lesage instructed, "This is trial by jury, and not trial by expert. You should not become a mere rubber stamp for an expert."

After the trial, juror, Eric B., went public, saying that he "didn't buy" Karla Homolka's excuse that she had been forced to participate in the murders: "There was nothing that would indicate she was a battered and domineered woman under Paul's control." He believed that Homolka should have been on the stand (accused of murder) with Bernardo. Susan S., one of the four female jurors on the twelve-person jury, said that she had no doubts in her mind that Homolka was physically and psychologically abused by Bernardo. Susan, however, did not necessarily agree with expert witnesses that Battered Spouse Syndrome accounted for Homolka's conduct. Favoursing another theory, Susan suggested that Homolka was "self-absorbed", "selfish", and so obsessed with Bernardo that "she would do whatever it took...to keep him." Susan concluded, "I don't think I'll ever understand her." Another juror, Erma S., agreed that Homolka was a victim, but not excused for her conduct.

³ *Ibid.* at paras41-43.

Later that year, Paul Bernardo at his sentence hearing before an audience of rape victims, and the Mahaffy and French families, stated defiantly:

"But if everyone looked really closely at the evidence, they would see something very different. I did not murder those girls."

The courtroom erupted with scattered heckling.

A. Introduction: Admissibility of Novel Scientific Opinion

The evolution of science and technology in society, not surprisingly, leads to concerns over communications by "scientific experts" in judicial processes.⁴ The Supreme Court of Canada in *R. v. Mohan* recently revitalized the trial judge's role as "gatekeeper", setting forth more stringent guidelines for admissibility of novel psychiatric opinion.⁵ In criminal cases, the law now regards whether such opinion is relevant and necessary for assisting the trier of fact

⁴ Over the last several decades, the progress of science and technology has motivated paradigmatic shifts in law and legal process. See generally, P. Huber, *Galileo's Revenge: Junk Science in the Courtroom*, (New York: Basic, 1991); B. de Sousa Santos, *Toward a New Common Sense : Law, Science and Politics in the Paradigmatic Transition* (1995); A. Champagne, D. Shuman & E. Whitaker, "An Empirical Examination of the Use of Expert Witnesses in American Courts" (1991) 31 *Jurimetrics* 375; Bazelon, "Coping with Technology Through the Legal Process" (1977) 62 *Cornell L. Rev.* 817. The "scientific revolution" in North American courtrooms has arguably increased reliance upon science and technology, and has to some extent de-humanized judicial processes, particularly by promoting the third-person, (and supposedly) neutral and objective narratives of scientists, over the first-person narratives of the parties and other witnesses. However, as Bernard Jackson asserts, the law still constitutes the "overriding, dominant expertise...which regulates the admissibility of other expertise"; *Making Sense in Law: Linguistic, Psychological and Semiotic Perspectives* (Liverpool: Deborah Charles Publ., 1995) at 419.

⁵ [1994] 2 S.C.R. 9 (defence counsel led novel psychiatric opinion suggesting that character traits of the accused pediatrician do not fit the psychological profile of the putative sexual offender); see Appendix A for a detailed summary of facts. See also R. Delisle, "The Admissibility of Expert Evidence: A New Caution Based on General Principles" (1994) 29 C.R.(4th) 267; A. Gold, "Expert Evidence - Admissibility" (1994) 37 *Crim. L.Q.* 16; D. Tanovich, "The Admissibility of Novel Scientific Evidence Under *Mohan*: The Case of DNA Typing" (1996) 1 *Can. Crim. L. Rev.* 221.

(the judge or jury), the other exclusionary rules of evidence do not apply, and the expert is properly qualified.⁶ Justice Sopinka, on behalf of the unanimous nine-member court, enunciated some specific concerns over the use of science in the courtroom:

"There is a danger that expert evidence will be misused and will distort the fact-finding process. Dressed up in scientific language which the jury does not easily understand and submitted through a witness of impressive antecedents, this evidence is apt to be accepted by the jury as being virtually infallible and as having more weight than it deserves".⁷

Justice Sopinka, however, refrained from discussing specific relationships between the form and content of psychiatric opinion.

This thesis explores how the language and other forms of scientific opinion can prejudice

⁶ *Ibid.* Novel psychiatric opinion becomes "*prima facie* admissible" once the tending party shows that it is logically relevant - that it is "so related to a fact in issue that it tends to establish [the same]"; *ibid.* at 16. The inquiry, however, continues into the specific and general exclusionary rules, including whether the "probative value is overborne by its prejudicial effect, if it involves an inordinate amount of time which is not commensurate with its value or if it is misleading in the sense that its effect on the trier of fact, particularly a jury, is out of proportion to its reliability"; *ibid.* See also *R. v. Marquard* (1994), 85 C.C.C. (3d) 193 (S.C.C.); *R. v. Dieffenbaugh* (1993), 80 C.C.C. (3d) 97 (B.C.C.A.); *R. v. Melaragni* (1992), 73 C.C.C. (3d) 348 (Ont. Ct. Gen. Div.); *R. v. Johnston* (1992), 69 C.C.C. (3d) 395 (Ont. Ct. Gen. Div.). The issue remains open as to whether the *Mohan* standard is applicable to the admissibility of any type of novel expert opinion in either criminal or civil cases. Prior to the *Mohan* decision, the traditional admissibility requirement of "relevant and helpfulness" provided the threshold for novel expert opinion in civil and criminal cases; see Wilson J. in *R. v. Béland and Phillips*, [1987] 2 S.C.R. 398 (in *obiter*); *Grant v. Dube* [1992] B.C.J. No. 2204 (B.C.S.C.); *R. v. Doe* (No.2) (1986), 31 C.C.C. (3d) 353 (Ont. Dist. Ct.). See also S. Baker, "*A Critical Approach to the Admissibility and Weight of DNA Evidence in Canada*" (1993) 20 C.R. (4th) 212.

⁷ *R. v. Mohan*, *ibid.* at 17 (QL). The *Mohan* admissibility criteria applies to both trial by judge alone, and trial by judge and jury. Justice Sopinka, however, suggested that jury cases warrant special caution; see *ibid.* at paras 18-21 & para 23 ("[t]he possibility that evidence will overwhelm the jury and distract them from their task can often be offset by proper instructions"). The jury system supposedly introduces common sense and representative values of a democratic society into judicial processes. See R. Hastie, S. Penrod, & N. Pennington, *Inside the Jury* (Harvard University Press, 1983) at 4/5 (jurors bring into the courtroom community participation and shared responsibility).

fact-finding and other decision-making processes.⁸ "Prejudice" arises where the form or content of scientific opinion misleads, confuses, or confounds the triers of fact, or otherwise distorts fact-finding. The assumption is that triers of fact should not make decisions based on pre-conceptions or pre-judgments, rather than actual evidence presented at trial. The judge and jurors should not rely upon stereotypes and prejudices while constructing stories to make sense of the evidence. Under the adversarial system, however, a scientist's written report or oral testimony may be cast in such rhetorical light as to appear to have "more [or less] weight than it deserves".

The utterances and narrative acts by experts, lawyers, judges, and other courtroom actors may constitute a "telling" of one or several interdisciplinary stories, perhaps to prejudice processes of fact-finding and adjudication. An interdisciplinary story may involve several narrators, such as the parties, scientists and other witnesses, lawyers, and judge, who communicate to each other, before an audience of the jury (and judge).⁹ The jury comprises of individual citizens from the various disciplines and cultures of society. The narratives of courtroom actors present a particular point of view and story version of the facts (and law) according to jurors.¹⁰ For conscientious scrutiny under admissibility criteria, the judge should

⁸ The judicial selection and communication of a standard for prejudice, however, will always involve value-laden constructions.

⁹ See M. Cortazzi, *Narrative Analysis* (London: The Falmer Press, 1993) at 116 ("[p]ractical knowledge, social and moral values are transmitted referentially and stylistically through narrative", as much among professions as cultural groups).

¹⁰ See the following interdisciplinary approaches to fact determination, the law of evidence, and the fields of literature and literary theory: B. Jackson, *Law, Fact and Narrative Coherence* (Merseyside: Deborah Charles Publ., 1988), and *Making Sense in Law*, *supra*, note 4; D. Klinck, *The Word of the Law* (1992), and "Evidence as Rhetoric: A Semiotic Perspective" (1994) 26 Ottawa L. Rev. 125. For general discussion on the application of narrative theory to law, see R. Delgado, "Storytelling for Oppositionists and Others: A Plea for Narrative" (1989) 87 Mich. L. Rev. 2411; J. Elkins, "A Bibliography of Narrative" (1990) 40 Journal of Legal Education 203; D. Farber, & S. Sherry, "Telling Stories Out of School: An Essay on Legal Narratives" (1993) 45 Stanford L. Rev. 807; H. Eastman, "Speaking Truth to Power: The Language of Civil

be aware of the relationships between the form and content of interdisciplinary communications.

The utterances and narrative acts by scientists often become the focal point of story construction and issue resolution by the judge and jury.¹¹ The communications by scientists may also shape the audience's notions of coherency and plausibility, perhaps to expand shrouds of infallibility over factual foundations and value-laden scientific theories and methods. From concrete details to abstract conceptions, scientific opinion moves the judge and jury beyond descriptions and explanations of fact, into norms and prescriptions, especially those of the law. Thus, the scientist's use of language and other forms sometimes prejudices fact-finding by excluding story versions and limiting the participation by the judge and jury.

By the term, "language and other forms", this thesis broadly refers to communications which involve relationships of logic and aesthetics between the semantics, pragmatics, and syntactics. The term includes a very wide spectrum of style, diction, syntax, spaces, arrangements, enigmas, metaphors, irony, parallelism, and so much more. The language and other forms of scientific opinion may be referential or poetic (in its broadest sense). Scientists' communications may also involve other functions and performative devices typically found

Rights Litigators" (1995) 104 Yale L.J. 763; R. Sherwin, *"The Narrative Construction of Legal Reality"* (1994) 18 Vermont L. Rev. 681; S. Winter, *"The Cognitive Dimension of the Agon Between Legal Power and Narrative Meaning"* (1989) 87 Michigan L. Rev. 2225; D. Patterson, *"Law's Pragmatism: Law as Practice and Narrative"* (1990) 78 Va. L. Rev. 937; D. Papke, *Narrative and the Legal Discourse* (Liverpool: Deborah Charles Publ., 1991). J. Balkin, *"The Promise of Legal Semiotics"* (1991) 69 Tex. L. Rev. 1627.

¹¹ See A. Champagne, D. Shuman & E. Whitaker, *"An Empirical Examination..."*, *supra*, note 4 at 388/9 (from empirical studies of civil cases involving experts, 65 percent of jurors polled said that the testimony of expert witnesses was crucial to the outcome of the case, whereas 80 percent of judges stated that the testimony of expert witnesses was crucial to the jury's decision). These empirical studies, however, involved small sample sizes from the court system of Dallas, Texas. See also R. Sherwin, *"The Narrative Construction..."*, *ibid.* at 689 (for the logico-scientific story, the audience is cast in the role of objective observer). Sherwin suggested that this explanatory genre of story may preponderantly support the burden of meeting a standard of proof; *ibid.*

within story narratives, such as flashbacks, flashforwards, multiple points of view, sub-plots, embedding, subordination, suspense, surprise, climax, and so on.¹² The courtroom actors apply various interpretive methods and rhetorical strategies towards convincing audiences about the authority of science, to (dis)prove story elements that correspond to legal-factual issues. For practical purposes, this thesis disregards the oral dimensions of scientific opinion incapable of transcription.¹³ Scientific and other discourses are otherwise invariably captured as part of the court record.¹⁴

This chapter defines expert opinion, and outlines admissibility issues of relevancy and necessity in light of recent jurisprudence. The role of experts in adjudication is discussed against the backdrop of contemporary philosophical debates between scholars who support the trier of fact's deference to experts, and those who advocate the education of the triers. The multi-

¹² See M. Cortazzi, *supra*, note 9; W. Bennett & M. Feldman, *Reconstructing Reality in the Courtroom* (New Brunswick: Rutgers University Press, 1981). A performative statement not only describes the action but performs it; H. McDonald, "The Narrative Act: Wittgenstein and Narratology" (1996) 4 *Surfaces* 1 at fn14. The statement in context, however, may show something different than what is said; *ibid.* See also M. Cortazzi, *supra*, note 9 at 108-13 (performance transforms referential uses of language towards those of style and social interaction). Performative statements link the "social, emotional, cognitive and moral functions of narratives in different cultural contexts"; *ibid.* Cortazzi further acknowledged that a narrator who performs has more power, and therefore should be held accountable for "the way referential, and more especially, stylistic, aspects of narration are enacted"; *ibid.* at 109. This thesis broadly defines a "performative" statement as that which performs an action (and has meaning) at a level consistent with, or beyond (and even logically distinct from) what is immediately described.

¹³ Some loss of rhetorical dimension occurs from the introduction of a scientist's written report, instead of oral testimony. The oral testimony by scientists may involve various paralinguistic, performative features, such as voice intonation, tempo, stress, pitch, in addition to body posture, gesticulation, and so on. See generally M. Cortazzi, *ibid.* at 108-113. This thesis often refers to the courtroom as theatre with actors (or authors) and audiences - a popular metaphor for trial lawyers.

¹⁴ The term "discourse" in its most common sense refers to an extended (beyond a single statement) and connected expression of thought.

disciplinary approach of "new evidence scholarship", in contrast to the "rationalist tradition",¹⁵ sets forth an initial framework to critically rethink the admissibility criteria for novel scientific opinion, and the role of judges as gatekeepers.

1. Defining "Expert Opinion"

The definition of "expert opinion" sets forth an initial gateway into judicial processes.¹⁶ The common law definition is relatively fluid according to the nature and type of proffered "expertise". Many Canadian courts, however, seem to accept the core definition of expert opinion as "likely to be outside the experience and knowledge of a judge or jury".¹⁷ The introduction of expert opinion requires that "[t]he subject-matter of the inquiry... be such that ordinary people are unlikely to form a correct judgment about it, if unassisted by persons with special knowledge".¹⁸ Evidence scholar, John Henry Wigmore, defined the admissibility

¹⁵ See R. Lempert, *"The New Evidence Scholarship Analyzing the Processes of Proof"* (1986) 66 B.U. L. Rev. 439; W. Twining, *Rethinking Evidence: Exploratory Essays* (Evanston, Illinois: Northwestern University Press, 1994).

¹⁶ The trial judge first determines whether or not the parties may lead "expert opinion". Within a *voire dire* (in absence of the jury), the judge requires the tendering party to informally show that the "expert" has the necessary prerequisites. If affirmative, the judge considers arguments on the admissibility of expert opinion. If the opinion is admitted, the experts may then be formally qualified in the presence of the jury; see *Grant v. Dube* [1992] B.C.J. No. 2204 (B.C.S.C.).

¹⁷ *Turner* (1974), 60 Crim. App. R. 80, at p.83, per Lawton L.J., cited with approval in *R. v. Mohan*, [1994] 2 S.C.R. 9; *R. v. Lavallee*, [1990] 1 S.C.R. 852; *R. v. Béland and Phillips*, [1987] 2 S.C.R. 398; *R. v. Abbey*, [1982] 2 S.C.R. 24 per Dickson J.; *R. v. D.R.*, [1995] S.J. No. 278 (Sask. C.A.); *R. v. McKarris*, [1995] P.E.I.J. No. 95 (P.E.I.C.A.). See also *R. v. Kinnie*, [1989] B.C.J. No. 2021 (B.C.C.A.) per MacDonald J.A.

¹⁸ *Kelliher (Village of) v. Smith*, [1931] S.C.R. 672, at p. 684, quoting from *Beven on Negligence* (4th ed. 1928), at p. 141, cited with approval in *Mohan* and *Lavallee*, *ibid.* See also *Abbey*, *ibid.* at 42 (expert opinion is necessary to enable the trier of fact to appreciate the matters in issue due to their technical nature).

criteria:

"On this subject can a jury from this person receive appreciable help? In other words, the test is a relative one, depending on the particular subject and the particular witness with reference to that subject, and is not fixed or limited to any class of persons acting professionally".¹⁹

In the most recent and authoritative pronouncement, the Supreme Court of Canada in *R. v. Mohan* unanimously ruled that the "need for expert evidence" should be assessed in light of its "potential to distort the fact-finding process".²⁰

The Supreme Court of Canada has defined an expert as "a skilled person, one who has by dint of training and practice acquired a good knowledge of the science or art concerning which his [sic] opinion is sought and the ability to use his [sic] judgment in that art or science."²¹ *Black's Law Dictionary*, in comparison, defines an expert as a person "qualified to speak authoritatively by reason of their special training, skill, or familiarity with the subject".²² Lord Justice Lawton in *R. v. Turner*, [1975] Q.B. 834 at p. 841, fully approved the conclusions of Lord Wilberforce in *Director of Public Prosecutions v. Jordan*, [1977] A.C. 699 at p. 718:

¹⁹ See 2 Wigmore *Evidence* (3rd ed.), s.555, from R. Delisle, *Evidence: Principles and Problems* (2nd ed.) (Carswell: 1989) at 433.

²⁰ [1994] 2 S.C.R. 9 at 20 (QL).

²¹ *R. v. Béland and Phillips*, [1987] 2 S.C.R. 398 at 416-18.

²² Sixth Edition (St. Paul: West Publishing Co., 1990). *Black's Law Dictionary* defines expert testimony categorically:

"evidence of persons who are skilled in some art, science, profession, or business, which skill or knowledge is not common to their fellow men [sic], and which has come to such experts by reason of special study and experience in such art, science, profession, or business".

The U.S. *Federal Rules of Evidence* R. 702 states:

"If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise."

"If on the proven facts a judge or jury can form their own conclusions without help, then the opinion of an expert is unnecessary. In such a case if it is given dressed up in scientific jargon it may make judgment more difficult. The fact that an expert witness has impressive scientific qualifications does not by that fact alone make his [sic] opinion on matters of human nature and behaviour within the limits of normality any more helpful than that of the jurors themselves; but there is a danger that they may think it does".²³

The facades of "scientific jargon" and courtroom characterizations of experts may create an aura of authority and weight in the eyes of the jury, who could perhaps overlook the expert's interests and value-laden assumptions. The definition and admissibility criteria for expert opinion seem to overlap, highlighting the issue of whether or not, given the context and values of the times, the opinion assists the trier's fact-finding.

For the purposes of this thesis, "expert opinion" is broadly defined as that *based on skill, experience, or knowledge inaccessible to most persons*. The content of expert opinion is by definition outside the logic, experience and common sense of the trier of fact. Accordingly, an "expert" is defined as an individual who has sufficient skill, experience, or knowledge in an area of expertise inaccessible to most persons. These definitions seem consistent with Canadian law, in particular, *Mohan, supra*, supporting wide access to experts' discourses and knowledge-claims.²⁴ The focus on accessibility also brings attention to the trier's interpretive processes, rather than the objective of a mutual understanding of evidence for determination of a fact in issue.

The "duty" of a scientist has been judicially described as "to furnish the Judge or jury with the necessary scientific criteria for testing the accuracy of their conclusions, so as *to enable the Judge or jury to form their own independent judgment* by the application of these criteria to

²³ The *Mohan* decision, *supra*, cited this Lord Wilberforce passage; *ibid.* at para23.

²⁴ I leave open the philosophical question of whether or not a knowledge-claim can be singularly and necessarily true, if not demonstrable (by observations and experimentation) to each and every inquisitor.

the facts proved in evidence".²⁵ Some difficulties may arise where complex or incoherent scientific opinion abandons the trier of fact who then must tenuously gather meaning. In the time-challenged practices of the courtroom, the complex network of reasoning and assumptions by experts, whether logical or not, may become inaccessible to triers of fact, despite the use of generally accessible forms of communication. On the other hand, the content of expert opinion may be accessible *but for* the inaccessible forms. Under the revised definition, *supra*, an expert's language and other forms, if esoteric and susceptible to miscomprehension by most persons, would fall outside the definition of "expert opinion". Although the content may be inaccessible, its forms ought to be accessible. This reciprocity is a precondition (some lawyers would say, the *quid pro quo*) for allowing opinion evidence into the courtroom.²⁶ The communication forms should not restrict the trier of fact's access to otherwise relevant knowledge-claims and factual foundations.

The law screens expert opinion under admissibility criteria, such as the concepts of relevancy and necessity. The traditional screening under the law of evidence focuses on two stages: (1) the relevancy of content; and (2) the probative value in light of prejudicial effects and other policy concerns of form and content. The separation of these two stages, however, disregards how the value-laden forms of an expert contribute meaning to the inference between expert opinion (and its evidentiary basis), and a factual proposition at issue. For the potential effects of communications in the courtroom, William Twining caveats:

"In the process of articulating an unexpressed generalization there is scope for using emotive language, for giving a misleading impression of precision or of confidence, or

²⁵ Per Lord Cooper in *Davie v. Magistrates of Edinburgh*, [1953] S.C. 34 at p.40, cited with approval in *R. v. Lavallee*, *supra*, (emphasis is mine).

²⁶ See *R. v. Abbey*, [1982] 2 S.C.R. 24 at 42.

for presenting value judgements as if they were empirical facts."²⁷

This thesis critically rethinks the law of evidence and its positivist forms which regulate the introduction of science into judicial processes. Beyond an admissibility threshold, a more participatory, dialogical approach to justice first requires that the courtroom actors have wide access to the form and content of expert opinion (if it exists). The courtroom actors should be self-aware, particularly about their own inclusion within or exclusion from various cultures and disciplines of society.²⁸

Expert opinion can be categorized as scientific, technical (i.e. breathalyzer testing procedures), or other specialized knowledge (i.e. art expertise). By definition, scientific opinion is generally based on the scientific method where hypotheses are generated, tested (i.e. confirmed or falsified), and revised. Scientific opinion may also be sub-categorized into "hard" science (i.e. physics and chemistry) and "soft" science (i.e. sociology and psychology). "Soft science" involves human behaviour, often relying upon the communications of participating subjects.²⁹ The communication of "soft" sciences tend to be more easily "deconstructed" than the communication of "hard" sciences.³⁰ While reference is frequently made to expert opinion

²⁷ Law and Society Association Joint Meeting, University of Strathclyde, Glasgow, Scotland (July, 1996).

²⁸ For practical reasons, this thesis discusses many of the common issues of professions and disciplines under the single label of "disciplines". The thesis otherwise acknowledges that differences exist between disciplines and professions, informalism and formalism.

²⁹ The hearsay rule basically excludes the introduction of statements made out of the courtroom for the truth of the matter. Expert opinion and layperson opinion about common occurrences are exceptions to the opinion rule; see *Graat v. R.* (1982), 31 C.R.(3d) 289 (S.C.C.); *R. v. Abbey*, [1982] 2 S.C.R. 24.

³⁰ See generally P. Rosenau, *Post-Modernism and the Social Sciences: Insights, Inroads, and Intrusions* (Princeton University Press, 1992); A. Rip, "Expert Advice and Pragmatic Rationality", in N. Stehr & R. Ericson (Eds.), *The Culture and Power of Knowledge: Inquiries into Contemporary Societies* (de Gruyter, 1992) 363 at 372/3. Rip asserts that scientific criteria

for general propositions (since many conclusions are widely applicable), this thesis focuses on "soft" sciences - particularly, the opinions of psychiatrists and psychologists in criminal cases.³¹

2. Revisiting the *Mohan* and *Daubert* Decisions: Issues of Relevancy and Necessity

The current *Mohan* criteria of "relevancy and necessity" includes a logical relevancy standard which rationally separates a minimal threshold - whether a link between the evidence and a factual proposition would be more or less probable (than without the evidence) - from consideration of the probativeness of evidence itself, in light of prejudicial effects and other policy concerns.³² The *Mohan* judgment emphasizes the "reliability" of scientific opinion relative to the trier of fact's potential for misinterpretation and miscomprehension.³³ According to Justice Sopinka, admissibility at some point requires a type of "cost-benefit analysis", where "cost" is the "impact on the trial process", and "benefit" measures probative value.³⁴ Justice Sopinka, however, seemed hesitant with his conclusion that prejudicial effects ought to be considered as a general exclusionary rule subsequent to a determination of logical relevance, rather than as an "aspect of legal relevance":

may be offset by administrative or political criteria for a "robust" outcome; *ibid.* at 373.

³¹ Some differences arise for the screening of scientific opinion in criminal and civil cases, particularly in relation to the rules and principles of evidence, standards of proof, and sites of normativity, such as societal values which inform the *Constitution Act, 1982*, enacted as Schedule B to the *Canada Act 1982*, (U.K.) 1982, c.11, Part I, ss.1-34 (hereinafter, the *Charter*), which came into force on April 17, 1982. For criminal trials, the standard is proof beyond a reasonable doubt. For civil trials, the standard is proof on a balance of probabilities.

³² *R. v. Mohan*, [1994] 2 S.C.R. 9.

³³ *Ibid.*

³⁴ *Ibid.* at 17.

"Evidence that is otherwise logically relevant may be excluded on this basis, if its probative value is overborne by its prejudicial effect, if it involves an inordinate amount of time which is not commensurate with its value or if it is misleading in the sense that its effect on the trier of fact, particularly a jury, is out of proportion to its reliability. While frequently considered as an aspect of legal relevance, the exclusion of logically relevant evidence on these grounds is more properly regarded as a general exclusionary rule (see *Morris v. The Queen*, [1983] 2 S.C.R. 190). Whether it is treated as an aspect of relevance or an exclusionary rule, the effect is the same. The reliability versus effect factor has special significance in assessing the admissibility of expert evidence."³⁵

The legal relevancy approach supports a first stage inquiry into the relationships between prejudicial effects and probative value of the form and content of scientific opinion. Justice Sopinka, rather surprisingly, concluded that the "effect" was the same under logical and legal relevancy.³⁶ But Justice Sopinka also acknowledged "*prima facie* admissibility" upon a finding of logical relevancy.³⁷ The judicial recognition of logical relevancy suggests that the challenging party has a burden to raise to the judge's attention an exclusionary rule or other policy issue, such as prejudice to fact-finding.³⁸ For expert opinion specifically, the concept of logical relevancy - a question of whether the opinion renders a factual proposition more or less probable - by definition does not seem to assist the inquiry.³⁹ Scientific opinion itself

³⁵ *Ibid.*

³⁶ *Ibid.*

³⁷ *Ibid.* at 16. Justice Sopinka stated that a "cost-benefit" analysis would occur at some point for admissibility, whether under relevancy or at a subsequent stage. This conclusion, however, discounts the relationships between some aspects of the means (i.e. the accord of status, such as "*prima facie* admissibility") and the ends of admissibility.

³⁸ See P. Giannelli, "*The Admissibility of Novel Scientific Evidence: Frye v. United States, a Half-Century Later*" (1980) 80 Columbia L. Rev. 1197 at 1246 ("[i]n effect, the relevancy approach places the burden on the party opposing admissibility (citation omitted)").

³⁹ See P. Giannelli, "*The Admissibility of Novel Scientific Evidence...*", *ibid.* at 1237 (evaluation of the probative value of novel techniques identifies a "fundamental difficulty" in the relevancy approach). Giannelli apparently relies upon the cognitive competence of judges who are familiar with the dangers of scientific opinion, such as its potential to mislead the jury; *ibid.*

directly relies upon an evidentiary basis (of adjudicative facts, and facts regularly relied upon in the field of expertise) to establish a link to a factual proposition - the very issue of logical relevance. The logical relevancy approach assumes that scientific opinion may be verifiable as probative (supposedly without consideration of prejudicial effects), and that such verification can be impartially communicated within a courtroom in a timely, definitive fashion. The reasoning behind scientific opinion, however, may involve not only induction and deduction, but also analogical reasoning, abduction, and interactions between atomistic and holistic conceptions.⁴⁰ The concept of relevancy at trial also has broad implications for pre-trial and ongoing requirements of evidence disclosure (or discovery, in civil cases) and production.⁴¹ Contrary to Justice Sopinka's assertion, the consideration of prejudice, and other policy concerns, as an exclusionary rule (and not as an aspect of relevancy) has normative implications that can distort

⁴⁰ See T. Anderson & W. Twining, *Analysis of Evidence* (Little, Brown and Co., 1991) at 84 (abduction involves creative searches for new hypotheses, and generations of new data).

⁴¹ See *R. v. Carosella* (February 6, 1997) (S.C.C.) (all references to Quicklaw paragraphs). The five majority justices held that the failure of the Crown to disclose and produce a counsellor's interview notes, which had been purposefully destroyed while in the possession of a counselling centre for sexual assault victims, breached the accused's *Charter* right to make full answer and defence. The duty of disclosure arose from the "reasonable possibility" that the information contained in the destroyed notes was logically probative to the issue of the complainant's credibility; *ibid.* at paras 42 & 47. The majority ruled that the accused need not show that the non-disclosure or non-production prejudiced his defence; *ibid.* at para 36. Whereas, the four dissenting justices asserted that the accused must demonstrate a "real likelihood of prejudice" from the exclusion of such notes; *ibid.* at para 106. The dissenters reasoned that third parties, in contrast to the Crown, do not have an onus to disclose potential evidence; *ibid.* The *Carosella* judgment is a stark example of how the five majority justices of the Supreme Court of Canada, in contrast to the four dissenters, rely upon the logic-value dichotomy, preferring to consider the evidentiary issue of prejudice as an exclusionary rule. The majority would review prejudice and other policy issues subsequent to a determination of the potential probativeness of evidence. The access to potentially probative evidence defines in part the accused's right to make full answer and defence. The majority in *Carosella* clearly follow a rationalist approach by contending that the issue of prejudicial effects should be considered only under a *Charter* remedy, and not within a *Charter* right or principle of fundamental justice. See also *R. v. O'Connor*, [1995] 4 S.C.R. 411; M. MacCrimmon, "Trial by Ordeal" (1996) 1 Can. Crim. L. Rev. 31.

the trier's fact-finding. Prejudicial opinion would stand a better chance of being admitted if considered highly reliable (as scientists may tell us), and privileged as logically relevant, and not subject to a more detailed first stage inquiry under legal relevancy.

Justice Sopinka in *Mohan*, under the general rubric of relevancy, emphasized the "special significance" of the "reliability versus effect factor" in assessing the admissibility of novel expert opinion.⁴² This factor would seem to require judicial consideration of the experts' language and other forms that mislead or confuse the triers of fact, or otherwise distort fact-finding. Justice Sopinka, however, recognized (under the formal judgment heading of "Necessity") the overlap between the concepts of relevancy and necessity:

"As in the case of relevance, discussed above, the need for the evidence is assessed in light of its potential to distort the fact-finding process."⁴³

Justice Sopinka contradicts his previous statement by supporting a legal relevancy approach - a sufficient threshold of probative value in light of prejudice to fact-finding. The vagueness and ambiguity of the *Mohan* judgment reflect the value-laden judges in their attempts to separate a minimal threshold of logical relevancy from the value systems of other interpretive communities, if even possible. It is a rather mysterious process by which judges can segregate prejudice from the minimal probative value for "*prima facie* admissibility".

In *Daubert v. Merrell Dow Pharmaceutical Inc.*, the United States Supreme Court with considerable fanfare pronounced criteria for the admissibility of novel scientific opinion in

⁴² *Ibid.* at 13 (QL). The Supreme Court of Canada ruled the psychiatric opinion of Dr. Hill inadmissible primarily because of insufficient reliability and the lack of necessity; *Mohan, supra*, at 41 (QL).

⁴³ *Ibid.* at 20 QL. At the beginning of his judgment, Justice Sopinka stated that "[r]elevance is a matter to be decided by a judge as question of law"; *ibid.* at para18.

federal cases.⁴⁴ The *Daubert* court recognized scientific validity as a basis for evidentiary reliability, but otherwise disregarded issues of prejudicial language and other forms.⁴⁵ Justice Blackmun, on behalf of the majority of the court, discussed some relationships between relevancy, validity, and helpfulness:

"[*Federal Rules of Evidence*] Rule 702 further requires that the evidence or testimony 'assist the trier of fact to understand the evidence or to determine a fact in issue'. This condition goes primarily to relevance... Rule 702's 'helpfulness' standard requires a valid scientific connection to the pertinent inquiry as a precondition to admissibility".⁴⁶

The *Daubert* decision suggests that scientific evidence is relevant only if scientifically valid in application to the specific case. Relevancy therefore involves some assurances of validity and evidentiary reliability in the application of scientific opinion to the specific facts of the case. In other words, the *Daubert* decision supports a more demanding relevancy threshold requiring a sufficient degree of probativeness for scientific opinion (as indicated by scientific validity and reliability), which is based on the evidentiary reliability of its underlying factual foundation. This seems to be a scientized version of "legal relevancy".

The determination of a threshold for probativeness, nevertheless, depends upon the value-laden communications by scientists. The lingering question is whether or not the issue of

⁴⁴ (1993) 113 S.Ct. 2786 (admissibility criteria for novel scientific opinion suggesting that the anti-nausea drug, Benedictin, causes birth defects). See R.J. Delisle, *supra*, note 5 at 271.

⁴⁵ *Ibid.* Scholars have generated an abundance of literature that criticizes various aspects of the *Daubert* decision. For example, see P. Castel, "'Bye to Frye': High Court Sets Standards for Admitting Expert Testimony" (1993) 210 New York L.J. 1; H. Vu & R. Tamor, "Of *Daubert*, *Elvis*, and *Precedential Relevance: Live Sightings of a Dead Legal Doctrine*" (1993) 41 UCLA L. Rev. 487; E. Imwinkelried, "The *Daubert* Decision: *Frye* is Dead, Long Live the *Federal Rules of Evidence*" (1993) 29 Trial 60; S. Jasanof, "What Judges Should Know About the Sociology of Science" (1993) 77 Judicature 77; R. Jonakait, "The Meaning of *Daubert* and What That Means for Forensic Science" (1994) 15 Cardozo L. Rev. 2103; "Developments in the Law: Confronting the New Challenges of Scientific Evidence" (1995) 108 Harvard L. Rev. 1481.

⁴⁶ *Daubert*, *ibid.* at 6. See *supra*, note 22 (U.S. FRE 702).

relevancy is really about the definition of scientific opinion. Following the *revised* definition (as I introduced previously), scientific expert opinion ought to be accessible through communication forms that facilitate the trier's participation in fact-finding. Whether by the definition of scientific opinion, or by the concept of legal relevancy, inquiry into the trier's access to communications should occur as a preliminary stage to admissibility.

Although the *Mohan* and *Daubert* judgments address some practical concerns over the content of scientific opinion, they generally overlook issues of interdisciplinary communications, particularly those which can significantly influence fact-finding. These two leading North American decisions have inspired a new generation of evidence scholarship, although most scholars to date have focused on the "hard" concepts of scientific validity and reliability, rather than the grey, spongy zones of communication theories, interpretive communities, norms and politics.⁴⁷ Practitioners and scholars generally seem content with a rationalist ideology which encourages separation of the logical relevancy of scientific knowledge-claims - an admissibility issue - from the values and constructions intrinsic to their communications - more likely to be considered an issue of weight.

The *Mohan* and *Daubert* decisions illustrate that courtroom actors quite often lack awareness of the forms of interdisciplinary communications. And yet, the form and content of expert opinion are inseparable; the aura of scientific validity and reliability always falls within one or several interpretive communities, such as those of experts, lawyers, judges, and jurors. The cognitive assumption of "human fallibility" in understanding experts' discourses and

⁴⁷ For an exception, see S. Jasanof, "*What Judges Should Know...*", *supra*, note 45 at 80 (deconstruction of "scientific facts" to expose contingencies and underlying assumptions). See also L. Askowitz & M. Graham, "*The Reliability of Expert Psychological Testimony in Child Sexual Abuse Prosecutions*" (1994) 15 Cardozo L. Rev. 2027 at 2052 (psychiatric expert in child sexual abuse cases may for a validity assessment consider the style, manner, and content of a child's narrative).

knowledge-claims underlies the law's attempts to screen expert opinion for probative value and prejudicial effects on fact-finding.⁴⁸ Any practical solutions to these theoretical questions will, admittedly, rest on normative and political choices over the level of clarity and flexibility for an "efficient" courtroom.

B. The Role of Experts in Adjudication

"They [skilled witnesses] do not, indeed, wilfully misrepresent what they think; but their judgments become so warped by regarding the subject in one point of view, that, even when conscientiously disposed, they are incapable of expressing a candid opinion."⁴⁹

"[N]o one can claim privilege for the point of view he [sic] holds and therefore everyone is obliged to practice the art of persuasion."⁵⁰

"Important as the initial qualification of an expert witness may be, it would be overly technical to reject expert evidence simply because the witness ventures an opinion beyond the area of expertise in which he or she has been qualified. As a practical matter, it is for opposing counsel to object if the witness goes beyond the proper limits of his or her expertise...In the absence of objection, a technical failure to qualify a witness who clearly has expertise in the area will not mean that the witness' evidence should be struck. However, if the witness is not shown to have possessed expertise to testify in the area, his or her evidence must be disregarded and the jury so instructed."⁵¹

⁴⁸ In *R. v. Béland and Phillips*, [1987] 2 S.C.R. 398 (accused charged with conspiracy to commit robbery had requested to undergo a polygraph examination) Justice LaForest agreed with the reasons of Justice McIntyre in refusing to allow admissibility of polygraph testing, but solely grounded his decision:

"[on] human fallibility in assessing the proper weight to be given to evidence cloaked under the mystique of science, and the inadvisability of expending time on collateral issues" (at 434).

⁴⁹ *Deschênes v. Langlois* (1906), 15 Que. K.B. 388 (C.A.) per Bossé J, quoting *Taylor on Evidence* (5th ed.) (1855) p.74, s.50. See also A. McDonell & C. Shultz, "Expert Evidence in the Supreme Court of British Columbia" (1988) 46 *The Advocate* 193.

⁵⁰ S. Fish, *Is There a Text in This Class?: The Authority of Interpretive Communities* (Harvard University Press, 1980) at 368.

⁵¹ *R. v. Marquard*, [1993] S.C.J. No. 119 (admissibility of expert opinion in a case of aggravated child assault) (headnote) per McLachlin J., on behalf of the majority.

Under the adversarial system, experts in the courtroom may persuade others of the correctness of their points of view on human behaviour and the physical world. The assumption is that these views might not otherwise be revealed through the everyday logic and common sense of the participants. Experts are the keyholders who occasionally open epistemological doors. These metaphorical doors, however, are fluid, changing with the expectations and understandings of triers of fact. The expert's language and other forms are the signs (or the doors) which may have meaning in relation to other signs within a referential system, though always seen through the cognitive processes of an audience. As recognized in the *Marquard* decision, *supra*, the law provides extensive freedom for expert opinion, although it does limit an expert's persuasive efforts to a recognizable field of expertise.

Expert opinion may be introduced into judicial processes as an "authoritative" source of knowledge in support of legal argument. At trial, expert opinion may influence the alignment of substantive law over a specific set of facts, or vice versa. Expert opinion thus entwines facts and legal norms, sometimes involving the language of an ultimate legal issue. In constitutional cases, expert opinion may inform a framework for the contextual interpretation of human rights and freedoms, and societal values, perhaps to encourage further "dialogue" between the courts and legislatures.⁵² But the inquiry is often limited to a narrow interpretation of legal-scientific thresholds, without consideration of the lack of access to information channels and institutional

⁵² A dialogue may arise between courts which rule statutory law unconstitutional, and the legislatures which respond by enacting modified legislation; Peter Hogg, lecture at UBC (October, 1996). This constitutional "dialogue" encourages public discourse and criticism of legislative objectives. Any critical checks on the State's application of knowledge-claims to citizens would seem to depend on liberal access to experts' discourses and knowledge production. Through the courts, the judiciary maintains a large degree of control over the definition of "access" and the obligations of the State to individuals and groups. See generally, P. Russell, *The Judiciary in Canada: The Third Branch of Government* (McGraw-Hill Ryerson, 1987).

routes between interpretive communities. At any court level, the engagement of expert opinion may lend authority to the "democratic" opening or "hegemonic" closing of epistemological doors, those which may lead to the support or criticism of mainstream thought.

Under the current law of evidence, the judge considers the qualifications of the expert (as author), the expert opinion itself (as oral or written text), and the trier of fact (as audience). Although the current admissibility criteria involves all three dimensions, judges tend to place more emphasis on the integrity of expert opinion, the characterizations of experts, and potential prejudices to the jurors' decision-making.⁵³ Judges and scholars often become concerned over the disengagement of expert opinion from foundations of reason and common sense, to divert "accurate" fact-finding.⁵⁴ Most scholars to date have been rather quiet in their criticism of experts' discourses that support dominant interests to the prejudice and exclusion of others. Judicial processes, however, should always be subject to critical scrutiny, especially for abuses of power and authority by courtroom actors, such as experts, lawyers and judges, who may invoke specific language and other forms to the exclusion of outsiders. The legal-scientific terms "relevancy", "probative value", "prejudicial effects", "beyond a reasonable doubt", and "balance of probabilities" each have a genealogy, suggesting specific meanings in context and with contingencies, according to situated authors and audiences.

According to traditional notions of a free and democratic society, it is fundamental that the accused have reasonable opportunity to voice his or her story in answer to allegations of criminal conduct. Whereas the Crown attempts to prove the elements of a crime, usually by elaborating a story of guilt, the accused may respond by destructing (or deconstructing) the

⁵³ *R. v. Mohan*, [1994] 2 S.C.R. 9.

⁵⁴ See W. Twining, *Rethinking Evidence*, *supra*, note 15 at 73.

Crown's story, or by constructing alternative stories, with the goal of raising a reasonable doubt according to a trier of fact. For example, the accused may assert a theme of innocence that fits one or more plausible stories. The accused's story may also involve expert opinion that contradicts the Crown's story, or raises alternative stories that foster the audience's "reasonable doubt". For example, the DNA comparison of genetic samples of a suspect or accused with evidence found at the crime scene may compellingly discredit the prosecution's story of guilt, and support the former's story of innocence.⁵⁵ Fact investigation, such as DNA analysis, in light of the evidence rules and principles which guide admissibility decisions, can exclude individuals and specific stories of culpability.

The courtroom as theatre involves various actors in dynamic processes, such as the (de)construction of interdisciplinary stories. The lawyers argue, the experts describe and explain, the judge mediates, all before the audience of jurors. The administration of justice supports the victims of crime by providing the opportunity to voice their stories personally or indirectly through expert opinion. The accused persons, of course, may respond with their own stories of

⁵⁵ The case of Guy Paul Morin provides a startling example; see chapter two, note 61. See also *R. v. Morin*, [1995] O.J. No. 350 (Ont. C.A.) (acquitting Morin, who had been convicted of first degree murder, on the basis of fresh evidence proving "a scientific fact"; novel DNA analysis excluded Morin as the source of semen found on the underpants of the murdered victim). See also the Morin Inquiry, *The Globe and Mail*, front page headline (April 8, 1997) (Stephanie N., a scientific expert on hair and fibre analysis, admitted that she was under pressure from police and prosecutors to overstate her evidence against Morin). The case investigators had relied on Stephanie for guidance as to what evidence they should pursue. She had initially told police that it was "highly unlikely" that the fibres and hairs from the victim and Morin's vehicle were a coincidence. At the subsequent inquiry, however, Stephanie revealed her personal belief that the hair and fibres were somehow deposited by a third party, and not Morin. As a neighbour, Morin had frequented the victim's house, and had used the same laundromat. Stephanie subsequently admitted that she may have misled the prosecutors by using such language as "match" and "matching" to describe her comparison of the sets of hair and fibres. She stated, "I think my fault would be that [my] opinions were not expressed or understood as they should have been". The lawyer for Guy Morin concluded that Stephanie was malleable and unworthy of belief; *ibid.* See *The Globe and Mail* (April 8-11, 15 & 16, 1997).

innocence, and legal argument that challenges their relationship with the State. As a theatre audience, the triers of fact are seen to be neutral storylisteners (at least until jury deliberations); they cannot ask experts and other witnesses questions about the evidence. In this sense, the triers observe the interactions of experts and legal counsel, perhaps to pay more attention to the pragmatics (and especially the performances) in the courtroom. Experts may attempt to persuade the other actors that their point of view falls within a recognized field of expertise, and that a consensus exists within this field which supports the experts' specific views. By analogy to a generic factual situation, experts argue that generalizations - the theories, principles, and methods which suggest points of cumulation, consensus or collectivization - should apply to specific individuals or groups in a specific context. The context of the original production of expert opinion is displaced by the context of a courtroom, with various actors and an audience of judge and jury. Moreover, the production of expert opinion continues during its communication in the courtroom. The following subsections review some of the judiciary's attempts to categorize the use of expert opinion, and philosophical inquiries into potential judicial approaches to expert opinion. This chapter then closes with consideration of trends in evidence scholarship, from the rationalist tradition to new evidence scholarship, shedding light on ways to rethink the admissibility criteria for novel scientific opinion.

1. Adjudicative, Social and Legislative Facts

Expert opinion may be introduced into judicial processes by three ways which are not always clear and distinct, or mutually exclusive.⁵⁶ Firstly, expert opinion may apply specifically

⁵⁶ See generally, D. Faigman, "'Normative Constitutional Fact-Finding': Exploring the Empirical Component of Constitutional Interpretation" (1991) 139 U. Pa. L. Rev. 541 at 552; J. Watson, "Balancing the Scales Anew: Stereotypes and Contexts", Canadian Bar Association, August 21-24, 1994, Toronto, Canada at 69-71; J. Hagan, "Can Social Science Save Us? The

to the facts of the case. Secondly, social framework evidence may provide context in the specific case.⁵⁷ Thirdly, legislative facts may support the making of law.⁵⁸ Although the first and third categories are clearly questions of adjudicative and legislative facts, respectively, the second category of social framework evidence may relate to either the background for specific facts led by the parties, or the effects of the law.⁵⁹ The Supreme Court of Canada in *R. v. Danson*, [1990] 2 S.C.R. 1086 at 1088 (headnote) expounded the distinction between legislative and adjudicative facts:

"Adjudicative facts are those that concern the immediate parties. They are specific and must be proved by admissible evidence. Legislative facts are those that establish the

Problems and Prospects of Social Science Evidence in Constitutional Litigation", in R. Sharpe, (Ed.), *Charter Litigation* (Toronto: Butterworths, 1987) at 213; G. Morgan, "Proof of Facts in Charter Litigation", in R. Sharpe, (Ed.) *ibid.* at 159; K. Swinton, "What Do the Courts Want From the Social Sciences?", in R. Sharpe, (Ed.) *ibid.* at 207; J. Monahan & L. Walker, *Social Science in Law: Cases and Materials* (3rd ed.) (Westbury: The Foundation Press, 1994).

⁵⁷ For example, see *R. v. Bernardo [Evidence - Psychiatric - Karla-Homolka]* [1995] O.J. No.2249 (Ont. Ct. of J. (Gen.)) (Justice LeSage ruled admissible hypothetical questions and general discussions by experts on Battered Spouse Syndrome, theories of Normalization, and Post Traumatic Stress Disorder). Justice LeSage, however, held inadmissible the specific application of the latter expert theories to the facts of the case; *ibid.* In the *Bernardo* case, the experts could narrate about science in general, for example, by hypothetical questions, but not apply their expertise to the facts of the case. Justice LeSage's decision supported the participation of the jury in deciding issues of human behaviour directly related to legal culpability.

⁵⁸ See A. Woolhandler, "Rethinking the Judicial Reception of Legislative Facts" (1988) 41 Vand. L. Rev. 111 (social or legislative facts predict social effects of legal rules) at 123.

⁵⁹ For example, social framework evidence may indicate why the government believed that legislation was required as a response to social effects. In addition, the evidence may specifically point to the litigant as one who has suffered the same consequences as those addressed by the legislation. See *Moge v. Moge*, [1992] 3 S.C.R. 813, where the Supreme Court of Canada accepted studies indicating that women face economic disadvantages and hardships from marriage or its breakdown because of the traditional division of labour within that institution. The social framework evidence led in *Moge* also assisted the interpretation of specific provisions of the 1985 *Divorce Act*. See also B. Bouw, "Faulty Figures Used in Key Divorce Ruling", in *The Vancouver Sun* (Tuesday, May 21, 1996) (the empirical data and statistics from an American sociologist's 1985 report relied upon by the *Moge* decision were found to be grossly incorrect).

purpose and background of legislation, including its social, economic and cultural context. Such facts are of a more general nature, and are subject to less stringent admissibility requirements."

Legislative facts may be adduced by judicial notice, testimony at trial, affidavit, or "Brandeis brief".⁶⁰ Sworn testimony and affidavits, unlike a Brandeis brief, may be vigorously challenged at trial by cross-examination and rebuttal expert opinion.⁶¹ An appellate court, however, may interfere with the trial judge's factual findings only if there is a "manifest error" which influences the judge's "conclusion or overall appreciation of the evidence".⁶² Although the role of the trier of fact at trial is to weigh adjudicative facts, appellate courts may widely review and evaluate social and legislative facts related to law-making.⁶³ Justice LaForest, on behalf of a majority of the court in *RJR-MacDonald*, noted:

"[T]he privileged position of the trial judge does not extend to the assessment of "social" or "legislative" facts that arise in the law-making process and require the legislature or a court to assess complex social science evidence and to draw general conclusions concerning the effect of legal rules on human behaviour."⁶⁴

⁶⁰ *Canada Post Corp. v. Smith* (1994), 20 O.R. (3d) 173 (Ont. Ct. (Gen. Div.)).

⁶¹ *Ibid.* See *RJR-MacDonald Inc. v. Canada (Attorney General)*, [1995] S.C.J. No. 68. See also J. Monahan & L. Walker, *supra*, note 56 at 5-11 (history of the original Brandeis brief). The authors noted that the original Brandeis brief would not be accepted by today's courts because its contents primarily consist of value-laden statements, opinions, and casual observations; *ibid.* at 8.

⁶² *RJR-MacDonald*, *ibid.* at 174. See *Dorval v. Bouvier*, [1968] S.C.R. 288 at 293; *Lapointe v. Hôpital Le Gardeur*, [1992] 1 S.C.R. 351 at 358.

⁶³ *RJR-MacDonald*, *ibid.* at 174-6.

⁶⁴ Per La Forest, L'Heureux-Dubé, Gonthier and Cory JJ., at 176. Chief Justice Lamer and Justice Iacobucci expressed agreement with Justice LaForest's reasons, leading to a majority concurrence on this specific issue; *ibid.* at 288. Justice LaForest described adjudicative facts to involve the litigants in a specific story, or the "who did what, where, when and how, and with what motive or intent" (quoted from J. Hagan, *supra*, note 56 at 215); *RJR-MacDonald*, *ibid.* at 175.

Justice LaForest elaborated several reasons in support of his position.⁶⁵ Firstly, trial courts are not any better than appellate courts in determining the less familiar and uncertain issues of social and legislative facts. Secondly, appellate courts should be able to review trial court findings in order to develop legal principles. Thirdly, the review of social and legislative facts by appellate courts could establish uniformity across various trial court jurisdictions.⁶⁶ Thus, a majority of the *RJR-MacDonald* court, not surprisingly, held that appellate judges (like themselves) could review the trial judge's assessment of social science evidence as social or legislative facts where the "trial judge erred in the consideration or appreciation of the matter".⁶⁷

Judicial review raises a fundamental question of whether some form of admissibility criteria at trial should also apply to the introduction of social science evidence at the appellate level. This question centres on the judiciary's access to experts' discourses and knowledge production. Appellate courts review trial transcripts, but do not directly interact with the narrators - the experts, lawyers, and other courtroom actors at trial - who have "told" interdisciplinary stories. The pragmatics (and performances) of experts and other courtroom actors would seem to be more influential to the weighing of expert opinion as adjudicative and social facts, in contrast to legislative facts. The differences between adjudicative, social, and legislative facts identify not only points of concretization and abstraction, but also locations of institutional constraints. These differences partly structure the debate on whether or not appellate judges should review rather than defer to a trial judge's assessment of expert opinion.

⁶⁵ *Ibid.* at 178/9. See G. Morgan, *supra*, note 56 at 186.

⁶⁶ *Ibid.*

⁶⁷ *Ibid.* at 181.

2. A Philosophical Debate: Deference to Experts, or Education of Triers of Fact?

The deference-education debate seems more complicated than previously expounded by evidence scholars.⁶⁸ At trial, judges may fully or partially defer to scientific consensus or the opinions of individual scientists.⁶⁹ At the appellate level, a similar debate (although with less fanfare) exists between scholars who support the deference to a trial judge's assessment of expert opinion, or the updated education of appellate judges.⁷⁰ At either court level, the full deference to experts can create problems in light of the judges' lack of access to the original context in the production of expert's discourses and knowledge-claims. The legal institution sometimes uncritically relies upon scientific concepts, such as validity and reliability criteria, without ways to examine their value-ladenness as products of interpretive communities.

At trial, judges consider probative value and prejudice to fact-finding under the current admissibility standard for novel scientific opinion: "relevancy and necessity" in assisting the trier of fact.⁷¹ This standard moves the trial judge to assess scientific validity and reliability

⁶⁸ See the symposium on expert testimony, (1993) 87 Nw.U. Law Rev. (1131-1187), which includes articles by R. Allen & J. Miller, "*The Common Law Theory of Experts: Deference or Education?*" (1131); E. Imwinkelried, "*The Education Significance of the Syllogistic Structure of Expert Testimony*" (1148); R. Epstein, "*Judicial Control Over Expert Testimony: Of Deference and Education*" (1156); P. Rice, "*Expert Testimony: A Debate Between Logic or Tradition Rather than Between Deference or Education*" (1166); R. Lempert, "*Experts, Stories, and Information*" (1169); R. Carlson, "*In Defense of a Constitutional Theory of Experts*" (1182).

⁶⁹ See *Frye v. United States* 293 F. 1013 (D.C. Cir. 1923). The *Frye* standard - the general acceptance of the relevant community of scientists - remains predominant in many state jurisdictions. See also *Daubert v. Merrell Pharmaceuticals Inc.* (1993) 113 S.Ct. 2786 (the United States *Federal Rules of Evidence* supersede the *Frye* standard in federal cases).

⁷⁰ See *RJR-MacDonald Inc. v. Canada (Attorney General)*, [1995] S.C.J. No. 68 at 176/311 (QL) per La Forest, L'Heureux-Dubé, Gonthier and Cory JJ.

⁷¹ *R. v. Mohan*, [1994] 2 S.C.R. 9.

according to many factors, including the degree of acceptance by the scientific community.⁷² The inquiry, however, leads us back to the issues of accessibility to scientific opinion, and social consensus among scientists, judges, and triers of fact. The courtroom audiences, especially jurors, may rely upon the apparent consensus of a scientific community according to the communications by experts, lawyers, and even judges. To what extent should the jurors defer to the courtroom actors for the resolution of factual issues? The actors and their interdisciplinary discourses may preponderantly influence the jurors' interpretations, understandings and consensus formation. The apparent danger lies in the overreliance upon the authority of science - its apparent consensus, logical probativeness, demonstration, and so forth - to perpetuate *only* the dominant views of mainstream society.

The admissibility criteria accords formal recognition or status on novel scientific opinion in the courtroom, thus sanctioning its value-laden constructions. The separation of scientific opinion from its original context leads to concerns over the ethics of its application within a new context. The concretization and abstraction of expertise in the courtroom identifies (always in hindsight, looking back through another layer of construction) to some extent the norms and politics of scientists, lawyers, and judges. A deferential approach thus implies the acceptance of the values and norms, ideologies and politics which underlie scientific opinion.

Many evidence scholars and practitioners rely upon the assumption that triers of fact are

⁷² *R. v. Mohan, ibid.* ("reliability versus effects" factor has special significance) at 17 (QL). In *Mohan*, Justice Sopinka also recognized that the trial judge had found no indication of a general acceptance of the expert's theory; *ibid.* See also *R. v. Johnston* (1992), 69 C.C.C. (3d) 395 at 415. The *Mohan* decision, however, did not consider Justice Langdon's judgment in *Johnston*, which included an extensive (though not exhaustive) list of factors for the reliability and helpfulness of scientific opinion on the matching of the accused's DNA to samples found at the crime scene. Although not obvious in the written judgment, the court in *Mohan* may have supported a distinction between the hard and soft sciences, especially for the role of the jury in assessing psychological or social aspects of human behaviour.

always capable of fully disregarding scientific opinion led in court, and applying their own independent experiences and reasons.⁷³ Otherwise, the concerns over the jurors' tendency to defer to scientific consensus would lead to a higher admissibility standard for assurances of trustworthiness, especially where the language and other forms of scientific opinion can be fully understood only from within the interpretive communities of scientists. The deference versus education debate illuminates how the admissibility threshold for novel scientific opinion may vary with the judiciary or parties' access to experts' discourses, norms and knowledge-claims. The issue of access seems to involve the interrelationships of at least four elements: the control and gatekeeping responsibility of judges, the degree of consensus among experts, the language and other forms used by experts, lawyers, and other courtroom actors, and the cognitive competence of triers of fact.⁷⁴

⁷³ See R. Epstein, *supra*, note 68 at 1160; R. Lempert, *supra*, note 68 at 1170/1. The assumption that the jury can easily disregard information, such as expert opinion, after the judge's *ad hoc* warnings or closing jury instructions, seems idealistic - a rationalist construction in itself. Jury instructions occur just before deliberations in order to have a preponderant, lasting influence on decision-making. However, see R. Hastie, S. Penrod, & N. Pennington, *Inside the Jury*, *supra*, note 7 at 81 (the authors were disturbed over the jurors' failures to recall information from the judge's instructions). Moreover, the judge's instructions re-frame the juror's interpretations of expert opinion and interdisciplinary stories. The stories carry themes which sometimes motivate jurors to consider scientific facts in light of legal norms. Where the law attempts to constrain the participatory role of the jury, for example, by jury instructions, one may consider sites of normativity as especially sensitive, perhaps even in opposition to the formal adherence to the law. The issue of jury nullification focuses on how the jury may go beyond the application of the facts to law (or vice versa). That is, the jury could possibly convict or acquit an accused aside from the evidence, or without any apparent legal reasons. For an example of the inherent uncertainty in such processes and analyses, see R. Wiener et al., "The Social Psychology of Jury Nullification: Predicting When Jurors Disobey the Law" (1991) *J. of Applied Social Psychology* 1396. The conflicts arising from jury instructions can also lead decision-making to another level, one of institutional stories.

⁷⁴ The scope of this thesis precludes any investigation into processes of jury deliberations. Social pressures over the interpretations of expert opinion likely influence the verdict choice of individual jurors. See A. Champagne, D. Shuman & E. Whitaker, "An Empirical Examination of the Use of Expert Witnesses...", *supra*, note 4 at 378 & 388. See generally, "Enter the Jury Room", CBS Reports, (aired April 16, 1997).

In the 1992 symposium on expert testimony, Ronald Allen and Joseph Miller supported the education of triers of fact rather than their full deference to experts.⁷⁵ The authors argued that any deference to experts would require a strict threshold of admissibility, for example, the general acceptance of a scientific community.⁷⁶ Allen and Miller also acknowledged that the deference versus education debate should focus on the cognitive competence of jurors.⁷⁷ On this very issue, Edward Imwinkelried would account for the cognitive competence and the role of triers of fact by differentiating expert opinion on the basis of its major premises - the general principles applicable to a particular case - and minor premises - the actual facts of a case.⁷⁸ Imwinkelried advocated the education of triers of fact where the rules of evidence only consider an expert's major premises.⁷⁹ This approach, however, decontextualizes expert opinion to some instrumental extent, and assumes that triers of fact can cognitively process the application of general principles - the theory and methodology of knowledge-claims - to the facts of the case, and the application of the facts to the law.⁸⁰ In a similar vein, Richard Epstein contends that

⁷⁵ R. Allen & J. Miller, *supra*, note 68, at 1137.

⁷⁶ *Ibid.* at 1142.

⁷⁷ *Ibid.* at 1146.

⁷⁸ E. Imwinkelried, *supra*, note 68 at 1148. Imwinkelried noted that where experts opine on the credibility of specific facts (or minor premises) in a case, they exceed their roles and usurp the function of the jury; *ibid.* In other words, experts are not to influence the characterization of specific actors or events in the case at hand; the development of specific factual stories belongs within the ken of the jury. Imwinkelried's approach, however, seems rationalist and idealist in its formal dichotomy of expert opinion in abstract, and its application to specific evidence or facts.

⁷⁹ *Ibid.* at 1154/55.

⁸⁰ This assumption encourages the participation of triers of fact as representatives of a "common" sense from some of the various cultures and disciplines of society. The triers apply the general principles of novel expert opinion which supposedly represents "the cutting edge" for how to make sense of a specific set of facts. The problem, however, remains that the language and other forms of an expert's generalizations typically based on theories and methods

the deference versus education debate is really a "battle" between issues of admissibility and weight.⁸¹ Epstein's approach emphasizes the different roles for the judge and jury, assuming some relative levels of cognitive competence. The latter two approaches, however, seem to discount the prejudicial effects of the expert's communications.

The conceptual dichotomy of the current deference versus education debate seems too artificial and simple to be very useful for inquiry into admissibility criteria for novel expert opinion. The triers of fact may be educated about knowledge-claims, albeit to some extent by deference to experts as educators. A more participatory approach would rather focus on the triers' access to experts' discourses and knowledge-claims, in light of cognitive constraints. Experts may express novel perspectives and interpretations, but only if jurors can in effect freely accept or reject such opinions in light of the actual testimony and physical evidence. The jurors' participation depends on accessible communication forms, such as simple, clear language (and other forms) that support story narratives.

The focus of evidence scholars, as Richard Lempert acknowledges, should be on how information is presented through stories by experts and other witnesses, and not the debate on whether to support education of triers of fact, or their deference to experts.⁸² In his brief article, Richard Lempert applied Pennington and Hastie's cognitive story model for juror decision-making to expert testimony, with focus on "the adequacy of competing stories to explain the evidence".⁸³ A story approach supports inquiry into how the value of expert opinion may

developed in another context can prejudicially influence the trier's application of the same to the specific facts of the case.

⁸¹ R. Epstein, *supra*, note 68 at 1165.

⁸² *Ibid.* at 1169.

⁸³ *Ibid.* at 1175.

be communicated within a specific context. The approach to some extent avoids Allen and Miller's conceptual dichotomy between deference to experts and education of triers of fact. Rather, experts as narrators present (or educate) the triers of fact with new ways to interpret phenomena.⁸⁴ The danger lies in the reliance upon experts' "discourses of power" to inform the triers in a formal courtroom setting. The engagement of the triers seems to go beyond the deference to experts, and involves not only the education of triers, and other cognitive and affective functions, but also the norms and politics of experts and other courtroom actors. As an audience, the triers regard the theatrical interplay of the story narrators and characters, who in turn pay close attention to the decision-makers - the triers. In this sense courtroom processes are "dialogical".

C. Contemporary Trends in Evidence Scholarship

Over the last two decades, evidence scholarship in common law jurisdictions has evolved to support multi-disciplinary perspectives.⁸⁵ The evidence scholars of today seem less pedantic and more willing to acknowledge the cross-fertilization of knowledge between disciplines. The advancements of technology and science in society have brought new challenges and concerns over interdisciplinary communications. The law of evidence in Canada, against the backdrop of the *Charter*, guides judges in their gatekeeping roles over expert opinion and other evidence. This section briefly reviews contemporary trends in evidence scholarship, including the views

⁸⁴ *Ibid.* at 1171.

⁸⁵ See R. Park, *"Evidence Scholarship, Old and New"* (1991) 75 Minn. L. Rev. 849; W. Twining, *Rethinking Evidence*, *supra*, note 15; R. Lempert, *"The New Evidence Scholarship..."*, *supra*, note 15; M. Seigel, *"A Pragmatic Critique of Modern Evidence Scholarship"* (1994) 88 Nw.U. L. Rev. 995; D. Nicolson, *"Truth, Reason and Justice: Epistemology and Politics in Evidence Discourse"* (1994) 57 The Modern L. Rev. 726.

of rationalist and new evidence scholars. In particular, the concept of relevancy illustrates the differences between the main schools of thought.⁸⁶ The thesis supports a broad, open-minded approach to "new evidence scholarship", akin to that described by William Twining.⁸⁷

1. A Critique of the "Rationalist Tradition"

"Well, of course, evidence is important; but, my dear fellow [Raskolnikov], there's evidence and evidence, and in most cases evidence can be twisted to show anything you like, and, being an examining magistrate, or, in other words, only human, I [Porfiry] must confess that I'd like to present the results of my investigation with mathematical clarity. I'd like to get the sort of evidence that is as irrefutable as twice two! Something

⁸⁶ One concern is how to avoid the "unity of discourse" where evidence scholars use the same language and concepts of practitioners, perhaps to become entrapped within the same norms and politics; see E. Rubin, *"The Practice and Discourse of Legal Scholarship"* (1988) 86 Mich. L. Rev. 1835. The paradox of relevancy is one of the most troublesome points of debate in the law of evidence. A low threshold for relevancy can solidify and perpetuate dominant regimes. Whereas, a high threshold of relevancy could screen out facts that challenge "the politics of existing law"; quote is from D. Nicolson, *ibid.* at 736. The concerns over the politics of normative orders, such as the law, likewise apply to paradigms of knowledge-claims, such as the sciences. For example, the introduction of scientific opinion into judicial processes may either support or challenge the ideology of dominant legal orders. Within the courtroom, the concept of relevancy is truly a political "cutting edge"; it separates insiders from outsiders, along sites of normativity - namely, those of the judge, the scientist, and the law.

⁸⁷ W. Twining, *Rethinking Evidence*, *supra*, note 15 at 32-91; T. Anderson & W. Twining, *Analysis of Evidence*, *supra*, note 40 at 94-104; R. Lempert, *"The New Evidence Scholarship..."*, *supra*, note 15. The history of interdisciplinary inquiry within evidence scholarship is relatively short and uneventful. Broader inquiry was endorsed in early twentieth century when scholars John Henry Wigmore and Benjamin Cardozo explored various interests spanning from "law and science" to "law and literature". See M. Pantazakos, *"Ad Humanitatem Pertinent: A Personal Reflection on the History of the Law and Literature Movement"* (1995) 7 Cardozo Studies in Law and Literature 31; J. Wigmore, *"A List of Legal Novels"* (1908) 2 Illinois L. Rev. 574, and *The Science of Judicial Proof*, 3d ed., rev. and enl. (Boston: Little, Brown and Co., 1937); B. Cardozo, *"Law and Literature"* (1925) 14 Yale Rev. 699, and *Paradoxes of Legal Science* (New York: Columbia University Press, 1928). For example, Wigmore at one point focused on legal themes in works of literature, whereas Cardozo investigated the literary style of legal texts. See M. Pantazakos, *ibid.* at 38.

that's more like direct and conclusive evidence."⁸⁸

The assumptions of many traditional evidence scholars have been consolidated by William Twining under the general and rather mysterious label of the "rationalist tradition".⁸⁹ Twining concluded that rationalist evidence scholars generally support the reconstruction of past events by impartial decision-makers who rationally weigh relevant and reliable evidence against specified standards of proof.⁹⁰ The communication forms are designed to "bring out the truth and discover untruth".⁹¹ The quest for truth focuses on probabilistic inferences which are based upon "the available stock of knowledge about the common course of events"; event probabilities are informed by the common sense, logic, and experiences of decision-makers, and augmented by the knowledge of experts.⁹² The rationalist model primarily employs the forensic sciences

⁸⁸ Fyodor Dostoyevsky, *Crime and Punishment* (1865/6), translated by D. Magarshack (Penguin Books, 1966) at 354. Dostoyevsky's novel is a striking example of classical literature on the struggles and ethics of an individual, Raskolnikov, under investigation for murder. Here, Porfiry, the local magistrate, with visions of mathematical-like proof, applied various investigative strategies to his main suspect, Raskolnikov. Porfiry hinted at his suspicions to Raskolnikov through language and other forms designed to create a "state of continual terror and suspense". Dostoyevsky's protagonist, Raskolnikov, explores various psychological routes to his freedom continually *derived* from Porfiry's investigation. Raskolnikov's conscience, however, overwhelms his rational views to escape, leading to his voluntary disclosure of guilt. The irony rests in Porfiry's use of psychology and various instrumental forms of communication to search Raskolnikov's story for incriminating evidence "as good as twice two, that would, as it were, have quite a mathematical look about it" (at 354/5).

⁸⁹ W. Twining, *Rethinking Evidence*, *supra*, note 15 at 72-76 & 79 (distinctions between aspirational, optimistic and complacent rationalism). For strong criticism of Twining's all-encompassing rubrics, see K. Graham, "There'll Always Be an England": *The Instrument of Ideology of Evidence* (1987) 85 Michigan L. Rev. 1204 at 1230 (a review of W. Twining, *Theories of Evidence: Bentham and Wigmore* (London: Weidenfeld & Nicolson, 1985)).

⁹⁰ W. Twining, *Rethinking Evidence*, *ibid.* at 73.

⁹¹ *Ibid.*

⁹² *Ibid.*

for reliability assessments of evidence, and methods for improvement of reliability.⁹³

The primary and secondary goals of a rationalist model are the practical application of reason to the issues of fact and law, to the ends of "rectitude of decision", and to minimize vexation, expense and delay, respectively.⁹⁴ The rationalist model is considered instrumentalist because the pursuit of truth through reason also provides the path to substantive justice.⁹⁵

William Twining further elaborated the rationalist assumptions in evidence discourse:

"epistemology is cognitivist rather than sceptical; a correspondence theory of truth is generally preferred to a coherence theory of truth; the mode of decision making is seen as 'rational', as contrasted with 'irrational' modes such as battle, compurgation, or ordeal; the characteristic mode of reasoning is induction; the pursuit of truth as a *means* to justice under the law commands a high, but not necessarily an overriding, priority as a social value".⁹⁶

Evidence discourse should not become disengaged from other legal studies (i.e. procedural law and process of proof), and the ideas of nonlegal disciplines.⁹⁷ Academics and practitioners ought to be more skeptical of the basic assumptions found in the theory and practice of evidence, especially those which govern the import of experts' communications and value systems. This thesis challenges the assumptions which underlie the evidentiary gates - the admissibility rules and principles - and judicial gatekeepers, who control the introduction of novel expert opinion. The construction of relevancy criteria within the discipline of law may be compared with those of other disciplines and cultures. A broad, expansive inquiry would

⁹³ *Ibid.*

⁹⁴ *Ibid.*

⁹⁵ *Ibid.* at 78/9.

⁹⁶ *Ibid.* at 72. For the common assumptions of rationalist theories of evidence and proof, see Twining's chart, *ibid.*, at 73.

⁹⁷ *Ibid.* at 74.

acknowledge the rather thick fog (like that over the Court of Chancery in Charles Dickens' *Bleakhouse*) which drifts over boundaries between questions of fact, value, and law.

The ideas presented in this thesis, however, are not always counter to the rationalist approach. According to William Twining, *supra*, the rationalists design the forms of communication to bring out moral and other "truths". This thesis, likewise, seeks access to value systems and "narrative truths". Every communication of evidentiary reliability occurs under the norms of an interpretive community. Academics and practitioners should consider beyond rational forms of description and explanation, to focus on the norms and politics of courtroom communications, especially those which influence the trier's fact-finding.

2. "New Evidence Scholarship"

"When law adopts the perspectives or methodologies of another discipline...it is not simply attaching itself to a superior pre-determined system. It is evaluating that system, testing its techniques to see whether they are socially acceptable or relevant."⁹⁸

And likewise, other disciplines may evaluate and challenge legal perspectives and methodologies. Ideally, the disciplines and cultures of a plural society continually check each other's discourses, norms, and knowledge-claims.

"New evidence scholarship" generally supports a more critical approach to fact determination, the law of evidence and the process of proof.⁹⁹ While the rationalists tend to balance "rectitude of decision" with competing social values, new evidence scholars attempt to

⁹⁸ E. Rubin, *"The Practice and Discourse..."*, *supra*, note 86 at 1900.

⁹⁹ See W. Twining, *Rethinking Evidence*, *supra*, note 15, at 349-52. See also R. Lempert, *"The New Evidence Scholarship..."*, *supra*, note 15 at 61.

remove artificial barriers to knowledge and its representations in language and other forms.¹⁰⁰

The law and its screening over fact-finding processes may also account for holistic notions, such as narrative and story coherency, which are not necessarily inconsistent with atomistic approaches, such as the analytical logic of science.¹⁰¹ The forms that may draw out the "truth" are complex and situated within interpretive communities. An inquiry into narrative coherency would supplement analytical approaches to the admissibility criteria for novel scientific opinion.

New evidence scholars may explore ways to dissolve the "unity of discourse", where legal scholars cannot escape the discourse of law, and their criticism generally becomes a product of the formal language and concepts of law.¹⁰² Although I acknowledge that the unity of discourse between practitioners and academics should be avoided, as Rubin contends, the constraints of law and the legal courtroom require some mode of communication between disciplines for a timely resolution of issues. The participant's "critical self-awareness" of the unity of discourse, rather than reflexive adoption of the same, seems to be the important lesson

¹⁰⁰ See also W. Twining, *ibid.* at 73/4 & 349-52. Twining admits to his own development from a realist, contextual viewpoint that focuses on thinking in terms of total pictures and processes; *ibid.* at 368.

¹⁰¹ See W. Twining, *ibid.* at 77. Stories are holistic in the sense that their formation as a whole defines something different than the linear sum total of each of their component's meaning. Within a story narrative, scientific opinion is like a work of art, such as a painting, which has integrity far beyond the sum of its constituents - the individual strokes of a paint brush, or the demonstrative, analytical logic of science. In context, the meaning of the whole to some extent depends on the artist's strokes and the observer's interpretations, all mediated by value-laden expectations and interests.

¹⁰² For example, see E. Rubin, *supra*, note 86. Rubin acknowledged the "unity of discourse" between law and legal scholarship, where legal scholars are deeply immersed in the practical discourse of lawyers and judges. He criticized this "unity of discourse" for leading to vagueness in description and normative bases, the lack of empirical grounding, compartmentalization, and reactivity to the external; *ibid.* at 1880-6. However, Rubin also suggested that legal scholarship should set forth a conceptual framework of "normative positions" to be subsequently translated into legal language, presumably for debate with practitioners; *ibid.* at 1895. This translation, however, seems to lead back to the same problems of value-laden construction.

from Rubin's article.¹⁰³

New evidence scholarship provides a broad initial basis from which to critically question the two primary assumptions of the rationalist tradition: the correspondence theory of truth, and the assumption of ordinary cognitive competence.¹⁰⁴ Under interdisciplinary perspectives, this thesis criticizes how the current admissibility criteria aims for correspondences to reality and truth.¹⁰⁵ Evidence scholars should avoid overemphasis of the narrow concepts of the rationalist tradition, such as logical relevancy, probativeness, reliability and validity, but also consider broader notions, such as story narratives. The lingering question is whether or not judges as 'keepers of evidentiary gates can screen novel scientific opinion for prejudice to fact-finding, while remaining open to outsiders' discourses and knowledge-claims.

D. Rethinking Evidentiary Gateways

As a two-way gate, the law of evidence supports scientific opinion to assist the trier's fact-finding, or screens out the prejudicial form and content of scientific opinion. Under these constraints, the best we can do is to openly and continually search out forms of closure to outsiders' discourses and knowledge-claims. The recognition of interdisciplinary stories in judicial processes would encourage a more critical look at epistemic crossroads between

¹⁰³ See E. Rubin, *ibid.* at 1880.

¹⁰⁴ W. Twining, *supra*, note 15 at 72/3.

¹⁰⁵ In contrast, Edward Rubin criticized the "law and literature" movement and its focus on the interpretation of text as a narrow critique applicable to law but not legal scholarship; "*The Practice and Discourse...*", *supra*, note 86 at 1874). With respect, I disagree with Rubin's latter assertion. With the diverse interpretive strategies or ways to make sense of text arising from "law and literature" (i.e. law as text, and literary texts of law), scholars may critically approach sites of normativity that support evidence scholarship and the gateways to novel scientific opinion.

interpretive communities, as well as their value systems. New evidence scholars may use interdisciplinary perspectives, such as "law and literature" and "law and language", to criticize courtroom practices, science and the law. Under interdisciplinary approaches, evidence scholars may closely scrutinize how evidentiary gates and judicial gatekeepers screen scientists' discourses and knowledge-claims - the admissibility of scientific opinion.

Chapters two and three of the thesis introduce and explore how interdisciplinary stories in the courtroom arise between scientific facts and legal norms. A poethics of interdisciplinary stories considers the "poetics" and "ethics" over the (de)construction of novel scientific opinion. This approach to interdisciplinary stories involves cognitive and literary/performative dimensions. The cognitive story model of Pennington and Hastie, and Richard Lempert's application to the admissibility of expert opinion, suggests an initial cognitive basis.¹⁰⁶ Under literary/performative dimensions, various interpretive strategies may support a poethics of telling interdisciplinary stories. Actual legal cases and works of literature illustrate some of the difficulties with the language and other forms of scientific opinion in the courtroom.

Chapter four rethinks the role of judges, and the admissibility criteria for novel scientific opinion, particularly the concepts of relevancy and necessity. A review of the logical-legal relevancy debate prefaces discussion on the potential influences of interdisciplinary stories on the *Mohan* admissibility criteria. The poethical method may be applied to the concept of relevancy and the hypothetical question, among others.

¹⁰⁶ R. Lempert, *"Experts, Stories, and Information..."*, *supra*, note 68. See N. Pennington & R. Hastie, *"A Cognitive Theory of Juror Decision Making: The Story Model"* (1991) 13 Cardozo L. Rev. 519. Aside from Lempert's article, few scholarly works have directly considered the interrelationships of science, law and story; see R. Jonakait, *"Stories, Forensic Science and Improved Verdicts"* (1991) 13 Cardozo L. Rev. 343; J. Batt, *"Law, Science, and Narrative: Reflections on Brain Science, Electronic Media, Story, and Law Learning"* (1990) 40 J. of Legal Education 19.

CHAPTER TWO: BETWEEN SCIENTIFIC FACTS AND LEGAL NORMS: INTERDISCIPLINARY STORIES

A. Experts' Discourses and Knowledge-Claims

"The fact that a standard of truth is never available independently of a set of beliefs does not mean that we can never know for certain what is true but that we *always* know for certain what is true (because we are always in the grip of some belief or other), even though what we certainly know may change if and when our beliefs change."¹

"The difficulty is to realize the groundlessness of our believing".²

"Discourse in general, and scientific discourse in particular, is so complex a reality that we not only can, but should, approach it at different levels and with different methods".³

According to Stanley Fish's model of persuasion, evidence and facts are available only upon the assumption of a particular interpretation, which may evolve within an interpretive community.⁴ Under the Fishian model, we know that the foundations of expert opinion rely

¹ S. Fish, *Is There a Text in This Class?: The Authority of Interpretive Communities* (Harvard University Press, 1980) at 365.

² L. Wittgenstein, *On Certainty* (Oxford: B. Blackwell, 1974), from H. McDonald, "The Narrative Act: Wittgenstein and Narratology" (1996) 4 *Surfaces* 1 at 1.

³ M. Foucault, *The Order of Things: An Archaeology of the Human Sciences* (New York: Random House, 1970), at xiv. Foucault argued that we should not focus on the scientist's perspective, but on "the rules that come into play in the very existence of such discourse"; *ibid.* Foucault would ask what conditions would the scientist have to fulfil to give such discourse (at the time of its production and acceptance) value and practical application as scientific discourse; *ibid.*

⁴ S. Fish, *Is There a Text in This Class?*, *supra*, note 1 at 365. Fish criticizes the demonstration model of logic and scientific inquiry which confirms or disconfirms "independent" facts; *ibid.* He asserts that all arguments have assumptions and presuppositions, which are open to challenge and change; *ibid.* at 368. The "force and persuasiveness of an argument depends on institutional circumstances (rather than any normative standard of correctness)"; *ibid.* at 359. Any answer to "what is persuasive" depends on context. See also Richard Weisberg's criticism of the postmodern theories of Fish; *Poethics: and Other Strategies of Law and Literature* (Columbia U. Press, 1994) at 169.

upon a set of institutional assumptions in context.⁵ These foundations, however, may be inaccessible because we are situated outside the community of experts and their specialized discourses. The duality of fully viewing a text from "inside" and "outside" is not possible.⁶ If a text can only be viewed from the outside (that is, by another interpretive community), then some forms of coherency are inaccessible, for example, those intended by the author. Within a model of persuasion, such as an adversarial system, the audience's challenge is to make sense of communications, while remaining open to arguments that suggest the "groundlessness" of their beliefs.⁷ These arguments often arise from other disciplines and cultures.

The issues of textual interpretation have long been debated within literary circles, and more recently, the legal institution.⁸ Stanley Fish acknowledged that the "cannons of acceptability" of an interpretation may change over time.⁹ He argues that a core agreement on the text should not be used to reject interpretations, or reduce interpretive strategies.¹⁰ Instead, we should focus on limitations in the production of text.¹¹ Under Fish's (and Foucault's)

⁵ This statement itself, of course, relies upon my own beliefs about the value of validity and reliability criteria, what constitutes the foundations of expert opinion, the closure of institutions, and so on.

⁶ See J. Elkins, *Pathologizing Professional Life: Psycho-Literary Case Stories* (1994) 18 Vermont L. Rev. 581 at 607. See Stanley Fish, *Is There a Text in This Class?*, *supra*, note 1 at 342 (a text is always a function of interpretation, and thus cannot be the location of core agreement). Fish apparently backtracks, however, by arguing that a core agreement (though subject to change) may occur about the ways of producing text; *ibid.*

⁷ For example, postmodernists may move the audience towards gaps between interpretation and understanding, or the "folds of knowledge".

⁸ For example, see O. Fiss, *Objectivity and Interpretation* (1982) 34 Stanford L. Rev. 739; S. Fish, *Fish v. Fiss* (1984) 36 Stanford L. Rev. 1325.

⁹ S. Fish, *Is There a Text...*, *supra*, note 1 at 349.

¹⁰ *Ibid.* at 342.

¹¹ *Ibid.*

emphasis on production, however, one would seem hard pressed not to rely on some core values as relatively immutable, or perhaps definitive of humanity over its history (but not necessarily its future). The constraints on the interpretation of a text consist of slowly evolving core values which are channelled by interpreters (the authors and audiences) through text and between the various cultures and disciplines of society. Prior to criticism of a text, the audience may focus on its production by searching for some unity of discourse (at least in a momentary sense) with the authors. The participation of various authors and audiences may for practical purposes (a value choice in and of itself) lead to some consensus over a particular textual interpretation, although this interpretation should always remain open for subsequent challenge. The norms which underlie any apparent incommensurability of logic and persuasion (such as the differences revealed during a "battle of experts" at trial) ought to be raised to the surface for critical scrutiny by each interpretive community.

The communication of knowledge-claims is always value-laden - a constitutive action.¹² We as human beings think and communicate *in* language; we cannot extricate ourselves from the values and norms underlying language. The audience of triers of fact are likely to be external to the interpretive communities of lawyers and experts. Within the courtroom, the various actors may have different understandings of texts, perhaps the result of different social and cultural backgrounds. Experts and lawyers attempt to persuade others about the truth of their knowledge-claims (or beliefs); they endeavour to persuade their audiences to accept a particular set of norms and values. The veneers of language and other forms, however, may obscure the value foundations of expert opinion from scrutiny by other courtroom actors.

Ponder "legal reality", for the moment, as a snapshot of images which correspond human

¹² I generally *prefer* a pluralist view where knowledge-claims are considered according to one or another perspectives from within the cultures and disciplines of society.

society to nature. These institutionalized images form a "reality puzzle" with various jagged pieces which are informed by participants, such as scientists and other witnesses. Now suppose each image, or piece, is seen to have different distortions to different situated viewers - or interpreters - in light of social, cultural, economic and political context. Experts themselves generate knowledge within communities that nurture particular social relations, norms and politics. Within the legal institution, practitioners and academics may sometimes uncritically defer to experts who describe and explain how their expertise (or puzzle pieces) fit "reality" at a particular time, despite themselves being products of interpretive communities. The focus is on those persons who contribute puzzle pieces, and those persons who attempt to interpret and understand the same. Within the courtroom, these changing puzzles, or interdisciplinary stories, are shaped by socio-cultural, ideological, political and other influences between the various actors. A dialogical process emerges and continues within the legal institution's limits for a timely resolution.

The law of evidence normatively screens all the pieces (i.e. the testimony of the parties and witnesses, expert opinion, physical evidence, and so on) which could possibly fit the "reality puzzle" at a specific time. The triers of fact attempt to fill in the remaining literary-cognitive spaces by relying upon their own common sense and logic from personal experiences and everyday knowledge structures. The picture as a whole may thematically cohere to represent a factual story that fits or does not fit the elements of substantive law according to a standard of proof. Under the law of evidence, the judiciary screens expert opinion for probative value and prejudicial effects, in light of the cognitive competence of the jury.¹³ The current rationalist

¹³ Cognitive competence refers to an individual's ability to perceive and understand signs, assuming some structures of signification. The cognitive competence of each individual storylistener is relative to her or his expectations. Each individual may refer to stock stories, "narrative typifications", and other structures which help to organize information for

approach, however, tends to consider expert opinion within a two-dimensional spectrum of positive or negative value according to triers of fact - i.e. the opinion is deemed probative or prejudicial.¹⁴

The cognitive competence and general expectations of individual actors, such as judges and jurors, are shaped directly by everyday experiences, or indirectly through various communication media. For example, legal judgments may paint "objectivity" over images of scientific opinion, which in turn are carried by various public media, such as newspapers, journals, television, and radio. Novel scientific opinion and other issues of law and society may draw upon an audience's interests and feelings towards a particular factual story. These media forces can indirectly influence judicial processes, where cloaks of scientific language and other forms otherwise keep triers of fact in the dark, away from novel experiences and perspectives, and perhaps higher levels of self-awareness. The forms and content of scientific opinion will evoke different responses from individuals within different interpretive communities. The interpretation of interdisciplinary communications in the courtroom thus seems contingent on the situated actors and their cognitive processes.

comprehension and recall; N. Pennington & R. Hastie, *"Explanation-Based Decision Making: Effects of Memory Structure on Judgment"* (1988) 14 *Journal of Experimental Psychology: Learning, Memory and Cognition* 521 at 521. See B. Jackson, *Making Sense in Law: Linguistic, Psychological and Semiotic Perspectives* (Liverpool: Deborah Charles Publ., 1995) at 194-239 (discusses "narrative typification" and several theories of cognitive competence). The rationalist term "ordinary cognitive competence" implies that "normal", unbiased individuals who receive the same information will arrive at the same result; see W. Twining, *Rethinking Evidence* (Northwestern University Press, 1994) at 72-4 & 366.

¹⁴ Under the correspondence theory of truth, the facts, events, and state of affairs exist *independent* of human awareness; the observer is not considered as part of the experiment or observation itself. Under a coherency theory of truth, the assumption that the observer interacts with the object theoretically excludes any conclusion of a singular, necessary reference to an external reality. This thesis accepts the coherency view that cognitive constraints limit each audience's access to the form and content of knowledge-claims; any specific reference to (or communication about) "reality" is socially and culturally contingent.

Legal inquiry does not necessarily require the ends of "truth" or "reality", but rather focuses on processes, such as access to scientific discourses and knowledge-claims in the pursuit of truth or reality. The law pretentiously considers itself as *the Hub* for various means of inquiry to the ends of justice. The legal institution may attempt to dominate interdisciplinary communications, sometimes excluding the voices of outsiders.¹⁵ Any attempts at making sense of acts within the legal institution, such as the admissibility of novel scientific opinion involve context, contingencies, and therefore the norms and politics of the actors. The communications of law and other disciplines are often overemphasized as authoritative and exclusive of all other claims, or otherwise instrumentally misrepresented through construction and mediation; they generate, in Foucault's terms, "discourses of power".¹⁶

A pluralist view avoids essentialist and foundationalist approaches where one source of knowledge-claims or norms is singularly and necessarily true.¹⁷ A pluralist would say that several "narrative truths" or legal orders may co-exist, though the text to some extent constrains interpretive communities. As Stanley Fish elaborated, "[a] pluralist is committed to saying that there is something in the text which rules out some readings and allows others (even though no *one* reading can ever capture the text's 'inexhaustible richness and complexity')." ¹⁸ Within a

¹⁵ This thesis in fact prescribes (and privileges) a vision of a plural society with broad access to various normative orders and sources of knowledge-claims from the many cultures and disciplines of society.

¹⁶ See M. Foucault, *Discipline & Punish: The Birth of the Prison* (New York: Random House, 1977).

¹⁷ The approach of modernists is generally essentialist and foundationalist; they attempt to reduce meanings of text to "an essential core or single truth"; S. Feldman, *"Diagnosing Power: Postmodernism in Legal Scholarship and Judicial Practice (With an Emphasis on the Rule Against New Rules in Habeas Corpus Cases)"* (1994) 88 Nw.U. L. Rev. 1046 at 1048.

¹⁸ S. Fish, *Is There a Text in This Class?*, *supra*, note 1 at 342.

plural society, cultures and disciplines are relatively free to develop within some set of overarching conditions. This ideal society would promote meaningful participation by parties and other persons who have *relevant* contributions to judicial processes. The notion of relevancy, however, reflects the overarching conditions - the context under which the actors interact. Multi-disciplinary approaches and interdisciplinary discourses ideally encourage the exchange of knowledge, reduce the opportunity for hegemony by one particular culture or discipline over others, and promote the participation of "outsiders" in society.

A plural approach opens windows to a diversity of discourses and interpretive communities within the various cultures and disciplines of society, facilitating the scrutiny of dominant beliefs and assumptions. With access to a wide spectrum of values, experiences, and knowledge-claims, the participants in judicial processes may freely rotate their views and understandings. Consequently, norms and facts re-align, and law and other forms of legitimacy emerge. The existing paradigms of knowledge-claims and norms may eventually shift or phase out, liberating space for new paradigms, and so on.¹⁹ Within judicial processes, the communication paradigms of law and other disciplines form an allegiance or compete against (and sometimes assimilate) each other towards the timely resolution of legal-factual issues.

Communications are always situated with the evolving values and norms of law and society which vary in degrees of sharedness and stability. For example, the Supreme Court of Canada through the text of the *Canadian Charter of Rights and Freedoms* filters judicial interpretations, supposedly in accordance with the contemporary values of society. The *Charter* is thought as a check and balance on the communication paradigms and knowledge-claims embraced by the State, and their impositions on individuals and minority groups. The text of the

¹⁹ See T. Kuhn, *The Structure of Scientific Revolutions*, 2nd ed. (University of Chicago Press: 1970).

Charter, however, may merely support the dominant beliefs of society. Thus, the actors who use the *Charter* may either support or counter changes to unstable paradigms of discourses, norms, and knowledge-claims.²⁰ For example, judges under the law of evidence attempt to screen scientific opinion according to societal norms which define probative value, prejudice, and other policy issues. But the knowledge-claims of scientists also influence sites of normativity, which apparently describe or even prescribe norms, and therefore the formation of multi-sourced maps (which can also be considered as puzzles or stories) for society. The internal map-making guidelines by dominant actors (i.e. judges, lawyers, scientists) can distort or mislead the recognition of sites of normativity which, in turn, seem to motivate the law's screening of scientists' discourses and knowledge-claims.²¹ But who screens the lawyers, judges, and the law? The legal principle of judicial independence essentially forecloses any opportunity for politicians to democratically check the activities of judges and other legal actors. The *Charter* may formally shield individuals and groups from state action (such as making law), but apparently not the "private" practices of lawyers, and perhaps even judges in their application of law.

The communication of knowledge-claims thus may be considered descriptive, normative, and sometimes prescriptive. The access to various discourses of normative orders and knowledge-claims seems preferable within a plural, democratic society. By asserting the latter

²⁰ Perhaps, scientific revolutions to some extent motivate the formation, dominance and dissolution of legal paradigms; see *supra*, note 4. For example, consider the genesis and evolution of "battered spouse syndrome" as a defense to spousal murder; see L. Walker, *Battered Woman* (Harper & Row, 1979). See also *R. v. Lavallee*, (1990) 76 C.R. (3d) 329 (S.C.C.); D. Martinson, M. MacCrimmon, I. Grant, C. Boyle, "A Forum on *Lavallee v. R.*: Women and Self-Defence" (1991) 25 U.B.C. L. Rev. 23; D. Brodsky, "Educating Juries: The Battered Woman Defence in Canada" (1986/87) 25 Alta. L. Rev. 461.

²¹ The metaphor of map-making is from T. Kuhn, *supra*, note 19.

position, I assume that a just society esteems the meaningful participation of individuals and groups who are directly affected, or who otherwise can make "relevant" contributions to legal issues. The resolution of disputes seems more acceptable or legitimate where the discourses of knowledge-claims on the "human condition" are relatively autonomous, though not hegemonic. The justificatory practices (i.e. to justify factual and legal decisions) within the courtroom, perhaps in contrast to rhetorical practices, tend to counter pluralist approaches to communications. But the timely resolution of legal issues hurry the actors' searches for consensus through forms of coherency, or basic structures of signification - which "operate, for the expert as anyone else, as conditions of the appearance of sense"²².

B. Between Scientific Facts and Legal Norms: Interdisciplinary Stories

"Use the expert to tell the story,...to make the judge and jury want you to win,...to show how the law makes sense,...to explain,...[and] to show the facts to the judge and jury."²³

Communications between scientists and other courtroom actors involve constructions within interpretive communities. The separation of form and content always seems elusive. Although the content of scientific opinion arises from the author (and her or his community), it is interpreted by an audience within one or several cultures and disciplines. The mutual

²² B. Jackson, *Making Sense in Law*, *supra*, note 13 at 419-20. The structures of signification provide the rules and conventions of language within an interpretive community. These structures identify the more stable sense of meaning, relating signifier to signified. The structures of signification may span the communities of storytellers and listeners, reflecting shared expectations and values between cultures and disciplines.

²³ J. McElhaney, *Showtime for the Jury: Use Expert Witnesses to Tell a Story - Not to Try to Win the Case For You* (September 1994) ABA Journal 74-5 (Professor McElhaney elaborated the five major points as litigation advice for trial lawyers).

recognition of relationships between form and content, if even possible, requires access to the discourses and value systems of interpretive communities, between author(s) and audiences. Within judicial processes, the trier of fact's access to forms of coherency supports movement beyond the ideal dichotomies sanctioned by the legal institution, such as the separation of logic and values, causation and association, or referential language and poetics. The trier constructs interdisciplinary stories to make sense of the evidence and law. These stories convey scientific facts, legal norms, and other sites of normativity, between authors and audiences.

The concept of "interdisciplinary story" involves interrelationships of form and content by the pragmatics, syntactics, and semantics of legal and scientific discourses.²⁴ The application of specialized and rather inaccessible knowledge-claims to human nature rests upon a sensitivity and awareness to the forms of communication. Interdisciplinary stories of law and scientific opinion can move the judge and jury beyond the commonsensical to expand self-awareness and reflexivity through novel perspectives. These stories disseminate uncommon experiences, perhaps alleviating power struggles between the "outsiders" and the dominant in society; they bring attention to the self-consciousness and conscience of participants across cultures and disciplines. The stories of science and law, especially through relationships between the pragmatics and semantics, can either familiarize the unfamiliar, or "de-familiarize the familiar"²⁵. Experts and lawyers either confirm our suspicions about something novel, or dispel our misconceptions and stereotypes, though always in context and with contingencies. These narrators of interdisciplinary stories focus on their immediate audience of decision-makers - the judge and jury.

²⁴ The pragmatics involve the functions of language, or what we use it for, in contrast to its meaning (the semantics); see B. Jackson, *Making Sense in Law*, *supra*, note 13 at 513.

²⁵ The quote is from Jan Marta, Lecture, University of British Columbia (February 25, 1997) (the bioethics of medical doctor-patient discourses).

Interdisciplinary stories focus on various communications about scientific opinion, such as the opening statement, examinations in chief and cross-examinations of experts, closing argument, and jury instructions.²⁶ This genre of story involves constructions of the pragmatics of various discourses in the courtroom. Interdisciplinary stories weave together, for example, facts, generalizations (or knowledge-claims), norms, and inter-institutional processes.²⁷ These stories may bridge cultures and disciplines by coherently threading together characters, settings, sequences of events, episodes, and themes.

According to Webster's dictionary, the definition of "coherency" is that which is "logically or aesthetically ordered or integrated", or the "integration of diverse elements, relationships, or values".²⁸ For the purposes of this thesis, coherency defines an order (or an extended "family") of signs which by logic or aesthetics generate meaning within an interpretive community. Forms of coherency may involve relationships that are real or notional, causal or associative, temporal or atemporal, logically ordered or aesthetic. Coherency may arise from a blend of analysis and synthesis, or atomistic and holistic conceptions. The coherency of referential language and poetics may move the audience into worlds of reality or fiction. In this sense, forms of coherency help identify relationships between the author's telling of the story, the story itself, and the audience's listening to the story. The notion of coherency relates to how

²⁶ For example, an interdisciplinary story may involve the scientist's telling a story about her or his career in the relevant field, spanning over periods of formal education to specific scientific conclusions in the courtroom. Legal judgments also may be considered as interdisciplinary stories of scientific facts and legal norms. These justificatory stories involve the judge as narrator and storyteller, who synthesizes the facts of a case, and decides how the facts fit the law.

²⁷ For example, the legal institution may handle the proof of knowledge-claims differently than government or university institutions.

²⁸ *Webster's Ninth New Collegiate Dictionary*.

the audience makes sense of the pragmatics and semantics of stories. This assumes some structures of signification.

Under a cognitive story model, Pennington and Hastie assert that story coherence influences the juror's perceptions of evidence strength.²⁹ For this model, story coherence generally requires completeness, consistency, and plausibility, where "consistency" is basically the extent to which the story does not contradict itself, and "plausibility" is considered relative to the storylistener's known or imagined story sequences.³⁰ Story plausibility involves explanations or causal structures according to the juror's referential system within an interpretive community.³¹ Jurors may also compare the "relative plausibility" of different story versions.

Bernard Jackson's description of "narrative coherency" seems relatively consistent with Pennington and Hastie's notion of story coherency.³² Pennington and Hastie refer to causal relationships inherent to simultaneous story construction and explanation, though contingent on the jurors' beliefs about the evidence.³³ Whereas, Bernard Jackson relies on narrative coherency

²⁹ N. Pennington and R. Hastie, *"Explanation-Based..."*, *supra*, note 13 at 531.

³⁰ *Ibid.* at 522.

³¹ *Ibid.*

³² B. Jackson, *Law, Fact and Narrative Coherence* (Merseyside: Deborah Charles Publ., 1988).

³³ Pennington and Hastie suggest that the jurors make up coherent stories based in part (but not singularly and necessarily so) on evidence presented at trial. The jurors may believe that a particular story informs their decision-making. Pennington and Hastie rely upon an empirical basis to suggest causal links between juror decision-making and story construction. This seems to be a correspondence theory. As author of this thesis, I also have relied upon a correspondence theory by assuming that Pennington and Hastie's link between story construction and actual juror decision-making is likely true. The real difficulty for scholars is to remain descriptive, without asserting normative or prescriptive claims -that is, to focus on the "how" question in context, rather than seek abstractions under questions of "why" or "ought to be". To do so, some scholars (such as those suspected to be postmodernists), continuously attempt to separate forms from content, or the interpretive community from the authorial function.

under the assumption of some "universal structures of signification".³⁴ But what happens when the trier's understanding of story content radically differs from that of the narrators?

Although causation may occur in the real world, the communication of this reality is by the rules and conventions of language. The communication of a sense of causation may involve the pragmatics (the relationships between language and its users), the syntactics (the relationships within language itself) or semantics (the relationships between language and a referential system). The forms of coherency are not necessarily linked to a logical representation of reality, but merely require some semblance or arrangement of signs. The trier of fact gathers a sense of meaning from the logic and aesthetics of a text according to her or his *mélange* of personal and social experiences, common sense, intuition, and so forth. The audience "measures" the text against abstractions such as everyday knowledge structures, for example, stock stories, schemas,³⁵ and scripts,³⁶ or concretization, such as direct experiences through physical and

³⁴ B. Jackson, *Law, Fact, and Narrative Coherence*, *supra*, note 32 at 5 (Greimasian semiotics assumes some universal structures of signification). See J. Black, "Understanding and Remembering Stories", in J. Anderson and S. Kosslyn (Eds.), *Tutorials in Learning and Memory* (San Francisco: W.H. Freeman, 1984) 235 at 236-43 (coherence relations that associate statements for "memory representation of a story" can be considered as referential, based on setting, causation, and motivations). Black asserted that stories may be understood according to inferences that coherently relate story statements into "higher level units" and structures for easy subsequent memory recall; *ibid.* at 252. That is, coherency involves shared referents, background generalizations, and story plots; *ibid.*

³⁵ Schemas are generic prototypes that "convey information about persons, roles, and events"; S. Fiske & S. Taylor, *Social Cognition* (Reading, Mass: Addison-Wesley, 1984) at 184, from M. MacCrimmon, "Developments in the Law of Evidence: The 1988-89 Term", [1990] 1 Supreme Court L. Rev. (2d) 345 at 350-1 (three types of schemas: scripts, frames and stories).

³⁶ See R. Schank, *Tell Me A Story: A New Look at Real and Artificial Memory* (Toronto: Collier Macmillan, 1990). Schank described a "script" as:

"a set of expectations about what will happen next in a well-understood situation. In a sense, many situations in life have the people who participate in them seemingly reading their roles in a kind of play... Life experience means quite often knowing how to act and how others will act in given stereotypical situations. That knowledge is called a script." (at 7)

emotional senses. For communications between disciplines and cultures, the more abstraction and complexity in the text (i.e. the conceptual and imaginary), the more likely it will be considered as incoherent.

The trier's recognition of coherent forms poses additional problems for novel scientific opinion, which by definition informs beyond ordinary experiences. Triers of fact may have preconceptions about scientists, and how their narratives contribute to the plausibility of story events and sequences. At trial, scientists may tell descriptive or explanatory stories which fit or do not fit the audience's existing stock of plausible stories. Scientific opinion, however, may alter the very processes integral to the trier's recognition of stories that are coherent, plausible, and thus relevant. The lack of access to forms of coherency also limits inferential streams that support interdisciplinary stories, perhaps to prejudice the trier's fact-finding. The triers first become aware, and gather a sense of meaning, prior to challenging the instrumental and sometimes unethical use of language and other forms. The courtroom actors' awareness of forms of plausibility and coherency that evolve with communications may even de-stabilize any shared sense of meaning. The basic structures of signification recognize the "core" prior to exploring the "penumbra".³⁷

Each individual of the courtroom audience may recognize the coherency of various

Schank concluded that scripts facilitate mental processing by identifying the meaning of existing and predicted events, and expectations on what should happen given a set of circumstances; *ibid.* A script for events is an "ordered sequence of actions, its standard characters and subjects"; R. Sherwin, *"Law Frames: Historical Truth and Narrative Necessity in a Criminal Case"* (1994) 47 Stan. L. Rev. 39 at 50.

³⁷ On the other hand, the core could be recognized from what it is not, or what defines the penumbra. The language of "core" and "penumbra" excludes or includes, according to the (in)commensurability of logic apparent to individuals within interpretive communities. The terminology of the core/penumbra distinction arose from a lecture by Allan Hutchinson, U.B.C., Spring, 1997.

narratives, but may also interpret an interdisciplinary story as inconsistent with any specific narrator's version.³⁸ The plausibility of interdisciplinary stories apparently relates to the potential fit between the facts, existing knowledge structures (i.e. stock stories, narrative typifications, scripts, frames, etc.), and normative orders, such as the law. Under a pluralist approach, this thesis supports coherency theories of "narrative truth" over (but does not necessarily exclude) correspondence theories of truth. It assumes that the pragmatics and syntactics of a text combine to influence notions of coherency as semantics. Under the pragmatics of courtroom discourses, the various performative acts of narration may influence the trier's overall coherence of an interdisciplinary story.³⁹ The decision-making by triers of fact centres on the elicitation of facts and dialectic argumentation between scientists, lawyers, judges, and other courtroom actors. The trier of fact as a storylistener interprets the various narrators (i.e. the lawyers, scientists and other witnesses) to construct a story about the "telling of a story" (i.e. why each teller told the story in a particular way). Stories emerge about the telling of various story versions. The pragmatics and semantics of stories about novel scientific opinion relate through interrelationships of form and substance, such as sites of normativity and literary-cognitive spaces.

³⁸ In light of their expectations, the audiences seem to shape notions of coherency in attempts to make sense of the utterances and narrative acts of the various courtroom participants, especially those of scientists and other experts.

³⁹ By drawing a parallel to Heisenberg's Uncertainty Principle in physics - "the precision of our measurement of a particle's momentum is inversely proportional to the precision of our measurement of that particle's position" - Henry McDonald argues that the more definite our account of the story, the more indefinite our account of the performative - the act of telling the story; *supra*, note 2 at 6-9. Without asserting a position on the conclusion, I find that the irony of McDonald's parallel between a physics theory and the performative acts of narration pervades much of my own thesis.

C. Exploring Sites of Normativity and Literary-Cognitive Spaces

Sites of normativity are locations of shared meaning recognizable as normative within one or more interpretive communities.⁴⁰ The sites may support communications between authors and audiences, assuming some shared structures of signification. The sites of normativity arise from the discursive practices of the production and evaluation of discourses.⁴¹ A pluralist approach draws out a universe of cultural galaxies and sites of normativity with varying brilliance. An author exists within the cultures and disciplines of society which in a given set of circumstances limit her or his choice of sites of normativity. Within the courtroom, the actors move between sites according to their access to factual and normative orders, and the rules and conventions of language.

The admissibility criteria for novel scientific opinion rests on some sites of normativity, for example, legal and constitutional norms, professional ethics, and so on. These sites underpin the comparison of factual and stock stories - i.e. the relevancy of evidence towards a "fit", the sufficiency of evidence for a "fit", and the definition of a "fit". The judiciary's access to sites of normativity seems requisite for their application of admissibility criteria. The sites of normativity also inform how lawyers and judges fit a story of scientific facts into a legal framework. However, in the sheep's clothing of scientific objectivity may lie the wolf of legal

⁴⁰ The term "sites of normativity" attempts to avert readers to the possibility that the norms of interpretive communities may not be stable and immutable. Audiences, especially those outside dominant communities, may consider individual values as representative sites of normativity. The values accepted and even prescribed by individuals to some extent derive from normative orders.

⁴¹ See R. Sherwin, *"Lawyering Theory: An Overview What We Talk About When We Talk About Law"* (1992) 37 N.Y. L. Rev. 9 at fn69 (many discursive practices are constructed by "unconsciously internalized models, scripts, or cultural schemas"). Discursive practices refer to "what an actor does with language in a particular communicative context"; *ibid.* at fn33. The actor's prior expectations seem to shape their uses of language, particularly in respect to their interpretations of textualized norms.

rhetoric, or at least, the rhetoric of an agenda-driven scientific community. The judicial screening of interdisciplinary communications should inquire into the formal and informal interaction between scientific facts and legal norms. Authors' stories about the "human condition" can sensitively move audiences to sites of normativity. The courtroom actors pragmatically engage norms that support specific knowledge-claims and legal orders.

The sites of normativity underlie relationships between the form and content of scientific opinion, or between the "telling" of an interdisciplinary story, and the story itself. The audience, however, may not have had such direct experiences (by observation, demonstration, or performance), or correspondences to reality. The author thus often seeks to describe some detail of the context. The reach of context to be considered in each story narrative seems to vary with the norms and politics of the actors, whether scientists, lawyers, judges or jurors. Any narrator's assertion of a "correspondence to reality" rests on tenuous, value-laden constructions. Judges specifically have a role to identify sites of normativity, and to consider beyond the analytical rationality of logical probativeness, to forms of narrative and story coherency. Evidentiary inquiry requires refocusing from analysis of probative value and the units of language and other forms, to synthesis and more holistic conceptions, such as narratives and stories.

The communications by scientists in the courtroom may be considered at pragmatic, syntactic, and semantic levels. The pragmatics of "telling" an interdisciplinary story relate the story text to its narrators. Bernard Jackson dichotomizes the content of the story from the "narrativisation of pragmatics" (i.e. how the story is told) which may influence the understanding of judges and jurors.⁴² Within the courtroom, the narrativisation of pragmatics

⁴² See B. Jackson, *Law, Fact, and Narrative Coherency*, *supra*, note 32 at 62-3; and *Making Sense in Law*, *supra*, note 13 at 513 (sense construction is based on narrative structures).

involve the persuasive telling of a story,⁴³ to show its "continuity and closure", and "aesthetic finality".⁴⁴ The "narrativisation of pragmatics", which describes the acts of telling stories, assumes some recognizable structures of signification.⁴⁵ The narrativisation itself, however, can transform processes of signification.

Interdisciplinary stories involve literary/performative and cognitive dimensions where authors produce and communicate the text, and the audience attempts to interpret and understand the same. Within the field of english literature, "literary" generally describes well-written text which derives its value from expressive forms.⁴⁶ The works of literature involving judicial processes may provide parallels and analogies to the "literary" texts of law and scientific opinion. These texts (or discourses) may involve interdisciplinary stories, and the stories about telling such stories. The performative utterances and narrative acts by courtroom actors support the "telling" of stories. The audiences, or storylisteners, cognitively process the actors' communications and story narratives. The judge renders admissibility decisions by assuming the situated audience's level of cognitive competence.

The literary-cognitive spaces within a text (or interdisciplinary story) identify locations where the interpretive communities of author and audience fail to share meaning; the communities do not recognize the same structures of signification. The understood levels of logic may be incommensurable. Within courtroom communications, literary-cognitive spaces confuse

⁴³ *Ibid.*

⁴⁴ Reich, from J. Elkins, *"Pathologizing Professional Life..."*, *supra*, note 6 at 618.

⁴⁵ B. Jackson, *Law, Fact, and Narrative Coherency*, *supra*, note 32 at 35.

⁴⁶ For the lack of a better term (and with apologies to literary scholars), this thesis uses "literary" in a rather spacious sense, referring to expressive language and other forms with descriptive, explanative and normative aspects.

the actors and audiences' consideration of sites of normativity, perhaps to prejudice the trier's fact-finding. Under postmodern strategies, such as deconstruction, the actors use literary-cognitive spaces to reach for the "folds of knowledge". These strategies may involve the use of contradictions, binary oppositions, parody, irony, and so forth.⁴⁷ However, the use of literary-cognitive spaces within legal and scientific discourses can prejudice the trier's interpretation of the content of stories, the telling of stories, and the stories about "telling" stories.

The term "prejudice" to the trier's fact-finding, and thus a fair trial and the administration of justice, may arise from the impartiality of actors, misleading information, distortion, confusion, and delays.⁴⁸ The actors' use of discriminatory stereotypes would likely prejudice the trier's story developments and other fact-finding processes.⁴⁹ Prejudice can arise from the trier's lack of access to experts' discourses and knowledge-claims. This closure may occur where experts maintain covert interests, and invoke "measured forms" within considerate communications, perhaps to marginalize the personal narratives of the parties and other witnesses. Thus, prejudice may originate from the form, as well as the content of scientific

⁴⁷ For examples of postmodernism in legal practice, see S. Feldman, *"Diagnosing Power..."*, *supra*, note 17; F. Mootz, *"Is the Rule of Law Possible in a Postmodern World?"* (1993) 68 Wash. L. Rev. 249; P. Schanck, *"Understanding Postmodern Thought and Its Implications for Statutory Interpretation"* (1992) 65 S. Cal. L. Rev. 2505; J. Balkin, *"What is a Postmodern Constitutionalism"* (1992) 90 Mich. L. Rev. 1966. Feldman (rather categorically) discusses seven postmodern themes: anti-foundationalism/anti-essentialism, power-language relationships, self-reflexivity, irony, paradoxes, political ambivalence, and the social construction of the subject; *ibid.* at 1105.

⁴⁸ This thesis defines a "fair trial" as inclusive of the meaningful opportunity by the parties to tell their factual stories, and to argue the law. Fairness requires that fact-finding not be limited by the prejudices of scientific discourses and knowledge-claims. For example, scientists prejudice fact-finding if their primary inferences and assumptions rest on discriminatory stereotypes that limit the participation by others.

⁴⁹ For example, the accused should not be prejudicially characterized as a bad person on the basis of past conduct. The law of evidence currently proscribes this type of characterization, unless the accused first suggests that he is a good person; *R. v. Mohan*, [1994] 2 S.C.R. 9.

opinion. The term "prejudice" itself relies upon the existence of some recognizable structures of signification to inform the actors of the consequences of their prejudices.

The concept of "measured forms" describes those which are instrumentally invoked by a storyteller for persuasive effects on a storylistener.⁵⁰ A story text may at various concrete or abstract levels become coherent to the audience relative to (or "measured" against) their physical and emotional senses, and existing knowledge structures. The influences of an author's "measured forms" relate to the expectations of the situated audience, which may be far different than those of the original author.⁵¹ The possibility that the actors may use measured forms should re-direct the judge's focus from the text of scientific opinion itself to an ethics of producing and communicating a text, and to an ethics of reading (or interpreting) a text. The actors and audiences have responsibilities in approaching scientific opinion and the law. Legal cases and works of literature provide sources from which to draw specific examples of the influences of measured forms within considerate communications, and how to make sense of the ethics of lawyers, judges, experts, and other courtroom actors.

"Considerate communication" involves those which are careful and constructive, accounting for various factors that can influence the interpretation and understanding by the

⁵⁰ Herman Melville in *Billy Budd, Sailor* (Harrison Hayford & Merton M. Sealts, Jr., eds., Bantam Books, 1984) apparently criticized legal, religious and scientific positivism, as well as human agency in the application of natural principles. Melville wrote that Captain Vere would say, "With mankind [sic],...forms, measured forms, are everything" (at 74). See R. Weisberg, *Poethics, supra*, note 4 at 106 (the author may use measured forms in response to potential readers and personal goals).

⁵¹ See H. Melville, *ibid.*, at 52 (for pay, professional experts will become "considerate", and demarcate an opinion on difficult scientific issues). For initial discussions on "considerate communication" within the "law and literature" movement, see Richard Weisberg, *How Judges Speak: Some Lessons on Adjudication in Billy Budd, Sailor with an application to Justice Rehnquist* (1982) 57 New York L. Rev. 2. See also the chapter three subsection, "Authorial Responsibility and Professional Ethics", for some specific examples of Melville's "measured forms" within considerate communications.

audience. Richard Weisberg suggests that an author's considerate communications may be covert or even deceptive.⁵² The concept of considerate communication, however, has generated some confusion among "law and literature" scholars.⁵³ Steven Mailloux rejected Weisberg's initial 1982 definition, *supra*, instead accepting one which very broadly accounts for, or considers, "the many factors involved in any judgment, interpretation, or argument".⁵⁴ Gary Minda relied upon Weisberg's initial definition, *supra*, while focusing on "how legal rhetoric can justify results by sparing its readers and audience any discomfort by omitting or even distorting facts in the narration of past events".⁵⁵ As an aside, Minda suggested that Weisberg's more recent assertion that "plain meanings can only be discovered by audiences receptive to them" indicates his turn towards postmodernism.⁵⁶

⁵² R. Weisberg, *"Accepting the Inside Narrator's Challenge: Billy Budd and the 'Legalistic' Reader"* (1991) 1 *Cardozo Studies in Law & Literature* 27 at 28. See S. Mailloux, *"Judging the Judge: Billy Budd and 'Proof to All Sophistries'"* (1991) 1 *Cardozo Studies in Law & Literature* 83 at 85.

⁵³ Richard Weisberg had elaborated three requirements for a judge's "considerate communication":

"(1) that the communicator's perception of the audience's well-being stand uppermost in his [sic] mind, whatever the ancillary motivations for the speech; (2) that whatever factual distortions occur because of that perception involve predominantly *omissions*, or, at the worst, trivial misstatements of fact; and (3) that the communicator faithfully convey the essence of the underlying reality he [sic] is discussing (either through overt language, or tonal or structural elements), despite the omissions or mild misrepresentations of detail." (R. Weisberg, *"How Judges Speak..."*, *supra*, note 51 at 35).

Weisberg has since veered from these surprisingly *positivist* (can you hear Melville resonating from his grave?) criteria for considerate communications. See R. Weisberg, *"Accepting the Inside Narrator's Challenge..."*, *ibid.* at 34 (the narrator [Melville] takes careful, even deceptive [or covert] communication to be a fact of modern life").

⁵⁴ S. Mailloux, *"Judging the Judge..."*, *supra*, note 52 at 85.

⁵⁵ G. Minda, *Postmodern Legal Movements* (New York University Press, 1995) at 154.

⁵⁶ *Ibid.* at 165, quote from R. Weisberg, *"Three Lessons From Law and Literature"* (1993) 27 *Loy. L.A. L. Rev.* 285 at 289. But Weisberg loudly asserts his challenges to the "new

The considerate communications by an author may vary with her or his expectations of the audience's experiences and beliefs. This type of communication is often used within persuasive arguments where instrumental language and other forms may achieve specific ends. The use of considerate communication rests on sites of normativity and authorial responsibility. The sites and level of responsibility arise from the author's self-awareness and personal integrity within an interpretive community. At the other end, the audience's awareness of considerate communications would support a more participatory process of story construction about moral issues.⁵⁷ The audience ought to be aware of an author's "considerateness", to move from a narrow focus on utterances to whole structures of narratives and stories. For example, the communications by an expert witness - an authoritative figure in the eyes of triers of fact - may instrumentally "lead" counsel towards a specific objective, such as a scientific conclusion.

By illustration, considerate communication may occur during an articling interview between a law student and lawyer. The student responds to the interviewer's questions and remarks according to various factors, such as the language and other forms used by the interviewer, which may influence what the student would consider to be an appropriate answer. The interviewer may attempt to interpret the student's answers, knowing that the student has attempted to respond according to what would be most appropriate to the interviewer. The use of considerate communication within a story about moral responsibility may influence the apparent trustworthiness of knowledge-claims, and privilege normative orders.

Interdisciplinary discourses in the courtroom may thus involve intersubjective processes where an individual's communications are influenced by the ongoing responses by another

critical" and postmodernist interpretive methodologies; *Poethics*, *supra*, note 4 at 4/5, 108, 120 & 169.

⁵⁷ R. Weisberg, "Accepting the Insider's Challenge...", *supra*, note 52 at 38.

individual, and vice versa.⁵⁸ Legal counsel may present during cross-examination leading questions to test the credibility of an scientist. The measured forms between lawyers and scientists, however, sometimes lead to circularity or spin on fact-finding. That is, the act of "telling" an interdisciplinary story can motivate the audience's ongoing interpretations and re-interpretations of the story content. The practice of considerate communications, especially by scientists and lawyers, can preponderantly influence the judge and jury who may be unfamiliar with these specialized discourses and knowledge-claims. In response, judges under the law of evidence have screen the "integrity" of expert opinion and its potential prejudice to the juror's interpretations. Judges, however, have so far tended to downplay the authorial responsibility over the pragmatics and semantics of interdisciplinary stories, particularly those which have consequences to "outsiders".⁵⁹

Aside from dominant ideology, "outsiders" may gain power and control through the use of considerate communication, such as measured forms, or by relying upon the text itself.⁶⁰ For example, outsiders may seek broad access to scientific opinion,⁶¹ or constitutional text, such

⁵⁸ Intersubjectivity defines the interplay of two subjects. For example, a scientist and lawyer may communicate to each other, exchanging their perspectives on scientific facts and legal norms.

⁵⁹ See B. Jackson, *Law, Fact, and Narrative Coherence*, *supra*, note 32 at 5.

⁶⁰ This thesis refers to "outsiders" as individuals or minority groups marginalized by the powerful elite or the dominant majority of society. "Outsiders" are those persons or groups who lack access to discourses of power and knowledge. Thus, the term "outsiders" is more inclusive than the legal definition of persons or groups who face discrimination according to equality provisions under the *Charter* and other human rights legislation.

⁶¹ For example, an accused may rely upon DNA evidence to show his innocence, and to avoid wrongful imprisonment. See the case of Guy Paul Morin, who after 10 years, two trials and a conviction for the rape and murder of nine year-old Christine Jessop, was exonerated on the basis of DNA analysis; *R. v. Morin*, [1988] 2 S.C.R. 345. The Crown had successfully appealed Morin's original acquittal at trial to the Supreme Court of Canada. Morin was re-tried and convicted. The Ontario Court of Appeal then quashed Morin's conviction after novel DNA

as the *Charter*, for critical inquiry into judicial processes. The stories of dominant knowledge-claims and values may be reachable through non-legal disciplines, and interdisciplinary communications, such as within the "law and literature" movement.⁶² The links to other disciplinary fields, such as literature and literary theory, support access to the voices of outsiders.⁶³

The administration of justice requires various checks on the power and authority of scientists who invoke "measured" forms to the exclusion of outsiders. The minority views of outsiders are sometimes co-opted by the dominant cultures and disciplines in society. The dominance by one set of values or knowledge-claims over other sets - i.e. those of the authors over the audiences - may exclude the outsiders' stories about the stories of the dominant. The success of a storyteller in de-compartmentalizing - i.e. the avoidance of legal positivism and scientific determinism - can be seen in how she "reveals" in her text integrative or dissociative possibilities for the voices of outsiders within a larger, interdisciplinary story. The parties,

analysis indicated that Morin's genetic samples were different from those of the perpetrator found at the crime scene. The Crown and defence had agreed to follow the results of an independent DNA analysis supervised by scientists representative of both parties. A novel methodology involving a combination of PCR and DQ Alpha testing in a larger "cleansing procedure" had been required in light of the contaminants found in semen samples taken from the victim's underclothing which was badly decomposed. The analysis combined four techniques: neutralizing contaminants, dilution, soaking with protein preparations, and extraction. The tests and results were approved by Dr. Edward Blake, a California serologist and pioneer in DNA analysis; *ibid.* See *The Toronto Star* (January 25 & 26, 1995); *R. v. Morin*, [1995] O.J. No. 350 (Ont. C.A.). See also K. Makin, *Redrum the Innocent* (Toronto: Penguin, 1993).

⁶² For an overview of the "law and literature" movement, see M. Pantazakos, "*Ad Humanitatem Pertinent: A Personal Reflection on the History of the Law and Literature Movement*" (1995) 7 *Cardozo Studies in Law and Literature* 31. See also J. White, *The Legal Imagination: Studies in the Nature of Legal Thought and Expression* (Boston: Little, Brown, 1973); R. Weisberg, *Poethics*, *supra*, note 4; R. Posner, *Law and Literature: A Misunderstood Relation* (Harvard University Press, 1988).

⁶³ See C. Smart, *Feminism and the Power of Law* (1989) at 2 (the voices of race and ethnic difference "have flourished more in literary works than in the social sciences and law").

especially outsiders, should have an opportunity to meaningfully participate in the courtroom.⁶⁴

The opportunity for participation requires fair access to scientific opinion, including inferences, premises, background assumptions, and evidentiary foundations, as well as the normative orders which underlie law and science.

The outsider's access to justice would thus support critical inquiry into the form and content of scientific opinion. Within a legal framework, the level of accessibility may vary with sites of normativity, such as *Charter* values and professional ethics. For example, in criminal cases, the principles of fundamental justice include fairness at trial, equality before and under the law, equal protection and benefit of the law, the accused's presumption of innocence and right to make full answer and defence, and so forth.⁶⁵ The parties and other courtroom actors require meaningful opportunity to scrutinize each scientist's utterances and narrative acts for sites of normativity, and potential prejudices to fact-finding.⁶⁶ Meaningful access may also require the use of a scientist's prior inconsistent statements for evaluation of her or his credibility in the

⁶⁴ The *Charter* supports the participation of parties "in a fair and public hearing by an independent and impartial tribunal". I acknowledge a value judgment (and politics) inherent to a preference for meaningful, non-hierarchical participation of the various actors in judicial processes.

⁶⁵ The concept of fundamental justice under *Charter* section 7 consists of various principles and values underlying the *Charter* rights ss.8 to 15.

⁶⁶ Under a *Charter* s.24(2) remedy for non-disclosure of a rape counsellor's interview notes, the majority in *R. v. Carosella* (February 6, 1997) (S.C.C.) reviewed the prejudice to the accused's ability to make full answer and defence in absence of potentially relevant evidence, and the prejudice to the integrity of the judicial system (para27). In the latter sense, to deprive the accused of relevant evidence would damage the image of the administration of justice (para56). In contrast, the dissenters required that the accused show a real likelihood of prejudice to his right to make full answer and defence; the proof of infringement of a *Charter* right should not involve a major leap of logic (para117). See *R. v. O'Connor*, [1995] 4 S.C.R. 411. The Supreme Court of Canada's position on the *Charter* s.24(2) remedy (exclusion of evidence bringing administration of justice into disrepute) to some extent parallels its stance on the logical-legal relevancy debate at trial.

communications at issue. Access to justice supports diverse inquiry and overt reasoning from recognizable sites of normativity, such as the evolving values of a democratic, participatory society.

Institutional constraints may limit the actors' discourses, knowledge-claims and norms. Within the courtroom, the constraints may involve the judiciary's (or a party's) lack of access to the foundations of interdisciplinary discourses and institutional stories. For example, the lack of access to the institutions of social science may constrain fact construction and process of proof. How does the communication of scientific opinion within the legal institution support or overpower the voices of individuals and minority groups external to mainstream society? For whatever reasons, citizens now seem to have more faith and stronger expectations of the institutions of science to check the power of government.⁶⁷ The adversarial system also generally supports a level playing field where courtroom actors generally have similar access to evidence, such as scientific opinion and underlying norms.

The administration of justice raises concerns over how trials can easily become diverted by "unanchored" institutional stories,⁶⁸ such as government conspiracy or abuse through the

⁶⁷ By illustration, the government and tobacco companies in *R. v. RJR-MacDonald Inc.*, [1995] S.C.J. No. 68 focused their interdisciplinary stories of fact and law primarily on the theme of institutional constraints - the judiciary and government's lack of access to social science evidence. The justices in *RJR-MacDonald* at various court levels elaborated different institutional stories, involving several storylines about the lack of access to the social sciences, judicial politics and other factors. See the chapter three subsection, "*Scientific Opinion in Appellate Judgments: The RJR-MacDonald Case and Its Institutional Stories*". See also A. Wallrap, "*Social Science Evidence and Elasticity of Proof in Charter Litigation: The RJR-MacDonald Decision*", presented at the Law and Society Association Joint Meeting, University of Strathclyde, Glasgow, Scotland, July 12, 1996.

⁶⁸ The term "unanchored" may refer to either the form or substance of a story. The absence of real, concrete, sensory-based language leads to "unanchored" forms. The story may also lack a common sense basis for evidence. See generally, W. Wagenaar, P. van Koppen, & H. Crombag, *Anchored Narratives: The Psychology of Criminal Evidence* (Hemel Hempstead: Harvester Wheatsheaf, 1993) (the term "anchored" refers to a trustworthy or commonsensical

agency of police officers and prosecutors. This genre of institutional story can undermine the administration of justice by shifting the focus away from the moral culpability of the accused in a specific factual context. The trier of fact's attention shifts from specific legal issues to questions of broader, more abstract policy at the intersections of law and society - i.e. where state conduct is likely to interfere with the human rights and freedoms of the individual accused. Institutional constraints and sites of normativity lead to the following two basic questions: what sources of information should be considered within the justice system?; and what forms of information should be sanctioned by the legal institution? For example, in sexual assault cases, victims may be deterred from laying charges if institutional constraints limit their opportunities to tell their stories. The victims also should not face further abuse and invasion of privacy at the hands of the accused through the legal institution.

The administration of justice rests on issues of fundamental accessibility; the victims and accused require meaningful access to law and legal processes. The latter includes fair access to the form and content of scientific opinion. The "principles of fundamental justice" are recognizable in part from the text of the *Charter*, and from the discursive practices of the judiciary at common law and under the *Charter*. The principles of fundamental justice seem to support a broad inquiry into the law of expert evidence, and the ethics of scientists and others over the production and communication of scientific opinion, in light of potential interpretations by triers of fact.

The concept of a "fair trial" - a principle of fundamental justice under *Charter* s.7 (see also s.11(d)) - has jurisprudentially expanded beyond the interests of the accused to encompass

the interests of victims and society in the administration of justice.⁶⁹ The equal protection and benefit of the law is also a *Charter* value that supports a fair trial. The accused's right to make full answer and defence does not encompass the use of irrelevant evidence which could render a trial unfair.⁷⁰ Each party should have meaningful opportunity to introduce and cross-examine scientific opinion, and to develop plausible interdisciplinary stories. For example, Madame Justice Wilson, on behalf of the majority of the Supreme Court of Canada in *Lavallee*, recognized that where a victim of domestic abuse faces charges of murdering her abusive spouse, and argues self-defence, the fairness and integrity of the trial process provides her with an opportunity to present the jury with scientific opinion on Battered Woman Syndrome.⁷¹ The "narrative truth" of scientists may preponderantly influence the trier's construction of interdisciplinary stories.

A well-constructed story possesses "narrative truth" that is real and immediate to the eyes of the situated interpreter. Reich describes "narrative truth":

"we use [a story] to decide when a certain experience has been captured to our satisfaction; it depends on continuity and closure and the extent to which the fit of the pieces takes on an aesthetic finality. Narrative truth is what we have in mind when we say that such and such is a good story, that a given explanation carries conviction, that one solution to a mystery must be true. Once a given construction has acquired narrative truth, it becomes just as real as any other kind of truth".⁷²

Although one may argue, as Reich does, that "one solution to a mystery must be true", this conclusion is a matter of belief, and not a singular, logical necessity of an external reality. For

⁶⁹ *R. v. Seaboyer*, [1991] 2 S.C.R. 577.

⁷⁰ This position is more uncertain in light of the very recent 5-4 decision by the Supreme Court of Canada in *R. v. Carosella*, *supra*, note 66. See also chapter one, note 41.

⁷¹ See *R. v. Lavallee* (1990), 76 C.R. (3d) 329 (S.C.C.). See *supra*, note 20.

⁷² Reich, from J.R. Elkins, "*Pathologizing Professional Life...*", *supra*, note 6 at 618.

the purposes of this thesis, "narrative truth" assumes a coherence theory of truth, rather than a correspondence theory. Any standard for "truth" or a knowledge-claim is always dependent upon a set of beliefs.⁷³ The language and other forms used to draw out the "truth" are complex and inextricably tied to sites of normativity from within the interpretive communities of the courtroom actors and audiences. Although we can never tell whether the semantic content of a story is true, we may judge who is most persuasive in showing the conditions of a truth-claim.⁷⁴ All selections and judgments occur within context.

The narrative truth of a story rests on the pragmatics of telling the story within the rhetoric of the courtroom.⁷⁵ The discourses of science and law, however, may sometimes cover up not only the actors' real experiences, but also their "inner truths" and responsibilities. Judges may apply the abstract concepts of "truth" and justice to concrete situations, including the narratives of scientists and interdisciplinary stories. The application occurs in light of the responsibilities and ethics of courtroom actors who narrate searches for "truth" and justice in context. The communication of "truth" and reality, however, only occurs through the constructions of language and other forms. The use of scientific opinion and legal arguments - the pragmatics of telling stories - always rest on sites of normativity, which may or may not be shared between the interpretive communities of actors and audiences.⁷⁶

⁷³ S. Fish, *Is There a Text in This Class?*, *supra*, note 1 at 365.

⁷⁴ B. Jackson, *Law, Fact, and Narrative Coherence*, *supra*, note 32 at 2. The object of criticism may turn from the content of the text (the semantics) to the author's use of language and other forms (the pragmatics).

⁷⁵ *Ibid.*

⁷⁶ In contrast, a postmodernist might suggest that the "truth" involves movement towards literary-cognitive spaces (and a sense of befuddlement?), before reaching moments of clarity. The movements between cognition and "being" in the pursuit of truth supposedly raises the audience's self-awareness. Under postmodern theory, an outsider can live "multiple and often

To model decision-making in the courtroom, one attempts to describe and explain processes involving the utterances and narrative acts of scientists and other participants. Martin Cortazzi describes the stages of one evaluative model for oral narratives: an abstract ("what was this about"), orientation ("who? when? what? where?"), complication ("then what happened?"), evaluation ("so what?"), result ("what finally happened?"), and coda.⁷⁷ Pennington and Hastie also use an evaluative approach under their cognitive story model for juror decision-making.⁷⁸ The cognitive story model focuses on story construction based on the trier of fact's beliefs about testimony and evidence.

Pennington and Hastie's model attempts to account for how the information at trial influences the juror's understanding and decision-making. The juror's evaluation of evidence occurs by simultaneously "constructing an explanatory representation in the form of a narrative story", a device which assists memory recall and decision-making.⁷⁹ According to Pennington

conflicting truths" (S. Feldman, *supra*, note 17 at 1102), or tell multiple stories.

⁷⁷ M. Cortazzi, *Narrative Analysis* (London: The Falmer Press, 1993) at 44-7. The evaluative stage may suspend the listener from the final result until the importance of events and characters are discussed in detail. The optional coda is typically an instance of a general proposition from the beginning abstract; *ibid.*

⁷⁸ N. Pennington & R. Hastie, "The Story Model for Juror Decision Making" in R. Hastie, S. Penrod, & N. Pennington, *Inside the Jury* (Harvard University Press, 1983) 192 at 192/3. This thesis assumes that the cognitive story model can also apply, at least in part, to factual decision-making by judges alone. This assumption, however, discounts many differences of socio-cultural experiences. Judges are privy to the experiences of legal education and practice. Whereas, jurors rely upon their personal and everyday experiences and common sense as a primary knowledge base. But jurors also have experiences in various disciplines, cultures, or other specific aspects of life. Within the courtroom, the "narrativisation of pragmatics" involve various disciplinary approaches and responses by the judge and jurors. The judges' responses may be categorized according to the interpretation and comprehension of scientific expert opinion, its effects on decision-making, and its subsequent use in a "justificatory discourse"; see B. Jackson, *Law, Fact, and Narrative Coherency*, *supra*, note 32.

⁷⁹ N. Pennington & R. Hastie, "Explanation-Based...", *supra*, note 13 at 521.

and Hastie, a cognitive story model for juror decision-making involves three processes: "(A) evidence evaluation through story construction, (B) representation of the decision alternatives by learning verdict category attributes, and (C) reaching a decision through the classification of the story into the best fitting verdict category".⁸⁰ This model defines a story as a "hierarchy of embedded episodes", each of which entail "initiating events, goals, actions, consequences and accompanying states".⁸¹ The authors suggest that the jurors will construct multiple stories or a single story with revisions, and ultimately decide on the "best" story.⁸² The basic assumption is that stories affect legal decision-making, and not conversely; the triers supposedly do not fit stories to legal conclusions or other normative orders in hindsight.⁸³ Richard Lempert has since applied the cognitive story model to expert opinion generally.⁸⁴

The law of evidence attempts to regulate information flow according to the judge's evaluation of the potential benefits and detriments to the trier's fact-finding. Judges screen scientific opinion under such terms as logical relevancy, necessity, probative value, validity,

⁸⁰ N. Pennington & R. Hastie, *"The Story Model..."*, *supra*, note 78 at 192/3. See also M. Cortazzi, *supra*, note 77 at 67 (discusses the basic assumptions of a psychological model for oral narratives).

⁸¹ N. Pennington and R. Hastie, *"Explanation-Based..."*, *supra*, note 13, at 522, citing J. Mandler, *Stories, Scripts and Scenes: Aspects of Schema Theory* (New Jersey: Erlbaum, 1984). See also M. Cortazzi, *supra*, note 77 at 75.

⁸² N. Pennington & R. Hastie, *"The Story Model..."*, *supra*, note 78 at 201. The authors also referred to Trabasso's work, suggesting that the "importance ratings of story statements are predicted by the statement's causal and logical relations to other statements in the text"; *ibid.* at 524, citing T. Trabasso & P. van den Broek, *"Causal Thinking and the Representation of Narrative Events"* (1985) 24 *Journal of Memory and Language* 612; T. Trabasso & L. Sperry, *"Causal Relatedness and Importance of Story Events"* (1985) 24 *Journal of Memory and Language* 595.

⁸³ *Ibid.* at 210.

⁸⁴ R. Lempert, *"Experts, Stories, and Information"* (1993) 87 *Nw. U.L. Rev.* 1169.

reliability, and so forth. This evaluative process occurs under sites of normativity, such as those which underlie the law of evidence, the *Charter*, and professional ethics. According to Pennington and Hastie, the jurors attempt to evaluate expert opinion and plausible stories by comparison with knowledge structures, such as stock stories and narrative typifications.⁸⁵ Bernard Jackson argues that narrative coherency requires consideration of both the pragmatics of telling a story and the semantics of a story. The descriptive and explanative force of a scientist's narrative are evaluated (or "measured") relative to the norms and everyday knowledge-structures of interpretive communities. This thesis explores the various ways to make sense of scientific opinion and the law of evidence.

D. Poethics and Interdisciplinary Stories

With the law's objective of a timely resolution of issues, and under the performative dynamics of the courtroom, the best we can do is to focus on the production and communication of scientific opinion, in light of the situated audience. The discursive practices of courtroom actors, especially judges and scientists, define "probative value" and "prejudice" to the trier's fact-finding.⁸⁶ Post-modernists and post-structuralists may urge a closer look at the discursive practices of scientists in their communications towards the "folds of knowledge".⁸⁷ The rhetoric

⁸⁵ N. Pennington & R. Hastie, *"Explanation-Based Decision Making..."*, *supra*, note 13 at 522.

⁸⁶ Michel Foucault identified discursive properties as characteristic of discourse and not reducible to the rules of grammar and logic; P. Rabinow (Ed.), *The Foucault Reader* (Pantheon Books: New York, 1984) at 117.

⁸⁷ "Discursive practice" is defined broadly as the active use of language and forms over a given period. See also L. Philips, *"Discursive Deficits: A Feminist Perspective on the Power of Technical Knowledge in Fiscal Law and Policy"* (1996) 11:1 Cdn. J. of Law & Society 141 at 149 ("the discursive power of scientific argument can be of great value to feminists and others who seek to delegitimize those conventional wisdoms that contribute to oppression"). The

within an adversarial system, and the binary nature of rule-based logic, however, sometimes obscure the discursive properties of discourse. Scholars continue to debate whether a story is reducible to a set of conventions (or genres), or rather "an order of signification, a semiosis, a discursive form generated in response to a particular order of situation".⁸⁸ Although the story can be considered as a discursive form, it may also involve some interaction with story conventions, such as normative orders about a beginning, middle and ending, and all the details inbetween, such as themes, character(s), settings, sequences of events, and so forth. To what extent should we focus on the interpretation of scientific opinion and interdisciplinary stories in light of the situated audience? Some structures of signification and sites of normativity are assumed recognizable from discursive practices involving scientific opinion. Under the law, the judge may screen scientific opinion according to shared signification and norms.

For the purposes of this thesis, the authorial function refers to the production and communication of text, in light of the situated audience. The relationship of the author's telling the story and the story itself link the cultures and disciplines of the author and audiences. The authorial function recognizes the author's role as both narrator and character, emphasizing an ethics over the production and communication of knowledge-claims. In the eyes of the audience, the author (or story narrator) is characterized in part by the performative acts of story narration. The authorial function thus identifies the narrator's presence as an "object of criticism", perhaps leading to an ongoing dialectic between the author/narrator and audiences. In contrast, Foucault's "'author function' separates itself from the text in order to impose coherence on it

ideologies and politics of technical (and scientific) discourses may be considered democratic or hegemonic; L. Philips, *ibid.* See also C. Smart, *Feminism, supra*, note 63.

⁸⁸ See D. Jonnes, *The Matrix of Narrative: Family System and the Semiotics of Story* (Mouton de Gruyter, 1990) at 261. The question remains over whether or not norms may be fully severable from the discursive practices of interpretive communities.

and bring to a halt 'the proliferation of discourse'".⁸⁹ He argues that it does not matter who is the author; a text is to be interpreted within the culture of its reader.⁹⁰

An approach involving the "authorial function", in contrast to Foucault's preference, would focus on the triers as audience and the scientist as author, who constitutes knowledge-claims through not only the semantics of a story, but also the pragmatics (including the performative acts) of telling a story. The scientist's "measured" language and other forms may involve performative acts, such as demonstrative evidence, which contribute to the trier's interpretation. Within the courtroom, each scientist has a responsibility to consider the situated audiences' potential for mis-interpretation and mis-comprehension. Under the law of evidence, each judge has a responsibility over the gatekeeping of information led into legal processes, including the communication of scientific facts and legal norms. Lawyers also have responsibilities in their examinations, cross-examinations, and other communications that may influence scientific opinion or the audience's interpretation.

Professional ethics involve principles of conduct which rest on a set of norms and values that typically derive from a self-governing profession, often under the strains of society at large.⁹¹ These principles may be identified from discursive practices, conventions, or the rules

⁸⁹ H. McDonald, *supra*, note 2 at 17. See M. Foucault, "What is an Author?", *supra*, note 86 at 101-120.

⁹⁰ M. Foucault, *ibid.*

⁹¹ By illustration, each professional engineer faces authorial responsibility for her or his opinions in the courtroom, according to a set of ethics, for example, the *Engineers and Geophysicists Act* R.S.B.C. 1979, c.109; see chapter three subsection, "Authorial Responsibility and Professional Ethics". Over the last decade, the male-dominated university engineering programs in Canada have faced strong accusations of sexism. Since l'Ecole Polytechnique massacre of December 6, 1989, when feminist-hater Marc Lépine shot and killed 14 women (13 female engineering students), the public media has focused more on the problems of sexism. The current disciplinary sub-cultures and ethics for engineers remains male-dominated, although recent increases in female engineering students may soon generate substantive changes.

under a code of ethics. The ethics typically evolve with stories of professional (mis)conduct, with adjustments for the evolving values of law and society. For example, the courtroom actors have ethical responsibilities over the form and content of scientific opinion, and the "telling" of interdisciplinary stories. Disciplinary rules, conventions, and codes of ethics to some extent restrain the courtroom actors and their application of sites of normativity.

The functions and responsibilities of authors arise from within and external to their respective cultures and disciplines. Under an ethical approach, these responsibilities would link the pragmatics, syntactics and semantics of a text. Within an interpretive community, the author is assumed to have some (but not complete) control over the production and communication of knowledge-claims, in light of some general understanding of the situated audience. For practical and procedural reasons, the jurors are assumed to have some basic level of cognitive competence. The problem often arises where the authors (or actors) and the audiences originate from radically different cultures or disciplines. Although the focus on authorial responsibility may avoid some indeterminacy of meaning to the audience, the potential exclusion of outsiders remains problematic.

At a pragmatic level, various sites of normativity motivate interdisciplinary communications and admissibility criteria for novel scientific opinion. The language and other forms may reflect the merging or diverging of one's outer form and inner "self", one's experiences in reality and "inner truths". The access to sites of normativity also seems to influence each actor's self-awareness of communication forms. The potential hegemony of one culture or discipline over others, however, may arise from overreliance on specific sites of normativity. The actors within judicial processes should avoid compartmentalization of the internal and external, or the separation of forms from substance. Rather, the courtroom actors ought to focus on story narratives to maintain an awareness of cultural diversity, and a sense of

humanity.

In *Poethics*, Richard Weisberg combines poetics and ethics in what is essentially a "humanist reclamation" over law and the administration of justice.⁹² Poethics focus on style and substance within narratives and stories; it is the "revival of jurisprudence through literary sources and techniques".⁹³ Weisberg supports "the twinned approach of literary jurisprudence: a poetic method for law, and a poethics of reading".⁹⁴ He resists the mechanical production and subsequent conceptual reduction of legal text, instead focusing on the views of the original author (rather than those of subsequent translators).⁹⁵ Weisberg focuses on the justice of a reading which "stands or falls on its alertness to the musicality, the nuanced tonality, of the original communication".⁹⁶ Under a poethical approach, practitioners and academics may scrutinize texts for unity of form and substance, assuming some recognizable structures of signification.

Weisberg emphasizes the authorial function (though he does not expressly use the term) over a text, and how the author may consider the interests of the audience. But Weisberg does so perhaps at the expense of the audience's cultural diversity. He focuses on literary analyses of classical works, some of which may be criticized as patriarchal.⁹⁷ Weisberg's reference to

⁹² R. Weisberg, *Poethics*, *supra*, note 4 at 1-47.

⁹³ *Ibid.* (cover).

⁹⁴ *Ibid.*

⁹⁵ *Ibid.* at 245.

⁹⁶ *Ibid.*

⁹⁷ For example, Professor Weisberg's 1994 seminar course in law and literature (during his sabbatical at the University of British Columbia, Vancouver) focused on the following literary works: Charles Dickens' *Bleakhouse*; William Shakespeare's *Merchants of Venice*; Fyodor Dostoevsky's *Brothers Karamazov*; Toni Morrison's *The Bluest Eye*; Herman Melville's *Billy*

classical works - the very inclusion of such works within his text, *Poethics* - constitutes a larger arrangement which warrants a caveat over the relationships of form and substance - one of his own central themes. Is Weisberg's quest for literary sense by revisiting classical works in effect a promotion of patriarchal forms? I believe not. The literary works are rather cautiously used to demonstrate alternative ways of how to make sense of the law (and in some cases, I argue, science).

The principles of *Poethics*, with the above-noted hesitations, may be applied as an initial approach to interdisciplinary discourses. The focus is on authorial responsibility, in light of the situated audience, and vice versa, the audience's responsibility in light of the author's situatedness. The thesis thus invokes "poethics" in ways different than Richard Weisberg's initial application to legal interpretations and judgments. A poethics of interdisciplinary stories may be based on the responsibilities of authors and audiences over legal norms and scientific facts. In particular, the ethics of authors and audiences guide the use of "poetics" under the rhetoric of law and science.⁹⁸ Poethics may apply to the pragmatics of interdisciplinary discourses, such as the narratives of scientific opinion, as well as the interpretations by judges and jurors. Thus, in the right hands, a poethical approach can challenge the instrumental, sometimes unethical use of language and other forms as a means of persuasion.

A poethics of interdisciplinary stories may lead to some tentative stability, in contrast to the continuous evasiveness and indeterminacy of radical postmodernism. Poethics spotlight

Budd, Sailor.

⁹⁸ By "poetics", I point to active, expressive, humanizing language and other forms. The basic support for poethics does not necessarily close the door on post-modern and post-structuralist strategies, particularly the focus on interpretive communities. These latter approaches may reveal an audience's intuitive sense or "non-identity", beyond any conventions of shared significance from interdisciplinary communications.

accessibility to the author's production and communication of a text, while considering the author's interaction with the audience, and their potential interpretations. The audience also has a responsibility over the interpretation of the author's communications in light of the stories about the author's telling a story. The poethical approach revitalizes our consideration of the language and other forms of courtroom actors. Although a poethics of interdisciplinary stories assumes a basic recognition of the actors' movements between sites of normativity, it is rather difficult, however, to avoid some level of incommensurability within an always imperfect, hopefully plural society. The assumption of recognizable structures of signification also assumes relatively stable relationships between the author's acts of communication and interpretive communities. Poethics thus support a critical inquiry into the sometimes hegemonic norms of law and society. A poethical approach also promotes one of the primary objectives of the "law and literature" movement, namely, to humanize the legal system through the field of literature. A poethical approach specifically transfers the focus from the purported objectivity of scientific opinion as text, to the acts of telling and listening to interdisciplinary stories.

The utterances and narrative acts by experts, lawyers, and judges in the courtroom may influence each judge and juror's story construction and thus decision-making. A poethics of interdisciplinary stories provides an approach to rethink courtroom communications, and the admissibility criteria for novel scientific opinion. Evidence scholars may critically challenge law and legal assumptions by drawing parallels from external sources, for example, the fields of literature, literary theory, and linguistics. An interdisciplinary story conceptually and practically relates scientific facts and legal norms within a common media across the various cultures and disciplines of society.

CHAPTER THREE: (DE)CONSTRUCTING INTERDISCIPLINARY STORIES

A. Experts, Stories, and Law of Evidence¹

Under the law of evidence, the judge screens the utterances and narrative acts by experts, lawyers, and other courtroom actors. These communications may contribute to interdisciplinary stories that fit the general expectations, stock stories and "narrative typifications" of the judge and jury.² The actors' communications are contingent on each situated audience. A sense of meaning from these communications may transcend cultural and disciplinary boundaries between actors and audiences, assuming the existence of some core structures of signification. Within interpretive communities, the actors (authors/narrators) produce story narratives to include, exclude, and arrange text (discourses) for consideration by audiences.

At trial, "experts" describe their education and experiences within specific fields of expertise. The judges will decide whether to formally qualify or disqualify each individual as an expert. The qualification itself is a "formal speech act" where the legal institution lends

¹ This title is partly derived from R. Lempert, *"Experts, Stories, and Information"* (1993) 87 Nw. U.L. Rev. 1169.

² For example, see N. Pennington & R. Hastie, *"Explanation-Based Decision Making: Effects of Memory Structure on Judgment"* (1988) 14 Journal of Experimental Psychology: Learning, Memory and Cognition 521 at 531 (psychiatrist uses story structure for psycho-social explanation). For a legal practitioner's view, see J.W. McElhaney, *"Showtime for the Jury; Use Expert Witnesses to Tell a Story - Not to Try to Win the Case for You"* (1994) 80 A.B.A. J. 74. For a forensic scientist's view, see R. Cornelis, *"Truth has Many Facets: The Neutron Activation Analysis Story"* (1980) 20 J. of Forensic Science Society 93. See also J. Batt, *"Law, Science, and Narrative: Reflections on Brain Science, Electronic Media, Story, and Law Learning"* (1990) 40 J. of Legal Education 19. See B. Jackson, *Making Sense in Law: Linguistic, Psychological and Semiotic Perspectives* (Liverpool: Deborah Charles Publ., 1995) (narrative typifications are based on our social knowledge of meaningful, typical actions which "thematically" help us make sense of data) at 513.

authority to expert opinion over a range limited to the field of expertise.³ The expert may then describe and explain relevant factual issues, primarily by way of narrative acts and utterances. From these communications, other testimony and the physical evidence, the trier of fact may cohere an interdisciplinary story.⁴

Under the theatrical aura of the courtroom, and the apparent authority of an expert, the language and other forms of expert opinion can have persuasive significance over the trier's fact-finding. As Richard Weisberg suggests with style, "effective arguments are as sensuous as they are logical, that audiences respond to the music and the confluence of words perhaps more than to their merely rational sense."⁵ On the other hand, the sensuality of words and the logic of science may blend covertly and dangerously with legal norms.⁶ The communications by experts may easily mislead, distort or otherwise prejudice the trier's fact-finding. Experts' discourses sometimes conceal norms and individual interests under an aura of objectivity, rhetoric, or most dangerously, a blend of objectivity and rhetoric.⁷ The law, however, does screen expert opinion

³ See B. Jackson, *Making Sense in Law*, *ibid.* at 418.

⁴ See N. Pennington & R. Hastie, *supra*, note 2 at 521 & 527. An interdisciplinary story may be simultaneously constructed, affirmed or falsified, and revised by the trier of fact in an attempt to cohere an overall picture. The stories of fact are compared to the law (or vice versa) according to a civil or criminal standard of proof - a balance of probabilities, or beyond a reasonable doubt, respectively.

⁵ R. Weisberg, *Poethics: and Other Strategies of Law and Literature* (Columbia U. Press, 1994) at 39.

⁶ The communications between scientists and non-scientists also seemingly encourages the use of simple, more descriptive and sensory-based language, such as used by journalists.

⁷ James White contends that law is rhetoric - the "art of establishing the probable by arguing from our sense of the probable"; *The Legal Imagination* (Boston: Little, Brown, 1973) at 31. Within the courtroom, the actors' story narratives are likely to be rhetorical. The actors often seek coherency by moving beyond "probable", logical, or analytical conceptions, to consider more holistic structures, such as story narratives. At any specific moment, discursive practices may generate blended "families" of logical forms and aesthetics, coherent according to

and other interdisciplinary discourses for relevancy, "helpfulness", or even "necessity", for a fair trial and the administration of justice. The juror's tend to be more influenced by experts who are independent and familiar with the facts of the case, and who communicate in plain language.⁸ Within an adversarial system, expert's communications should always be accessible.

Various criticisms of oversimplification have been pointed at interdisciplinary discourses.⁹ The use of simplified forms may lead to a loss of complexity and a reduction of meaning which can be integral to the resolution of highly technical issues.¹⁰ The development of a "pidgin" - a reduction to a common language for easy translation - between law and other disciplines can lead to incommensurability, perhaps prejudicing disciplinary perspectives.¹¹ The

participating actors. But why should we limit the definition of "coherency" to the language of logic and probabilities?

⁸ A. Champagne, D. Shuman, & E. Whitaker, *"An Empirical Examination of the Use of Expert Witnesses in American Courts"* (1991) 31 *Jurimetrics* 375 at 379.

⁹ A. Rip, *"Expert Advice and Pragmatic Rationality"* in N. Stehr & R. Ericson (Eds.), *The Culture and Power of Knowledge: Inquiries into Contemporary Societies* (de Gruyter, 1992), 363 at 365. Some scholars distinguish the concept of "story" from "discourse" on the basis that the former is not expression but rather content - a temporal and causal sequence of events with characters and objects in a setting; see M. Cortazzi, *Narrative Analysis* (London: The Falmer Press, 1993) at 88. This distinction is too narrow and misleading; the form and function, style and substance, the pragmatics and semantics of stories are always intertwined. The relationships between the surface and deep structures (i.e. levels of manifestation and signification, respectively) of stories are rather mysterious and complex. Story structures guide the language and other forms of discourse beyond temporal and causal references, to forms of coherency that seem acceptable between interpretive communities. Within the courtroom, the use of stories to exchange ideas between disciplines and cultures would support a more participatory, dialogical approach.

¹⁰ A. Rip, *ibid.* See also D. Klinck, *"'Criticising the Judges': Some Preliminary Reflections on Style"* (1986) 31 *McGill L. J.* 655 at 666 (intellectualization of language may involve a desire to impress the audience with psychological complexity); W. Conklin, *"Human Rights, Language and Law: A Survey of Semiotics and Phenomenology"* (1995) 27 *Ottawa L. Rev.* 129 (discusses the problems of a "scientized language" of human rights).

¹¹ See S. Fuller, *"Knowledge as Product and Property"* in N. Stehr & R. Ericson (Eds.), *The Culture and Power of Knowledge* *supra*, note 9, 157. Fuller investigated universal

incommensurability of localized discourses, may result in a loss of meaning between cultures and disciplines. Richard Weisberg argues that a literary text should not be reduced to its conceptual denominator because it would impoverish the text and reflect more on the translator than original author.¹² Where authors reduce the text to a "pidgin", the norms and politics of interpretive communities (of the author and audience) may dominantly shape translational processes, perhaps to realize Weisberg's concerns. The framework of law, however, imposes a practical requirement on the formation of mutually recognizable pidgins between disciplines. The assumption is that a more participatory process towards a resolution of legal disputes is preferred over pluralism taken to its extreme - that is, multiple resolutions to factual-legal disputes. Some simplification of experts' communications seems preferable - a value judgment, indeed - in exchange for the participation of triers of fact and other courtroom participants. The formation of a pidgin always rests on sites of normativity which support communications.

The focus on rationality, such as logic and causation, can displace more holistic communication forms, such as story narratives. Within the legal institution, an overemphasis of rationality tends to privilege expert opinion at the expense of inquiry into aesthetics, norms, and politics. The common belief is that logical and other rational forms of knowledge-claims are generally less misleading or less prejudicial, especially those actually demonstrated at trial, or

translatability and exchange rates between fields of knowledge, including the use of a "pidgin":

"For example, when a psychologist and neuroscientist pool their resources the result is not a reduction of their two jargons to a common epistemic currency, but rather a pidgin that is forged purely for local purposes, without any concern for whether both sides placed the same, or even commensurable, value on the transaction." (at 161).

See also R. Sherwin, *"Lawyering Theory: An Overview What We Talk About When We Talk About Law"* (1992) N.Y.L.S. L. Rev. 9, at fn 12 (social and metaphorical construction of language suggests the existence of local "discrete and incommensurable forms of knowledge and discourse").

¹² R. Weisberg, *Poethics*, *supra*, note 5 at 245.

at least, practically demonstrable by most persons. For trial demonstrations, the triers of fact may engage in the demonstration by relying upon their own senses. The performances of storytellers, likewise, encourage audiences to engage not only their physical senses but also their emotional senses. The pragmatics of courtroom communications thus involve demonstrations or performances by experts, lawyers, and other actors who attempt to communicate a sense of meaning beyond what was actually said. As an audience, the triers, however, usually do not physically participate in the experts' demonstrations and other performances. Rather, the triers interpret the same from a distance, in light of the expert's demeanour and apparent authority.

Judicial processes may involve the use of modern and postmodern interpretive approaches to interdisciplinary stories.¹³ For example, the "deconstruction" of expert opinion and its authority may continuously uncover and unanchor points of closure, where the views of outsiders have been excluded. By "deconstruction", the text of expert opinion has no essence or origins; its differences may speak of many different meanings. Since expert opinion is socially and culturally constructed, and thus contingent, it may also be deconstructed similarly, within interpretive communities.¹⁴ In contrast, some interpretive communities share a similar sense of meaning from a specific text. This basic core of signification may also carry a "common stream of humanity" - a sense of humanness in the pursuit of justice, though not necessarily a

¹³ See R. Sherwin, *Law Frames: Historical Truth and Narrative Necessity in a Criminal Case* (1994) 47 Stanford L. Rev. 39 at 39 (postmodern storytellers may narrate many different, yet convincing views to reality). After considering the interplay of a traditional linear story and discursive postmodern story, Sherwin concluded that the courtroom audience tends to favour storylines that advance meaningful resolution; *ibid.* He recommended that practitioners and scholars use affirmative postmodern storytelling with a "shared cultural storyline - a popular myth, a stock metaphor, a familiar character type - that allows one to create meaning out of the mass of information presented"; *ibid.*

¹⁴ See P. Rosenau, *Post-Modernism and the Social Sciences: Insights, Inroads, and Intrusions* (Princeton, New Jersey: Princeton University Press, 1992) at 137; T.S. Kuhn, *The Structure of Scientific Revolutions* (2nd ed.) (University of Chicago Press, 1970).

set of universal values. The communications between the cultures and disciplines of society always seem to generate some tension between modernists and postmodernists.¹⁵ For example, the discursive practices of the interdisciplinary courtroom involve struggles between actors who support specific sites of normativity.

This thesis briefly reviews some modern/structural and postmodern/poststructural approaches, prior to applying a poethical method to interdisciplinary stories and law.¹⁶ The emphasis on poethics results from problems with the more radical postmodern/poststructural approaches. Under the latter, the wholeness and stability of a story tends to become disrupted. Postmodernists attempt to fragment stories, and explore alternative stories that seem at least

¹⁵ See S. Feldman, *"Diagnosing Power: Postmodernism in Legal Scholarship and Judicial Practice (With an Emphasis on the Teague Rule Against New Rules in Habeas Corpus Cases)"* (1994) 88 N.W. U. L. Rev. 1046 at 1048 (criticism of the essentialist and foundationalist views of modernists). Postmodern tendencies arise and impede claims to deduction and empirical verification where cultures and disciplines generate from within responses, peculiar language, and revised claims to knowledge. See generally, P. Schanck, *"Understanding Postmodern Thought and Its Implications for Statutory Interpretation"* (1992) 65 S. Cal. L. Rev. 2505 at 2508/9. See also S. Feldman, *ibid.* at 1083 ("within modernism, we find the seeds of the postmodern, and within postmodernism, we find vestiges of the modern"); J. Balkin, *"What is a Postmodern Constitutionalism"* (1992) 90 Mich. L. Rev. 1966. A distinction has been made between "hard-coreless postmodernism" ("form forever subsumes content and the possibility of meaning until there is no longer a 'there out there'"), and "soft-core postmodernism" (generally uncovers how interpretivism has influenced the legal realm); P. Meyer, *"Introduction: Will You Please Be Quiet, Please? Lawyers Listening to the Call of Stories"* 18 Vermont L. Rev. 566 at 575. To complete the circle (of irony?), I suggest that the conceptual "hierarchy" of postmodernism, as described by Meyer, *supra*, is itself a "vestige" of the modern, and the foundation for at least half of a postmodern paradox, as suggested by Feldman, *supra*, and so on.

¹⁶ R. Weisberg, *Poethics*, *supra*, note 5. See D. Nelken, *"The Truth About Law's Truth"*, in European Yearbook in the Sociology of Law (Giuffrè, 1993) 87 at 114 (the three responses that avoid a meta-theory relating law and science: reconstructive approaches, post-modern movements, and "dialogic" responses). This thesis attempts to combine strands primarily under the latter two approaches, while keeping in mind that no ideal, overarching solution is likely to be found. Any dialogue about the collectivized principles of normative orders and knowledge-claims between various actors from the disciplines and cultures of society would seem to be political.

momentarily stable. A postmodernist in the courtroom may inquire into the culture-specificity of expert opinion in context, according to whatever sites of normativity.

Under a poethical approach, less radical postmodern strategies may be beneficial to reveal different senses of meaning within and beyond those tied to the prevailing norms of communications. Postmodern methods can also challenge epistemic shifts and assumptions within various disciplines and cultures. The application of law/facts to facts/law relates to how actors through the pragmatics of discourse sometimes shift between sites of normativity, and thus knowledge-claims.¹⁷ However, as Rosenau states, "the problem with post-modern social science is that you can say anything you want, but so can everyone else"; each interpretation is considered "as good as another".¹⁸

According to Richard Sherwin, stories may involve "sceptical" or "affirmative" postmodernism.¹⁹ "Sceptical postmodernism" is culturally contingent, and tends to be subversive in its continuous play on images.²⁰ Whereas, "affirmative postmodernism" at least

¹⁷ See Pennington & Hastie, *"Explanation-Based Decision Making..."* *supra*, note 2 at 522. See also B. Jackson, *Law, Fact and Narrative Coherence* (Merseyside: Deborah Charles Publ., 1988) at 190 (application of the narrative coherence of facts to law reverses traditional oppositional hierarchy where legal rules are applied to facts). The comparison of factual and legal stories seems to involve various complex linear and nonlinear, temporal and spatial dimensions. The substantive law consists of underlying narratives or story frameworks for human motives, actions and other criteria of legal culpability, all of which are channelled by evidentiary gateways and other adjectival law.

¹⁸ P. Rosenau, *supra*, note 14 at 137. See D. Nelken, *"The Truth About Law's Truth"*, *supra*, note 16 at 88 (post-modern approaches involve such problems as reflexivity and self-reference).

¹⁹ R. Sherwin, *"Law Frames..."*, *supra*, note 13 at 68. See also P. Rosenau, *supra*, note 14 at 29-31 (sceptical and affirmative postmodernists challenge "authorial function"). See the distinction between "hard-coreless" and "soft-core" postmodernism, *supra*, note 15. The more extreme strains of postmodernism are often criticized for leading to radical scepticism or moral relativism.

²⁰ R. Sherwin, *ibid.* at 69-72.

closes towards a coherent meaning or cultural storyline.²¹ Affirmative postmodernism, however, does not recognize truth or justice as a narrative or story based on universal values.²² Affirmative postmodernists may reduce the authority of the author by asserting that the "authorial intention" does not include the whole meaning of a narrative.²³ In some ways (but not necessarily so), one may draw upon affirmative postmodernism to reveal the modernist forms of law and science.

Bernard Jackson, using Greimasian semiotics and social psychology, contended that we should focus on persuasion of the conditions for a truth-claim, and not the truth of the story's content.²⁴ Jackson does not refer to external referents, but rather relies upon the narrative coherency of text.²⁵ Jackson emphasizes the "integrity" of the pragmatics (rather than the semantics) of discourse at trial.²⁶ By reference to the term, "integrity", Jackson seems interested in each individual actor, their self-reflections, as well as "intersubjective" play with other actors.²⁷ Jackson's emphasis on the "narrativisation of pragmatics" suggests an escape from a rationalist reliance on causal links from the semantics of stories. In a similar vein, this thesis attempts to avoid a singular, necessary (and thus objective) reference to causation within

²¹ *Ibid.* at 72-5.

²² *Ibid.* at 72.

²³ P. Rosenau, *supra*, note 14 at 31. See M. Foucault, "What is an Author?" in P. Rabinow (Ed.), *The Foucault Reader* (New York: Pantheon, 1980) at 120 ("[w]hat difference does it make who is speaking?"). See also P. Jaszi, "On the Author Effect: Contemporary Copyright and Collective Creativity" (1992) 10 Cardozo Arts & Ent. L. J. 293 at 293-300 (sharp criticism on the conception of authorship in copyright law).

²⁴ *Law, Fact, and Narrative Coherence*, *supra*, note 17.

²⁵ *Ibid.*

²⁶ See B. Jackson, *ibid.* at 173.

²⁷ *Ibid.*

the external world, in contrast to some shared communication systems and beliefs. The readers should keep in mind Jackson's latter comments, especially while considering the cognitive aspects of stories which primarily focus on the contents of stories according to the beliefs of storylisteners.

The legal institution channels scientific opinion relevant to issues of substantive law by way of evidence rules and principles, procedural law, and processes of proof. The law may extend itself under the specious assumption that scientists are "rational subjects" who communicate neutral, objective knowledge for the comprehension of triers of fact. Rather, interdisciplinary discourses may strongly criticize the "rationalist ideology" of science that extends law's authority and power. The concept of "interdisciplinary story" emphasizes how scientific opinion remains in the "production" phase as part of the discursive practices of the courtroom, and how the narrativisation of pragmatics influences the trier's interpretations. The judge as gatekeeper applies the law of evidence to some extent regulate the participation of scientists and other actors and how they gather meaning from scientific opinion.

The communications by scientists may identify movement between various abstractions or generalizations, and the specific facts of the case. The courtroom audience may venture between the stories told, and the stories about the various narrators telling stories. The trier of fact may shift focus from scientific opinion as an object of narration, to the scientist's credibility as a subjective narrator. From the pragmatics and semantics of interdisciplinary communications about scientific opinion, the triers gather a sense of meaning that cannot be fully translated to others.²⁸ Some parallels, though, may be roughly drawn from making sense in literary works to the practices of the courtroom. The language and other forms within interdisciplinary stories

²⁸ See R. Sherwin, *supra*, note 13 at 73.

may identify the authors' movements between sites of normativity. The judicial consideration of interdisciplinary stories also informs the admissibility issues for novel scientific opinion.

1. Recognizing Interdisciplinary Stories

The triers of fact may recognize in various ways interdisciplinary stories about scientific opinion. As one academic puts it, empowerment from knowledge-claims arises "not merely when one possesses a particular container, but rather that one can open the container and alter its contents".²⁹ An interdisciplinary story provides a container which is easily accessible to courtroom actors most often for the better, but sometimes for the worse. Stories support sensitive and intelligible access to the assumptions and values of interdisciplinary communications. On the other hand, a fictitious story about scientific opinion can easily prejudice fact-finding. The potential influences of interdisciplinary stories on courtroom actors has led some scholars to a cognitive inquiry. Pennington and Hastie's story model for juror decision-making, and Richard Lempert's application of the same model to expert opinion, set forth an initial cognitive basis for the recognition of an interdisciplinary story. The actors' awareness of other disciplines and cultures arises from their interpretations of relationships between the pragmatics, syntactics, and semantics. Within the courtroom, the actors' may compare the utterances, narrative acts, and stories, to those from personal experiences, or those typical to interpretive communities.³⁰ Within the constraints of a legal system, an evaluative model for the triers' decision-making leads to inquiry into the literary/performative and cognitive

²⁹ S. Fuller, *supra*, note 11 at 161.

³⁰ For example, the stock stories and "narrative typifications" acceptable to courtroom actors can arise not only from their own direct experiences and knowledge, but also from law, literature, popular culture, and so on.

dimensions of interdisciplinary communications.³¹

Cognitive studies on story narratives suggest that each trier of fact experiences and develops various stock stories, schema, and scripts for simultaneous organization of information, comprehension, and subsequent memory recall.³² The concepts describing cognition, for example, coherency, intelligibility, plausibility, and consistency, require unpacking in context, and with contingencies. Some tension, however, can arise between the conventional definitions (whether formal or informal) of story concepts, and those from discursive practices. A story may be formally and conceptually defined by literary scholars, or by those stories we have informally heard from our parents and grandparents, or through our experiences in courtroom practices, and so on. This thesis undertakes a limited inquiry into story narratives by exploring a few examples from such fields as social psychology, semiotics, linguistics, literature, and literary theory.

We may attempt to make sense of scientific opinion by considering interdisciplinary stories in the discursive practices of the courtroom, as well as literary works. The works of literature often involve more creative, visionary fiction, rather than the singular and necessary references

³¹ Cortazzi reviewed various models for teachers' narratives, finally accepting the evaluation model, as modified to take into account literary, psychological, and anthropological approaches; *supra*, note 9 at 49. Bernard Jackson avoids the use of a formal "model", relying instead on insights from Greimasian semiotics, social psychology, and the sociology of law; *supra*, note 17.

³² N. Pennington & R. Hastie, "*Explanation-Based Decision Making*", *supra*, note 2 at 521. See also N. Pennington & R. Hastie, "*The Story Model for Juror Decision Making*" in R. Hastie, S. Penrod & N. Pennington, *Inside the Juror* (1993) 192 at 192-6; M. Cortazzi, *supra*, note 9 at 18 (teaching curriculum according to story schema may make complex ideas more accessible and coherent) & 62 (describes five properties of schemata). See J. Black, "*Understanding and Remembering Stories*", in J. Anderson and S. Kosslyn (Eds.), *Tutorials in Learning and Memory* (San Francisco: W.H. Freeman, 1984) 235 at 243-6 (cognitive units for the organization of memory include concepts, propositions, and schemata, such as goal-based episodes, thematic plot units, and schema-plus-correction). Black also examined memory retrieval structures as reference and episode hierarchies, and plot unit networks; *ibid.* at 247-52.

to an external reality, such as the realist narratives of science. For example, the transitions between sites of normativity within a work of literature may show new ways to make sense of communications in the courtroom. Various approaches to the interpretation of interdisciplinary stories are illustrated within the movements of "law and language" and "law and literature".

In *Law, Fact, and Narrative Coherence*, Bernard Jackson referred to intelligibility as structured and measured in terms of narrative coherence, which in turn depends upon a universal level of signification, or structural level of discourse.³³ He discussed the intelligibility of the pragmatics and semantics of discourse, where "intelligibility" relates to a "construction of sense", and the overall appearance of narrative plausibility when compared to stock narratives (real or fictional).³⁴ Jackson distinguished between two forms of narrativisation: the semantics of stories told in court, and the pragmatics of those stories, the latter of which involves the process of persuading the courts that the stories are true.³⁵ He argued that the concept of "narrativisation of pragmatics" - where truth is a function of enunciation of discourse - may identify the dissolution of the opposition between fact and law.³⁶ Thus, Jackson's notion of "narrative coherency" would account for the "narrativisation of pragmatics".³⁷

The construction of a story, according to Pennington and Hastie, involves three fundamental knowledge types: case-specifics, knowledge of events similar in content to those at issue, and

³³ *Ibid.* at 1, 36 & 79.

³⁴ *Ibid.* at 11, 60 & 99.

³⁵ *Ibid.* at 92.

³⁶ *Ibid.* at 2 & 190.

³⁷ *Ibid.* at 35.

generic expectations of what makes a complete story.³⁸ The first category grounds expert opinion to the case at hand, whereas the second and third categories engage the audience's experiences and expectations about abstract knowledge-claims of similar events, and the communications of those knowledge-claims. The recognition of interdisciplinary stories in the courtroom seems to depend on how the expert's language and other forms suggest similarities with a generic story (or a composite of several generic stories) and its closure.

In a more formal sense, a basic story involves an exterior shell of a beginning state (i.e. prefiguration), middle action (i.e. figuration involving temporal and causal relations), and an ending (i.e. refiguration with inversion or closure).³⁹ Within the basic shell, the language and other forms establish poetic flow and ebb, to actively present themes and motifs to the audience. A story does not require fine artistry but merely some sense of coherency acceptable to the storylistener. A story need only be minimally coherent in form and substance, involving characters with motives and goals (or plans), settings, sequences of events, consequences, and themes or motifs. Pennington and Hastie describe stories and episodes in terms of causality:

"[I]nitiating events cause characters to have psychological *responses* and to form goals that motivate subsequent *actions* which cause certain *consequences* and accompanying *states*."⁴⁰

The same authors considered four plausible theories from their analysis of mock jurors' recall of evidence, finally focusing on a theory of story structure that requires "causal and

³⁸ N. Pennington & R. Hastie, *supra*, note 32 at 194. The authors seem to have disregarded the narrativisation of pragmatics.

³⁹ M. Cortazzi, *supra*, note 9 at 85.

⁴⁰ N. Pennington & R. Hastie, "*The Story Model...*", *supra*, note 32, at 197 (their emphases). An episode typically involves an exposition, complication, and resolution, involving events, goals, attempts, consequences, and reactions; M. Cortazzi, *supra*, note 9 at 71-5.

intentional relations among evidence".⁴¹ The authors downplayed the remaining three theories: (1) fragmented testimony connected by referential coherence; (2) evidence conceptualized to fit legal argument; (3) how more important evidence tends to characterize the parties.⁴² Pennington and Hastie's approach discounts what appears to be very intricate and complex processes in the pragmatics of storytelling - the relationship between the language and other forms of the story and its users - and especially, the performative aspects, which can lead to a "sense" of causality. In particular, interdisciplinary stories about novel scientific opinion seem to involve consideration of legal norms, and the characterization of parties. The scientist's communications can suggest real or fictional causation between characters, settings, events, episodes, and so on.⁴³ The trier may face the task of evaluating how the content of a story relates to the act of its narration.

a. Pennington and Hastie's Cognitive Story Model for Juror Decision-Making

"Story coherence mediates global perceptions of evidence strength and judgments of confidence."⁴⁴

Nancy Pennington and Reid Hastie's cognitive story model is based on empirical research

⁴¹ *Ibid.* at 205.

⁴² *Ibid.*

⁴³ See D. Jonnes, *The Matrix of Narrative: Family System and the Semiotics of Story* (Mouton de Gruyter, 1990) at 27 ("[w]hen we attempt to conceptualize the links between words and actions we enter a realm of 'paradox and mystery'").

⁴⁴ N. Pennington & R. Hastie, *supra*, note 2 at 531. See R. Sherwin, "Law Frames", *supra*, note 13 at 72 ("without coherent stories, judgment [by the public] becomes impossible"). See also B. Jackson, *Law, Fact and Narrative Coherence*, *supra*, note 17.

of memory recognition and decision-making by jurors.⁴⁵ Each juror is a storylistener who "spontaneously" forms and stores an explanation for evidence in his or her memory, with revisions as new information arrives.⁴⁶ The presentation of evidence in story order (i.e. what is causally and temporally connected), in contrast to witness order, tends to shift the juror's verdict choices towards those where a story structure is easier to construct.⁴⁷ The authors concluded that "the coherence of the explanatory structure and the strength of alternative stories" are important factors in weighing evidence.⁴⁸

According to Pennington and Hastie, story coherence generally requires completeness, consistency, and plausibility, where "consistency" is basically the extent to which the story does

⁴⁵ N. Pennington & R. Hastie, "*Explanation-Based Decision Making...*", *supra*, note 2. The authors experimentally investigated how story structures influence the juror's mental representations of evidence; "*The Story Model...*", *supra*, note 32 at 203. The experiments involved volunteers from a Massachusetts jury pool who were shown a videotaped reenactment of a much condensed version of an actual murder trial, *Commonwealth v. Johnson*; *ibid.* at 204; *Inside the Jury*, *supra*, note 32 at 46-7. Each juror was interviewed, and the resulting verbal protocol coded and analyzed; *ibid.* Pennington and Hastie also conducted a subsequent empirical study examining the recognition memory of mock jurors; *ibid.* at 209. The latter study had involved a "stimulus" text version of the *Johnson* murder trial, consisting of 119 selected sentences. The authors presented to volunteer college students the stimulus text - a combination of actual and false sentences from various verdict category choices; *ibid.* In a third study, Pennington and Hastie had varied the presentation order of 100 items and a judge's charge before verbally recording and playing back the same to college students; *ibid.* at 211.

⁴⁶ N. Pennington & R. Hastie, "*Explanation-Based...*", *supra*, note 2 at 521 & 527; "*The Story Model...*", *supra*, note 32 at 210.

⁴⁷ *Ibid.* at 521. In this experiment, Pennington and Hastie directly compared the effects of evidence which had been presented textually in story and witness orders to mock jurors; *ibid.* The authors acknowledged that the magnitude of the effects of presentation order were unknown because of inherent complexities in the real presentation of evidence at trial; "*The Story Model...*", *ibid.* at 212.

⁴⁸ "*Explanation-Based...*", *ibid.* at 530. See also R. Allen, "*Factual Ambiguity and a Theory of Evidence*" (1994) 88 Nw. U. L. Rev. 604 (a contemporary shift by evidence scholars in their focus on judicial decision-making from the truth or falsity of elements to "relative plausibility of opposing stories").

not contradict itself, and "plausibility" is considered relative to the storylistener's known or imagined story sequences.⁴⁹ The authors suggested that a juror's confidence in decision-making is related to the uniqueness and coherency of a story.⁵⁰ The decision-making becomes less certain where there exists more than one coherent story.⁵¹ Pennington and Hastie, however, did not discuss how scientific opinion may suggest a range of alternative, coherent stories, and perhaps influence the trier of fact's acceptability criteria, or preference for one coherent story over another.

Pennington and Hastie concluded that a juror's memory representation is based on the causal relations and temporal order of events which explain evidence.⁵² The weight attached to each piece of evidence depends on its location or role in the explanatory structure imposed by jurors.⁵³ They suggested that the importance of each story statement (i.e. testimony of witnesses, or presentation of physical evidence) of past events can be "predicted...by logical and

⁴⁹ N. Pennington & R. Hastie, *supra*, note 2 at 522. See also M. Cortazzi, *supra*, note 9 at 64 (stories where the characters have "more tightly-knit goal structures" are more coherent and comprehensible, and more likely to be recalled), citing Bower (1976). Pennington and Hastie previously asserted that story-based decisions fall within a confidence interval as based on four principles towards certainty: coverage, coherence, goodness-of-fit, and uniqueness; *"The Story Model"*, *supra*, note 32 at 193.

⁵⁰ N. Pennington & R. Hastie, *"Explanation-Based..."*, *supra*, note 2 at 528.

⁵¹ *Ibid.*

⁵² *Ibid.* at 523. Pennington and Hastie imply that the juror's recall of basic "surface structures" (i.e. the specific grammatical details of language) of textual evidence is lost over time. In contrast, this thesis assumes that "surface structures" and their pragmatics immediately contribute to "deep structures" (i.e. ideas underpinning linguistic meaning) for lasting effects on the trier's interpretation. See also B. Jackson, *Making Sense in Law*, *supra*, note 2 (discussing Noam Chomsky's "surface and deep structures") at 194-205. The effects of storytelling seem to involve a synergy of the pragmatics, syntactics, and semantics.

⁵³ *Ibid.* at 524 & 527.

causal relations to other statements".⁵⁴ The weight of evidence is influenced by whether it is within the story, whether it is within or causally connected to the main episode, and the degree of causal connectedness beyond the primary causal chain to the remainder of the story.⁵⁵ The causal chain consists of a subset of story events which identify the "highest level story episode".⁵⁶ Thus, Pennington and Hastie emphasize plausible explanations (or causal structures) and completeness as integral to story coherency.⁵⁷ The authors, however, suggest that the language of common themes or motifs that relate sequences of events have less significance to the memory recall of a story, in contrast to "logical and causal relations". They disregard the contributions from the immediate acts of communication in a specific context.

Pennington and Hastie focus on story structures which assist each juror's organization and interpretation of evidence,⁵⁸ but apparently give less attention to relationships between the semantics and pragmatics of story construction.⁵⁹ Literary-cognitive spaces within stories indicate differences between the audiences' interpretations and understandings from the purported

⁵⁴ *Ibid.* at 524, citing T. Trabasso & P. van Den Broek, *Causal Thinking and the Representation of Narrative Events*, (1985) 24 *Journal of Memory and Language* 612; T. Trabasso & L. Sperry, *Causal Relatedness and Importance of Story Events*, (1985) 24 *Journal of Memory and Language* 695.

⁵⁵ Pennington and Hastie, *ibid.* at 525-7, citing T. Trabasso & P. Van Den Broek, *ibid.*

⁵⁶ N. Pennington & R. Hastie, *ibid.*

⁵⁷ See N. Pennington & R. Hastie, *ibid.* at 522.

⁵⁸ *Ibid.* Pennington and Hastie in their experiments with textual records assumed that the presentation of evidence led to the interaction of three memory representations: the subject's verbatim representation of the surface structure of evidence, a semantic representation in the form of propositions, and a situation (or story) model for interpretation of evidence; *ibid.* at 524.

⁵⁹ See M. Cortazzi, *supra*, note 9 at 77 (structural-affect theory indicates that stories have a primary function to entertain according to three structures: surprise, suspense, and curiosity). Pennington and Hastie's conclusions are surprising (and perhaps hasty) in their discount of the pragmatics of discourses, such as the synergies of form and function, style and substance.

literal meaning or the "intentions" of the original author.⁶⁰ The storylistener may interpret a story by "estimating" the storyteller's actions and interests, and then constructing a story of the "telling of a story" (i.e. why the teller told the story in a particular way to that listener). The storylistener may tell stories about reading the story in light of the original storytelling (the pragmatics), and the story told (the semantics).

b. Lempert's Application of the Cognitive Story Model

Pennington and Hastie's work provides insight into juror decision-making, and initializes a more complex and intelligible approach to how expert opinion influences interdisciplinary stories, their acceptance, and verdict choice. Richard Lempert in a brief article for the symposium on expert testimony applied the results of Pennington and Hastie's cognitive story model to expert opinion.⁶¹ Lempert recognized four functions of expert testimony at trial:⁶² (1) to virtually tell the entire story, or the disputed part of the story; (2) to fill in gaps in stories; (3) to provide the jury with a story plot; and (4) to provide plots which assist in explaining the testimony of other witnesses. Lempert applied Pennington and Hastie's cognitive model under the assumption that a story explains cause-and-effect relationships, at least, according to the beliefs (and referential systems) of the jurors.

Richard Lempert also identified some concerns over an expert's ability to comprehend a range of alternative stories, and whether or not the trier of fact will accept an expert's

⁶⁰ The dichotomy of interpretation and understanding identifies potential unities and differences in making sense of a text. See generally, S. Feldman, "*Diagnosing Power...*", *supra*, note 15 at 1064.

⁶¹ R. Lempert, "*Experts, Stories, and Information*", *supra*, note 1.

⁶² *Ibid.* at 1175-78.

characterization of the facts as consistent with a specific plot.⁶³ Lempert concluded that the trier of fact will likely choose a story that best fits or explains expert testimony.⁶⁴ Where inconsistencies exist between stories, the credibility of experts and reliability of their expertise and factual foundations fall under closer scrutiny.⁶⁵ By the application of Pennington and Hastie's work, Lempert also discounted the pragmatics of interdisciplinary discourses - that is, *how* the expert uses language and other forms to fulfil the four functions, *supra*.

Although Lempert did not explicitly discuss an admissibility test, he implied acceptance of a higher threshold for expert opinion as an assurance for the jurors' deference to experts.⁶⁶ Lempert also provided insight into the admissibility of factual foundations for expert opinion:

"Inadmissible evidence that experts properly rely on in forming opinions should be kept from the jury only when and to the degree to which the evidence might encourage the jury to construct a story that could determine the verdict, even if the testimony of the expert offering the evidence is otherwise unpersuasive".⁶⁷

Lempert's conclusion alludes to story construction where the expert opinion relies on evidence otherwise inadmissible at trial. In absence of an evidentiary foundation, the expert's communications may influence the range of plausible stories, and prejudice fact-finding. For example, an expert should not suggest the likely identity of the perpetrator on the basis of character or disposition evidence.

Experts' discourses can influentially frame the trier of fact's interpretation of the testimony

⁶³ *Ibid.* at 1177-79.

⁶⁴ *Ibid.* at 1177.

⁶⁵ *Ibid.*

⁶⁶ *Ibid.* at 1178.

⁶⁷ *Ibid.* at 1180.

of other witnesses and the physical evidence.⁶⁸ Experts are story "range finders" who attempt to privilege their own descriptions and explanations of human behaviour at individual, social and cultural levels. Experts' discourses and knowledge-claims also mediate judicial power through the screening of evidence, and the interpretation of the law, providing alternative forms of coherency and consensus. Expert opinion under the pragmatics, syntactics, and semantics of a story text may generate literary-cognitive spaces, perhaps to preponderantly influence the audience's range of interdisciplinary stories.

c. Interdisciplinary Stories and Literary-Cognitive Spaces

Under the law of evidence, the judge filters interdisciplinary stories of fact which may fit substantive law. The law of evidence tends to involve many positivist forms which reflect the norms and values of those who make the law - the judges and legislators. On the other hand, stories of human experiences, particularly those of novel science, furnish a multiplicity of ways for rethinking and redefining what is relevant within judicial processes. The forms and structures of a story narrative are generally resilient and accessible, in contrast to the more formal concepts of knowledge-claims as often found in scientific treatises. Judicial assessments, however, always involve value-choices on whether or not expert opinion is "un-scientific", "un-anchored", irrelevant, and so forth.⁶⁹ These value choices or policy decisions seem to be occasioned in light of stock stories or narrative typifications.

The judge may screen out expert opinion that supports stories potentially prejudicial to fact-

⁶⁸ See B. Jackson, *Making Sense in Law*, *supra*, note 2 at 511 (frames allow us to make sense "by interpreting sensory data in terms of expected overall patterns of behaviour").

⁶⁹ See W. Twining, *"Anchored Narratives: A Comment"* (1995) 1 *European Journal of Crime* 106 at 111 (we typically seek anchors of "specific, concrete, particular evidence").

finding. Prejudices may also arise from literary-cognitive spaces within expert opinion. The judge and jurors are typically situated within different interpretive communities. Their interpretations of expert opinion may be logically incommensurable. The judge, however, actively participates during the trial by asking occasional questions, directing legal arguments, or limiting testimony. Whereas, the jurors merely listen to the actors' utterances and narrative acts. Within a larger field of rhetoric, the actors' performative tend to channel the jurors' interpretations more than the judge's interpretations, towards interdisciplinary stories, and away from literary-cognitive spaces. The judge, despite being a combined actor, director/producer, and audience, considers the experts' performative acts relative to potential prejudices to the jury. This involves a set of cognitive assumptions about the situated jurors. The judge may be influenced by the cognitive assumptions the expert made about the audience(s). Any such assumptions, however, rest on sites of normativity.

The boundaries between the descriptive, explanatory and normative dimensions of expert opinion sometimes vanish, conflating legal and factual issues of weight and admissibility. The concept of an interdisciplinary story recognizes that boundaries may be indistinguishable, and instead focuses on the actors' movements between sites of normativity. For example, a psychiatrist during a therapy session could describe a child victim's narrative as exaggerated or incredible, but rely in part on the same narrative for an opinion on the child's likelihood to have fabricated previous allegations of abuse.⁷⁰ The supporting facts (i.e. the child's utterances and narratives in therapy) may inextricably weave together the psychiatric opinion, including the norms and values of the psychiatrist.

⁷⁰ For examples of the admissibility of expert opinion on child abuse, see *R. v. D.R.*, [1996] 2 S.C.R. 291; *R. v. Marquard*, [1993] 4 S.C.R. 223; *R. v. B. (G.)*, [1990] 2 S.C.R. 30.

2. Interpretive Strategies and Forms of Coherency: From Analytics to Poethics

Within courtroom practices, the interpretation of experts' communications may involve a wide range of approaches from modernism and structuralism to postmodernism and poststructuralism. The focus may move from the text itself (i.e. written or oral opinion) to the author (i.e. the expert), who produces the text, and to the reader (i.e. the judge and jurors), who interprets the text. Postmodern strategies may move beyond the subject, the expert as narrator, to the object - the text of expert opinion (or the factual proposition at issue) - and the interpretive communities of triers of fact. Postmodern approaches may be used to explore discursive practices involving individual, social and cultural values. The existing legal order and its practical limits, however, keep the actor's focus on the rationality of knowledge-claims and legal norms, diverting focus away from communications and authorial responsibility. The interpretation of expert opinion, however, may involve more than an analysis of its elements, but also a poethics of interdisciplinary stories.

Interpretive strategies for expert opinion may fall within a broad theoretical spectrum, from scientific determinism, rationalism, practical reason, plain meaning, realism, to poethics, and affirmative and radical postmodernism, and so forth. The interpretation of interdisciplinary stories seems to partly rely on forms of coherency and literary-cognitive spaces - issues of access to experts' discourses. The communications by experts may blend prose and poetics in its broadest sense.⁷¹ This blended opinion may be interpreted beyond narrow, rationalist foundations, to consider more holistic forms of understanding, such as narratives and stories. The form and function, style and substance of experts' communications may combine so that the abstract logic of science plays on the human senses. The expert's communications can easily and

⁷¹ See R. Sherwin, "*Law Frames...*", *supra*, note 13 at 55 (considers meaning from the causal-linear, the rhetorical, and the poetic).

quickly disqualify outsiders' discourses and knowledge-claims.

The differences between emotive and referential language help distinguish relations between the signifier and signified, the sign and referential systems. For example, rationalist scholars tend to assume singular and necessary relationships between signs and external reality. But communications of causation (whether a matter of belief or reality) are always situated and constructed within interpretive communities. In particular, stories involve a play on the audience's beliefs, whether "narratively seduced, or made the captive of logic's necessity".⁷²

A postmodernist would suggest that concepts, such as "relevancy" and "probative value", cannot fully represent a specific object or some aspect of reality independent of the observer - the subject. The use of metaphors, spaces and enigmas may orchestrate stories which are contingent, and susceptible to deconstruction and reconstruction within various interpretive communities - the cultures and disciplines of society. For example, a postmodernist may locate spaces and enigmas, perhaps leading beyond normative curvatures (including the value-laden metaphors of space-time travel!) to the folds of knowledge. The spaces and enigmas within expert opinion may have meaning to triers of fact, in light of their expectations at that moment. The triers relate the cognitive and literary/performative dimensions by comparing plausible factual stories with generic stories from a wide range of experiences, such as education in a discipline, or the reading of literary fiction. A postmodernist tends to focus on the situated reader's interpretation of a text, but disregards or at least discounts authorial intentions and responsibilities over the production of text and its subsequent interpretation. Authorial responsibility stems from the fact that authors arise from interpretive communities and forms of coherency that may perhaps exclude the participation of others, such as the audiences.

⁷² R. Sherwin, *"The Narrative Construction of Legal Reality"* (1994) 18 Vermont L. Rev. 681 at 717.

Within cognitive dimensions, Pennington and Hastie's story model, and Lempert's application, primarily focus on the trier of fact's beliefs and expectations as to what constitutes a recognizable and rememberable story. These authors, however, do not discuss the production of text (such as their selections to form the "transcript" of the *Johnson* case), or the relationships between the pragmatics and semantics. Bernard Jackson approaches the semiotics of story narrative, focusing on forms of narrative coherency that are "already socially defined as stories" within an interpretive community.⁷³ Some tensions exist, however, between conventional definitions and generated, discursive forms of what is a "coherent" story.⁷⁴ The dominance of legal norms and scientific facts over what is coherent may arise at the moment as a discursive form (which never awaits its unpacking as such), or subsequently, perhaps to be textualized (though the interpretive community may have changed) as a convention or rule.

The triers construct interdisciplinary stories by locating (or generating) forms of coherency from the utterances and narrative acts by experts and other actors. The experts' discourses, however, may go beyond the descriptive (i.e. what occurred?) and explanatory (i.e. why it occurred?) to the normative and even prescriptive views (i.e. what should have occurred given the context, the norms, and current claims to knowledge?). Experts narrate from within an interpretive community which spawns preconceptions as to what ought to occur given a set of facts. The triers may draw parallels from their own everyday experiences on the one hand, to

⁷³ See B. Jackson, *Law, Fact, and Narrative Coherence*, *supra*, note 17 at 80.

⁷⁴ For example, Denis Jonnes in his text on narratives, stories, and family systems, argues: "[A] story is not reducible to a set of discursively-based conventions or a particular cluster of genres; rather, it is an order of signification, a semiosis, a discursive form generated in response to a particular order of situation". (D. Jonnes, *supra*, note 43 at 261) For the initial foundations of a semiotic approach to evidence, see D. Klinck, *"Evidence as Rhetoric: A Semiotic Perspective"* (1994) 26 *Ottawa L. Rev.* 125; B. Jackson, *Law, Fact and Narrative Coherence*, *supra*, note 17.

the experts' communications which reflect an expertise, on the other hand. Each trier, however, seems to rely upon the expert's ability to communicate between her or his dual roles in society: the application of specialized skill or knowledge (an expertise), and the exercise of everyday functions typical to individual citizens.

Expert opinion may become significant by mere association or rough parallels to common everyday experiences, or actions from within other interpretive communities. Thus, experts and other actors may bridge disciplines and cultures by jumping from recognizable text to locations of shared meaning (and sites of normativity), and vice versa. As Elkins remarked on his own experiences with storytelling, "[t]he gap between the way I live and the story I tell is both a measure of self-deception and a reflection of the hope that I have for myself".⁷⁵ Elkins' use of "I" - the subject of first person narrative - may be juxtaposed to the use of a socialized "me" (or "myself") - the object of an interpretive community. We may act and communicate in context, though our actions and communications are contingent on others' interpretations.

Various interpretive theories have been recognized within the fields of literature and law. Stanley Fish contends that a text may not be derived or specified because its meaning is obtained solely from the outside.⁷⁶ We cannot return back to the text because the interpretive community is external, and makes the text at that moment.⁷⁷ For example, the *Canadian Charter of Rights and Freedoms* came into existence with a set of intentions by its original framers, although the

⁷⁵ J. Elkins, *"Pathologizing Professional Life: Psycho-Literary Case Stories"* (1994) 18 Vermont L. Rev. 581 at 641.

⁷⁶ S. Fish, *Is There A Text In This Class? The Authority of Interpretive Communities* (Cambridge: Harvard University Press, 1980). Fish apparently falls within the reader-response and deconstructionist schools of literary theory.

⁷⁷ *Ibid.*

meaning of *Charter* values now evolves with Canadian society.⁷⁸ The *Charter* is viewed as a "living tree" whose growth is not confined to the literalness of its text, or the intentions of its original framers. And yet, meanings unacceptable to the dominant interpretive communities of society, especially the judiciary, may be labelled "off the wall".⁷⁹ As Richard Weisberg asserts, "outsiders" may rely upon the text itself to promote "off the wall" meanings, or instead use "measured" language and other forms within considerate communications.⁸⁰

Some legal scholars and practitioners have set up camps involving supporters of "plain meaning" and the "intentionalists". Under the former approach, where a word is not ambiguous, the authors and readers of the text are basically ignored, and the plain meaning determined according to a "normal speaker" under the circumstances.⁸¹ A problem may arise where the legal community, with its notions of "reasonableness" or "normality", objectively interprets the text; the text is liberated but only into the self-interested hands of the legal profession.

In opposition to Fish, Owen Fiss argues that disciplinary rules provide constraints open to interpretation and re-interpretation.⁸² Richard Weisberg agrees with the Fissian position,

⁷⁸ Some Scholars have criticized the legitimacy of the recent evolution of law and rights under the *Charter*. For a fascinating critique, see A. Hutchinson, *Waiting for Coraf: A Critique of Law and Rights* (Toronto: University of Toronto Press, 1995).

⁷⁹ Stanley Fish argues that "off the wall" interpretations "exist[] in a reciprocally defining relationship with interpretations that are on the wall (you know it by what it is not, and you know what it is not by it)"; *Is There a Text in This Class?*, *supra*, note 76 at 357.

⁸⁰ R. Weisberg, Lecture, U.B.C. (Fall, 1994).

⁸¹ See P. Brest, *The Misconceived Quest for the Original Understanding*, in S. Levinson & S. Mailloux (Eds.), *Interpreting Law and Literature* (Evanston, IL: Northwestern University Press, 1988) 69 at 71-2. See also B. Jackson, *Making Sense in Law*, *supra*, note 2 at 114-117 (the "Plain English" movement suggests that language be clear, direct and simple, and read as though it were spoken).

⁸² See S. Fish, *Fish v. Fiss* (1984) 36 Stanford L. Rev. 1325.

suggesting that we require stories about our stories that are always open to our communities for interpretation.⁸³ Within the constraints of a legal framework, I also diverge from a Fishian view, to move towards the approaches of Weisberg and Fiss. Our interpretations of text can be limited according to some accessible core. If so, the issue is how to identify this core (and shared sites of normativity), or structures of signification. If not, the issue is how to identify a sense of justice from discursive practices in the courtroom.

The focus of interpreters thus tends towards the development of authorial responsibility, which is to some extent grounded within the norms of interpretive communities. The stories by outsiders about stories of the dominant, however, may face marginalization where dominant norms or knowledge-claims - those of the authors or the audience - become inaccessible and unchallengeable. Those who support the status quo may suggest that norms and thus knowledge-claims are not severable from discursive practices, and thus no basis exists for change.

The access to experts' discourses and knowledge-claims always rests upon sites of normativity. Since one cannot always rely upon the identification of norms by lawyers and judges, it would seem preferable to support various interpretive approaches to interdisciplinary communications. For example, the access by outsiders would support critical inquiry into the dominant actors' stories. The paradox arises where some shared structures of signification are required for the recognition and communication of dominant norms and knowledge-claims. And yet, outsiders rather prefer the ephemeral strategies of postmodernism and poststructuralism which can overcome the textual and substantive constraints of the dominant.

A postmodern approach to storytelling may involve various levels of abstraction, leading to the momentary separation of signs from referents, language from meaning. A postmodernist

⁸³ R. Weisberg, Lecture at U.B.C. (Fall, 1994). See R. Weisberg, *Poethics*, *supra*, note 5 at 172-4.

may interpret expert opinion as a play of signs which prompt moments of reflection, but without resolution or arrival to a definitive statement. The reflections of experts' communications can lead to a sense of meaning, where otherwise sign and referents are unlinked. In this sense, postmodernists raise awareness of nuanced, "multi-valent" language. The "deconstruction" of a text leads to unobvious meanings by exposing intrinsic differences through the forming or voiding of space, arrangements, additions, variances, oppositions, contradictions, and so on.⁸⁴

Richard Weisberg, however, warns that to "deconstruct a text is to avoid its material existence as a text"; "deconstruction" creates some concern over "abstract support of authority".⁸⁵ Weisberg suggests that indeterminacy of meaning diverts authorial responsibility.⁸⁶ The result is especially troublesome where tension exists between a "real and immediate" goal, for example, to free a morally innocent accused from the prisons of an injustice, and contingencies, for example, the potential consequences for other accused persons in similar situations. "Outsiders" may lack protection without the guidance of constitutional text and its embedded values (i.e. equality, fairness at trial, and fundamental justice), or the text of expert opinion (i.e. DNA evidence which may absolve the accused). It is a rather stark reality, indeed, that a text of law, or expert opinion, can save an accused from incarceration.⁸⁷ Conversely, a text can be interpreted and applied so as to imprison an accused. In short, a text liberates or imprisons, but always along lines of human agency; a text is constructed or

⁸⁴ See J. Derrida, *Of Grammatology*, transl. by G. Spivak (Baltimore: John Hopkins University Press, 1976).

⁸⁵ R. Weisberg, *Poethics*, *supra*, note 5 at 109 & 199.

⁸⁶ *Ibid.*

⁸⁷ See the case of *Guy Paul Morin* (accused convicted of murder but set free on the basis of subsequent novel DNA analysis); chapter 1 (note 55) & chapter 2 (note 61).

"deconstructed" always within an interpretive community, and the value-laden grasps of cultures and disciplines. The trier of fact's development of interdisciplinary stories in the courtroom is likely to involve to some extent a unity or separation of constructed texts over various interpretive communities.

A "postmodernist" way of storytelling and listening strives for the passing through the "fold of knowledge", or points where text meets the "truth".⁸⁸ The limits of knowledge are located where "truth" is found, although it cannot be articulated. We discover "truth" by locating falsehoods, or where A and not A converge.⁸⁹ The limits of language in law can be approached by considering text as dialogue, and by revealing momentary reflections of subtext. The judge listens to dialectic argument (i.e. linear and nonlinear movement between A and not A) to discover the "truth". The passing through the fold - i.e. between perceiving/cognating and "being" - leads to empathy by way of an ethical approach to "truth". The judge in situating herself in various adversarial positions may not be able to articulate what is right but *knows* what is right for legal judgment. As J.C. Smith points out, a modernist would "see both sides"

⁸⁸ Many of the ideas in the present and next paragraph were abstracted from several lectures by J.C. Smith at the University of British Columbia (Fall, 1994). Smith acknowledged the existence of a gap in reality which we cannot cross to know things in and of themselves but which only involve representations; that is, knowledge is only a representational structure, or language. The subject/object distinction (i.e. when I use the sign "I" rather than "me" in communications to others) provides a representational view of how one passes through the fold. The use of "I" may involve participation by the narrator, whereas the use of "me" or the lack of reference to the narrator, suggests a more objective, distant or neutral view. J.C. Smith identified the gap between an object, "thinking about yourself" (in a language), and the subject, "thinking about yourself thinking about yourself", indicating the limits of knowledge. The latter subject presupposes language whereas the former object is an action in language because we think in language. J.C. Smith demonstrated (logically) a fold of knowledge as where A and not A meet, and its converse, not A and A meet.

⁸⁹ J.C. Smith believes that Nietzsche always attacked that which was perceived. If A, then Nietzsche argued not A, and vice versa, to go beyond the negative to the fold. The use of contradictions may assist in moving the reader to the limits of knowledge.

whereas a postmodernist advances virtually to "be both sides". A problem, however, arises where dominant discourses exclude the discourses of "others". For example, a judge's narrative may characterize participants as having masculine and feminine traits (or self as subject rather than object, and conversely, self as object rather than subject) that lend a "ring of truth" to legal judgment.⁹⁰ These characterizations may also describe the alignment and re-alignment of one's physicality and moral nature.⁹¹

A "postmodernist" would recognize that we live within the limits of language, and that language is not composed of linear elements but complex interrelationships of value systems which underlie atomistic and holistic conceptions.⁹² We may consider the text as a whole to have meaning through, for example, identities and non-identities, completeness and incompleteness. Legal concepts themselves are only metaphors which involve the use of language in representation, to expand consciousness towards the limits of knowledge. Words and concepts may not embed any particular idea or object but many moments of ideas and objects. The "truth"

⁹⁰ J.C. Smith, Lecture at U.B.C. (Fall, 1994). However, a fundamental problem exists in the male dominance of the Canadian judiciary; see S. Bindman, *"Women on the Bench"*, *The Vancouver Sun*, Saturday, August 19, 1995 (women account for only 15 percent of federally-appointed judges, and 16 percent of provincially-appointed judges). The legal institution (with its patriarchal foundations) has inspired gender movements for power reversals. "Truth", or passing through the fold, may be considered as "being" both feminine and masculine. See also H. Melville, *Billy Budd, Sailor* (H. Hayford & M. Sealts, eds., Bantam Books, 1984). Melville's protagonist, Billy Budd, symbolizes nature - a blend of masculinity and femininity.

⁹¹ A literary example is that of Herman Melville's *Billy Budd, ibid.*, where Billy's "[m]oral nature was seldom out of keeping with the physical make" (at 3), except as constructed at specific times by several characters, namely, Captain Vere, John Claggart, and the surgeon. Billy can be seen as a subject or object (having both masculine and feminine traits), through the eyes of readers and their interpretive communities. Billy Budd's presence and absence, however, seems to influence in various ways the other characters' actions. Melville encourages the readers to reconsider their own views of the "folds of knowledge", between subject and object, masculinity and femininity, aesthetics and moral nature, form and substance, and so on.

⁹² J.C. Smith, Lecture (Fall, 1994).

reflects the movement between moments.

We all seem to view "truth" through our windows or perspectives, and yet the notion of perspectivism alone may arguably negate "postmodernism" by limiting movement between perceiving/cognating and being, or "A" and "not A" (and vice versa). The notion of "truth" or a network of "truths" leads to a moral emphasis of law which is "unpostmodern".⁹³ Stephen Taubeneck avows that "truth" is "a composition of illusions or worn out metaphors".⁹⁴ Taubeneck suggests that the notion of "truth" as a human construction requires a more poetic endorsement.⁹⁵ We should be highly critical of self-awareness, and question whether human conscience is "manufactured and full of paroxysms".⁹⁶

Within the confusing whirlwinds of postmodernism, the interpretation of expert opinion may provide courtroom actors with a *carte blanche* to exercise their prejudices and politics. A poethical approach urges law and legal scholarship out from the continuous evasiveness of more radical forms of postmodernism. And yet, poethics does not necessarily exclude affirmative postmodernism which may lead to a better sense for sites of normativity and the folds of knowledge. We should rather (warily, according to Taubeneck, *supra*) focus on the self-awareness of lawyers, judges, and other experts, including how they compartmentalize the internal and external - the forms and substance of a text. The courtroom communications between actors ought to involve a sense of humanity (though it cannot always be *positively*

⁹³ R. Weisberg, Lecture (Fall, 1994).

⁹⁴ S. Taubeneck, Lecture at U.B.C. (Fall, 1994).

⁹⁵ S. Taubeneck, *ibid.* See also R. Weisberg, *supra*, note 5.

⁹⁶ *Ibid.*

communicated) towards justice.⁹⁷ Within the constraints of a legal framework, the audience at some point moves beyond postmodern moments to gain some stable sense of meaning - a thematic thread or recurrent image - through the coherency of language and story narratives.

A legal system and the rule of law require some degree of certainty; for example, as one well-worn proverb goes, justice delayed is justice denied. The issues of communication turns to how we practically (in timely fashion) can identify and move between sites of normativity. This objective cannot be approached through the more radical forms of postmodernism which rest precariously upon a limited, continuous agenda of "value-avoidance and nonjudgmentalism",⁹⁸ perhaps to the continual displacement of authorial responsibility. Rather, to keep the dominant paradigms on a progressive edge, one may wish to support access to outsiders' criticisms - a function which seems most suitable to affirmative postmodernism.

A theoretical balance may perhaps occur under the "narrativisation of pragmatics", as described by Bernard Jackson, which highlights speech acts (or communication of text), rather than complete reliance on the semantics of a text:

"Since the scientific character of the evidence precludes any real narrativisation of the semantics of the evidence, the narrativisation of the pragmatics of expert testimony - whether the expert appears to be behaving and talking like an expert in court - must predominate. The impression given by the expert in court is derived from the attribution of sense to a combination of what is seen and what is said."⁹⁹ (footnote omitted)

Jackson's "narrativisation of pragmatics" also applies to stories about how the expert acts or performs. The construction of scientific opinion in the courtroom involves the "telling" and

⁹⁷ See J. Elkins, *"Pathologizing Professional Life..."*, *supra*, note 75 at 605.

⁹⁸ R. Weisberg, *Poethics*, *supra*, note 5 at 120.

⁹⁹ B. Jackson, *Making Sense in Law*, *supra*, note 2 at 417. Here, Jackson focused on the visual performative of experts as authoritative figures. As discussed previously, the pragmatics of narrativisation include many aspects of the use of a story text, as described by the stories about the expert's telling stories.

listening to interdisciplinary stories between actors and audiences according to sites of normativity within the various disciplines and cultures of society.

B. Law, Literature and Science: Unusual Bedfellows and Interdisciplinary Stories

Interdisciplinary stories of science and law may be located within actual legal cases and works of literature. The coherency and intelligibility of scientific narrative is always contingent on interpretive communities, including those of scientists, the judge and jurors, or readers of literary works. Interdisciplinary stories about scientific opinion may assist or impede challenges to the dominant views of society. For example, feminist criticisms have revealed patriarchal foundations to the law of homicide, and have redirected scientific research to various issues of human behaviour intimately connected to legal culpability - issues of mixed scientific fact and legal norms.¹⁰⁰ "Battered Spouse Syndrome" is now generally recognized as a potential legal defence for abused women who are charged with homicide against their spouses.¹⁰¹ Scientific experts attempt to describe and explain the responses of battered women in specific situations.

¹⁰⁰ See C. Smart, *Feminism and the Power of Law* (1989). See also L. Walker's original text, *Battered Woman* (Harper & Row: 1979), in comparison with her later article in *Trial* (February, 1995) 30 (legal decisions have broadened the scientist's use of Battered Woman Syndrome to describe the dynamics of abuse as well as the psychological impact on the victim) at 32. While the legal system focuses on the clinical definition and battering dynamics, mental health professionals rely on the clinical definition to design treatment plans; *ibid.* But see D. Dutton, *The Domestic Assault of Women: Psychological and Criminal Justice Perspectives* (Vancouver: UBC Press, 1995) backcover (discusses the psychology of males who assault their intimate partners, and the dynamics of these abusive relationships). Dutton specifically investigates the dynamics of Battered Women Syndrome; *ibid.* at 200-17.

¹⁰¹ See D. Martinson, M. MacCrimmon, I. Grant, & C. Boyle, "A Forum on *Lavallee v. R: Women and Self-Defence*" (1991) 25 U.B.C. Law Rev. 23; *R. v. Lavallee*, [1990] 1 S.C.R. 852.

These recent paradigm changes of science and its discourses also suggest a rethinking of the admissibility criteria for novel scientific opinion, such as battered spouse syndrome and other theories of domestic abuse.¹⁰²

The *Paul Bernardo* case provides a specific example where the prosecution led expert opinion on various psychiatric theories, including Battered Spouse Syndrome, for the purpose of assisting the jury's assessment of the actions and credibility of co-conspirator, Karla Homolka.¹⁰³ Homolka had testified of her abuse at the hands of the accused, Paul Bernardo. The prosecutor argued that the abuse rendered Homolka unable to respond to Bernardo's conduct. However, Homolka appeared before the jury as a "most bright, articulate and responsive witness".¹⁰⁴ The prosecutor contended that the jury in absence of expert testimony would misinterpret patterns of behaviour that went beyond their everyday experiences.¹⁰⁵ Several expert opinions were offered to the court, including the formal report of Dr. Angus McDonald, which stated:

"Her relatively aggressive presentation at times does not seem consistent with the view of her as a fearful, terribly dominated individual, lacking the spine to stand up for

¹⁰² A. Wallrap, *"Expert Opinion on Domestic Abuse: Telling the Stories of 'Intimate Femicide' Victims"* (1995) University of British Columbia (unpublished). See also W. Conklin, *supra*, note 10 at 173 ("[t]he paradigm of language has slowly and subtly displaced the paradigm of knowledge which the discourse of 'human rights and law' has presupposed"). The question is whether the "legalized" and scientized language of domestic abuse arising from the interdisciplinary discourses of lawyers and scientists in the courtroom has in fact displaced the real narratives of battered women about their experiences and knowledge.

¹⁰³ See the chapter one introduction for the Bernardo/Homolka story. Prior to Bernardo's trial, Karla Homolka had reached a plea bargain agreement with the Crown. She had pleaded guilty to two counts of manslaughter, and received a twelve year sentence. The leniency of Homolka's sentence caused a societal outcry; *The Globe and Mail* (November 7, 1995).

¹⁰⁴ *R. v. Bernardo [Evidence - Psychiatric - Karla-Homolka]* [1995] O.J. No.2249 at 47 (all references are to Quicklaw page numbers and paragraphs) per Justice LeSage.

¹⁰⁵ *Ibid.* at 32/3.

herself. Some of this (new found?) feistyness could be reactive to her growing realization that her earlier lack of backbone led her into an untenable, even life threatening set of circumstances..." (Dr. McDonald's report, p.5/6).¹⁰⁶

Justice LeSage ruled inadmissible the expert reports and proposed testimony which directly applied psychiatric theories to Homolka.¹⁰⁷ These opinions were founded on "inadmissible and potentially untrustworthy information".¹⁰⁸ Justice LeSage also expressed his concern for usurping the jury's fact-finding function in assessing whether Karla Homolka actually suffered from any "psychiatric conditions".¹⁰⁹ Justice LeSage considered the potential influences of each expert's impressive qualifications on the jury's fact-finding.¹¹⁰ He concluded that the experts' opinions would prejudicially shift the trial focus from the primary issue of Bernardo's guilt or non-guilt to Homolka's mental state.¹¹¹ Justice LeSage, however, ruled admissible "'hypothetical' questions based only on the evidence presented in the trial", and general discussions (i.e. definitions and explanations) of Battered Spouse Syndrome, theories of Normalization, and Post Traumatic Stress Disorder.¹¹² The jurors required the means to

¹⁰⁶ *Ibid.* at 47. Dr. McDonald was the only expert to have interviewed Homolka, and then observe her testify at trial; *ibid.* See the chapter one introduction.

¹⁰⁷ *Ibid.* at 53/4.

¹⁰⁸ *Ibid.* at 51. Justice LeSage's judgment contains several direct references to Dr. McDonald's report; see *ibid.* at 4, 28-30 & 47. The report thus supported Justice LeSage's decision to admit expert opinion on battered spouse syndrome and other theories of domestic abuse as necessary to generally inform the jurors.

¹⁰⁹ *Ibid.* at 51 & 55. The label of "psychiatric condition" when attached to "battered spouses" seems rather prejudicial.

¹¹⁰ *Ibid.* at 45.

¹¹¹ *Ibid.* at 47.

¹¹² *Ibid.* at 31. The prosecution placed Dr. McDonald's formal report with the court for reference, but at the time did not intend to call him as a witness; *ibid.* at 4. Justice LeSage required a complete factual foundation prior to allowing hypothetical questions. See the Supreme Court of Canada decision in *R. v. Abbey* (1982), 68 C.C.C. (2d) 394 (inadmissibility of expert

understand the "conditions" of Karla Homolka in testifying at trial relative to her past criminal conduct with Bernardo.¹¹³

Dr. McDonald's opinion provides a stark example of the problems with interdisciplinary communications. The language and other forms used by Dr. McDonald, if formally admitted, or even informally used as a factual basis for other admissibility issues, would have widened the range of plausible stories, perhaps to prejudice Paul Bernardo's trial. The scientists' characterizations of Homolka's actions and motivations at trial in light of specific individual, social and cultural factors was a critical issue to Bernardo's story of events, as well as his credibility as a storyteller. The characterization of Homolka was important to the development of stories by both the Crown and the defence. The scientists' "measured" language could displace a fair trial by prejudicially distorting the trier's story constructions, and thus decision-making. The scientist's communications can close off access to some stories, and suggest alternative stories, whether or not an evidentiary foundation exists.

Scientists may rely upon inferences and background assumptions that conflate logical reasoning with the value-ladenness of language and other forms. The stark differences between scientific and legal discourses can strain professional relationships, and engender mistrust between scientists, lawyers, and judges. Power struggles may sidetrack information gathering, fact construction, story developments, and the triers' decision-making. The concept of

opinion based on facts not before the jury, and without circumstantial guarantees of trustworthiness); *ibid.*

¹¹³ Justice LeSage applied the word "'conditions'" (always with quotes) to Karla Homolka no less than nine times within his judgment; *ibid.* at 45. The use of the term "conditions", and the appearances of medical experts on Battered Woman Syndrome, are part of the narrativization of pragmatics - in this case, a "medicalization" (or "textualization") of Homolka's behaviour. See also *R. v. Mohan*, [1994] 2 S.C.R. 9, where Justice Sopinka, on behalf of a unanimous court, in the written judgment focused on the medical term "abnormal" and "abnormality", directly or indirectly using the same terms over thirty times.

interdisciplinary stories of law and science recognizes these interests and power struggles between actors in the courtroom.

The empowerment of scientists in judicial processes arises from their specialization within a discipline, and the closure of their discourses, perhaps to silence other discourses, norms, and knowledge-claims.¹¹⁴ For example, the concept of relevancy has been shaped by legal and scientific discourses, sometimes to the exclusion of other forms of everyday knowledge, such as the actual story narratives of victims. The judges within mainstream legal society may for various reasons deem irrelevant the experiences and stories of individuals and minority groups. The dominant members of society may yet marginalize the discourses of "outsiders" under institutional processes hidden by a facade of formalism, such as the "scientized" language of the *Canadian Charter of Rights and Freedoms*, or logico-scientific discourses of expert opinion in the courtroom. By assuming the norms and assumptions of the dominant, scientists become co-conspirators.

The fields of literature and literary theory may identify how scientific facts and legal norms become entangled through language and other forms. The references to works of literature refocus our attention to an ethics of communications, away from the "objective", "rational" explanations of science, which concentrate on the text and its correspondences to reality. Although the criteria of validity and reliability may answer some issues of scientific consensus, scientists produce and communicate their opinions within interpretive communities, and under external forces, such as the constraints of the legal institution, norms, politics, and so forth. Actual legal cases and literary works illustrate ways to make sense of communications by

¹¹⁴ See C. Smart, *supra*, note 100 at 11-14 (truths of law and human sciences are accorded status by patriarchal society to disqualify other knowledge and experiences).

scientists and lawyers, as well as institutional constraints.¹¹⁵ Interdisciplinary stories lie at the intersections of law, literature, and science - unusual bedfellows, indeed.

Interdisciplinary stories through a popular mode of communication bring together the many cultures and disciplines of society. As children, we gained much of our experience and knowledge from selective exposure to stories and other coherent forms reflective of community values and traditions.¹¹⁶ Within the courtroom, each of the various narrators present their views of characters and story events. The triers of fact listen to the various story narratives of associative or causal relationships, in light of the narrator's own values and interests. The triers are often left wondering why the narrator told the story, and why it was told in that particular way.

The legal institution in various ways abstracts and shapes stories according to its own norms and prescriptions; any evidence offered to support a story must be relevant and material to a legal issue. Lawyers and judges to some extent control the communication of scientific opinion, and thus interdisciplinary stories, through examination and cross-examination, and other stages, such as the opening statement and closing argument. The ethics of lawyers and scientists guide their communications of causation and culpability. The juxtaposition of words within sentences, and the use of grammar and other forms, may imply that one real event caused another, or that human motive led to an action, which in turn caused a specific event. Although causation may occur in the real world, the communication of this reality is by the rules and conventions of language, and structures of signification. As previously discussed, scientists' communications

¹¹⁵ For example, "institutional constraints" include the judiciary's lack of access to experts' discourses, norms and knowledge-claims.

¹¹⁶ See also M. Cortazzi, *supra*, note 9 at 107 (stories promote the moral self-assessment of readers) & 116 (knowledge and values are transmitted referentially and stylistically through narrative).

are easily led astray where the proper logic of language, and interrelationships of signs suggest causality between referents.

The narratives of scientists may consist of referential and poetic language.¹¹⁷ Any distinction between the poetics of a story, as broadly defined, and its referential language, however, is tenuous at best. In practice, the norms and values which influence authors are more likely identified from poetics rather than referential language. Although scientific opinion enmeshes the scientist's values within figurative language and other forms, logic and external references, it is the figurative language which tends to more clearly reveal a departure from the norms from the scientific community.¹¹⁸ Although the separation of forms and content may not be possible, disciplinary rules and conventions may usher "rationalist ideologies" onto the audience - that is, to formally separate logic and values, causation and association, referential language and poetics, and so forth. These separation attempts involve the (de)construction of interdisciplinary stories.

1. An Introduction to Law as Literature

The interpretive strategies that make sense of literary works about law and science may parallel those of "law as story" and "science as story". The "Law as Literature" sub-movement focuses on the language and other forms of law as literary text. The basic principles of the "Law

¹¹⁷ D. Klinck, *"Style, Meaning, and Knowing: Megarry J. and Dennings M.R. in Re Vandervell's Trusts (No. 2)"* (1987) 37 U.T. L.J. 358 at 359 (referential language focuses on the meaning communicated and not its forms; poetic language spotlights the forms).

¹¹⁸ The rationalists would likely argue that scientific opinion should be defined as referential, with its communication preferably through the language of proper logic, somewhat like the cold, rational voice of artificial intelligence. In contrast, this thesis suggests that scientific opinion involves to some extent a blend of referential language and poetics. The writing style of a scientist may involve simple, humanizing language and forms, though not necessarily by way of first person narrative.

and Literature" movement illuminate how literature can support access to the voices of outsiders who are otherwise excluded from judicial processes. The spotlight falls on interdisciplinary stories of scientific facts and legal norms, and the gatekeeping functions of judges.

Within the legal realm, the elements of a crime or civil action set forth a skeletal story around which legal counsel address evidence and rhetoric. A story centres on "what law is, what it tries to be, and how it operates".¹¹⁹ A story promotes self-reflections, and "new configurations of meaning that make our lives more attentive to vulnerabilities, disabilities, and darkness."¹²⁰ The form and substance of the law promotes a discrete set of legal norms that govern relations between individuals, groups and the State. Within legal processes, the actors may rely on the "objectivity" of science to "persuasively" describe, explain, or even prescribe various aspects of a story of law and fact. Science is typically used to distance the human subject - the scientist as observer and narrator - from the object of study. In contrast, Law and Literature brings together disciplines of the human mind and spirit.¹²¹ In this sense, authors' stories before audiences may humanize legal processes. Whether within the courtroom or the literary realm, the narratives of scientists, lawyers, and judges contribute to the development of a story jurisprudence and its legitimacy within our society. The "law and literature" movement, as Richard Weisberg notes, endeavour to somehow bridge the "ethical textualism of the past" and "antifoundationalism of the present".¹²²

The interpretation of law and science is contingent on the norms and politics of interpretive

¹¹⁹ R. Weisberg, Lecture at U.B.C. (Fall, 1994). Weisberg argues that legal errors may "only be revealable in light of the full narration of events"; *Poethics*, *supra*, note 5 at 230.

¹²⁰ J. Elkins, *"Pathologizing Professional Life"*, *supra*, note 75 at 643.

¹²¹ R. Weisberg, *Poethics*, *supra*, note 5, at 123.

¹²² *Ibid.* at 121.

communities, such as the judiciary, lawyers, the jurors, and scientists. And yet, the real sensations we (are we not all judges?) experience *in* language liberate our most profound thoughts. For example, legal judgments may "harmonize sound and sense in working their outcome so as to maintain power and endure over time"; they should "express their central core of justice".¹²³ The language and other forms of legal judgments, however, can also "powerfully" sanction or obfuscate unethical actions against outsiders. A trial judge may stylize a justificatory discourse with designs to the audiences, such as the parties, legal counsel, other trial judges, appellate courts, the public, and so on. As a formal text, the legal judgment may sanction a party's story, or a composite story version - perhaps, an eclectic rainbow of witness' narratives. The judgment itself may comprise an interdisciplinary story, where the judge as storyteller synthesizes the facts of a case with evaluations of scientific opinion and legal argument.

Within the courtroom, power imbalances between the actors may be recognized from structural and linguistic changes, differences, and emphases within discourses. The placement of the "real and active" within communications, such as scientific opinion, legal argument, or legal judgment, reflects a value hierarchy - the status of the subject or object in a specific context.¹²⁴ Yet, words are merely doors that may open to the "nonverbal will to power that had generated the words themselves".¹²⁵

¹²³ R. Weisberg, *Poethics*, *supra*, note 5, at 7-9. See *ibid.* at 5 ("[s]torytellers move us *in* and not *by* their language") and at 16 (to some extent an "effective judicial opinion shares the qualities of a good short story"). Weisberg also acknowledged the importance of examining the subjective values which underlie judicial intuition and discretion (at 192). See also W. Conklin, *supra*, note 10 at 159-60 (judges are experts who through legal meta-language, with its presupposed values, offer meaning to a non-expert's story).

¹²⁴ R. Weisberg, Lecture at U.B.C. (Fall, 1994).

¹²⁵ R. Weisberg, *supra*, note 5 at 302.

2. Law *in* Literature: A "Story Jurisprudence"?

The "law *in* literature" sub-movement taps into works of literature as rich sources from which to draw parallels to interdisciplinary stories within a modern legal system. A "literary jurisprudence" continuously evolves from the many stories of lawyers and law within the field of literature.¹²⁶ A diversity of story themes about human experiences and values emerges through the literary works and their authors' reflections of the many cultures and disciplines of society. Focusing on the role of lawyers in literature, Richard Weisberg described at least four fundamental elements of a literary jurisprudence: how a lawyer communicates, reasons, feels, and treats other people outside of power structures.¹²⁷ Literature draws forth human values for reflection and criticism; it can bring to life past real or fictitious human characters, actions and motives, even if only to provide a proper burial.¹²⁸ The "Law *in* literature" approach expands the opportunity for outsiders to participate in society generally, and judicial processes specifically. A "literary jurisprudence" tends to expand our collective awareness and thoughtfulness of human values across cultures and disciplines.

The understanding of stories in the courtroom is guided in part by the individual and

¹²⁶ Richard Weisberg recognized the "twinned" approaches to literary jurisprudence: "a poetic method for law, and a poethics of reading"; *ibid.* at 5. He contends that "[l]iterary jurisprudence provides a method to understand the values both of the institutionally powerful and of those whose lives they come to adjudicate"; *ibid.* at 213.

¹²⁷ *Ibid.* at 35. This thesis broadens Weisberg's notion of "literary jurisprudence" to apply poethical strategies to experts' discourses and interdisciplinary stories in the courtroom.

¹²⁸ Literary works carry to the fore human values which meet approval or face rejection at the hands of society. Authors rise from all areas of life, textually transgressing discriminatory barriers, such as racism, sexism, and class difference.

collective experiences of courtroom actors who have access to society's vast bodies of texts within literature, law, science, and other disciplines. Literary jurisprudence focuses on how the actors make sense of a written or oral text. Under the rubric of literary criticism, scholars may broaden interpretive horizons by exploring works of literature for parallels to the legal realm. Within the field of literature, stories about law and science contribute to a "story jurisprudence" which may inform the law of evidence and the judicial gatekeeping of interdisciplinary stories. Within the legal realm, the rule of law relies upon an evolving foundation of doctrine and precedent which encourages slow and cautious development of legal principles as specifically anchored in facts and common sense - a "story jurisprudence" of facts and law.¹²⁹

C. (De)Constructing Interdisciplinary Stories

Various theoretical perspectives from legal cases and literary works may apply to the (de)construction of interdisciplinary stories, and the authority of scientists.¹³⁰

1. Scientific Opinion at Trial

The case of *Paul Bernardo* illustrates how trial judges sometimes use the language and other

¹²⁹ For example, each legal judgment usually begins with a story of the facts, then discusses a normative story of law, and finally, applies the facts to the law, or vice versa, without a resolution to the case. See also T. Eisele, *"Wittgenstein's Instructive Narratives: Leaving the Lessons Latent"* (1990) 40 J. of Legal Education 77 at 91 (stories activate knowledge and understanding of the law). Anchored stories are those constructed on the basis of specific, concrete evidence persuasive to the audience. The persuasive force relates to the use of real, sensory-based language, rather than abstract concepts and generalizations. Stories may be considered un-anchored if the language and other forms are inaccessible, potentially limiting the participation of actors in fact-finding processes.

¹³⁰ See R. Weisberg, *supra*, note 5, at 10 (the focus on scientific issues may blur the central reality of a situation as represented by individual narratives). Weisberg concluded that the social sciences alone "have not shown the way to a more coherent, fair, or just legal environment"; *ibid.* at 213.

forms of scientific opinion.¹³¹ The judge in *Bernardo* considered psychiatric opinion to assess the condition of the key witness, Karla Homolka. In the case of *Commonwealth v. Johnson*, the utterances of a medical coroner apparently influenced the jurors' determinations.¹³²

a. The Paul Bernardo (Karla Homolka) Trial: A Story of Psychiatric Opinion and Its Relevancy

In the *Bernardo* trial, the prosecution contended that psychiatric opinion was logically relevant and necessary for the jurors' assessment of Homolka's credibility, including her behaviour at trial in relation to her version of the past events at issue.¹³³ The prosecution sought to rebut the accused's suggestions that Homolka was of higher intelligence than Bernardo, and therefore more likely to be the ringleader. The inference assumes that the more intelligent person of a two-person conspiracy is more likely to be the leader, or otherwise have extensive control over the less intelligent person. The next inferential leap is that the ringleader or person in control is more likely to have committed homicide.

The Crown and defence in *Bernardo* presented two basic storylines. The Crown suggested that Homolka's "relatively aggressive presentation" at trial was reactive to her previous abuse. Whereas, the defence argued that Homolka had self-control and was fully responsible at trial and previously, at the time of the alleged events. Was Homolka a murderer, or a helpless victim of abuse? Can we infer from Homolka's state of mind at trial to her state at the time of the crime?

¹³¹ See chapter one introduction.

¹³² Pennington and Hastie relied upon *Johnson*, a mock version of an actual murder trial for much of their research on the effects of story development on juror decision-making; see R. Hastie, S. Penrod, & N. Pennington, *Inside the Jury*, *supra*, note 32. See also the *Commonwealth v. Johnson* transcript.

¹³³ *R. v. Bernardo [Evidence - Psychiatric - Karla-Homolka]* [1995] O.J. No.2249 (Ont. Ct. of J. (Gen.)) at 31.

The issue was whether the trier of fact required some assistance in deciding whether Homolka was a victim, and assuming so, whether or not her trial presentation reflected her fear and continuous domination by Paul Bernardo. Homolka's plea bargain for a reduction in charges from murder to manslaughter could have also influenced her conduct at trial.¹³⁴ The characterization of Homolka was inevitably a key element in the prosecution's story of Bernardo's criminal conduct.¹³⁵

Psychiatric opinion on Homolka's state of mind, if admitted, could mislead or prejudice the trier of fact's construction of interdisciplinary stories.¹³⁶ For example, Dr. McDonald, in his report, *supra* (see the chapter one introduction), employed anatomical metaphors (i.e. "lacking the spine", "growing realization", and "lack of backbone") and analogies which lend medical "authority" to his opinion, while potentially prejudicing Justice LeSage's interpretation.¹³⁷ The metaphorical use of the words "spine" and "backbone" was rather enigmatic in light of the range of psychological characteristics the audience could have attributed to Homolka (with or without backbone?). The door was left wide open for the audience's moral views and prejudices. Dr. McDonald's excerpt contains other enigmas and spaces (i.e. "relatively aggressive presentation",

¹³⁴ At the time, Homolka was serving a twelve year jail term for manslaughter; see chapter one introduction.

¹³⁵ See chapter one introduction.

¹³⁶ See M. Cortazzi, *supra*, note 9 at 61. For informative discussion and interesting examples of the judicial use of language and other forms, see D. Klinck, "'Criticising the Judges'...", *supra*, note 10; D. Klinck, *Style, Meaning, and Knowing...*, *supra*, note 117. The following inquiry relies upon some of the many scholarly insights by Dennis Klinck.

¹³⁷ See R. Lipsey, in N. Stehr & R. Ericson (Eds.), *The Culture and Power of Knowledge: Inquiries into Contemporary Societies* (de Gruyter, 1992) 279 at 308-12 (experts through socially-mediated concepts - where the observer interacts with the observed - reason by analogy to transfer knowledge from context to context). In practice, scientists in the courtroom often use metaphors and analogies to simplify descriptions and explanations, especially when the audience is unfamiliar with the technical jargon.

"the view of her", "growing realization", "untenable, even life threatening"), which admittedly are difficult to identify and evaluate out of context. The doctor's audience may consider the degree of Homolka's aggressiveness against a standard for a similar victim's presentation in an adversarial courtroom. Ironically, Dr. McDonald's narrative itself seems unusually pointed and aggressive for science.

Dr. McDonald's opinion mysteriously shifts between a more objective view of Homolka at trial (i.e. "the view of her"), as seen by the audience, to a more subjective view of Homolka's transformation from her past conduct to the time of trial (i.e. "her growing realization..."). Dr. McDonald first considered an objective, distant view of Homolka's presentation at trial, prior to his attempts at placing the audience into the mind and body of Karla Homolka, perhaps to vicariously experience some of the abuse and thoughts which she had apparently suffered. Although some of Dr. McDonald's descriptive words, such as "untenable, even life-threatening set of circumstances", are somewhat humanizing, the same words are also vague and expansive relative to typical medical discourse. The use of the term "life threatening" in this context seems rather extreme and extravagant, enticing the audience's liberal imagination or, at the other end of the spectrum, their full deference to Dr. McDonald's opinion. Why was Homolka incapable of defending herself or escaping Bernardo's control? And why were the circumstances life-threatening? One may question whether Dr. McDonald's observations of Homolka during the trial were constructed according to his interpretations of the jurors' emotional responses (to Homolka's testimony), or Homolka's responses to the judge and jurors. The production of Dr. McDonald's opinion during the trial seems rather suspect, given the pragmatics (and performative) within the courtroom.

In the same excerpt, *supra*, Dr. McDonald for unknown reasons sharpened - elaborated or exaggerated - his narrative by using language such as "fearful, terribly dominated individual",

"feistyness", "untenable, even life threatening", "reactive", etcetera.¹³⁸ The excerpt also contains compounds or extensions (i.e. "relatively aggressive presentation at times", "seems consistent with the view", "could be reactive to her growing realization that...", "life threatening set of circumstances", etcetera), and occasional flattening - reduction or omission of dull parts - (i.e. "feistyness", "reactive", etcetera), some of which are not uncommon to medical discourse.¹³⁹

Dr. McDonald further supported his explanations with rationalizing words, such as "consistent", "lacking", "reactive", "realization", "untenable", and so on, which are common, if not partly definitive of scientific narratives.¹⁴⁰ Dr. McDonald's language and other forms also indicate exclusivity (i.e. "aggressive", "fearful", "dominated", "feistyness", "reactive", "realization", etcetera), exhaustiveness (i.e. "fearful, terribly dominated", "untenable, even life threatening", etcetera), and qualification (i.e. "relatively aggressive", "at times", "seem consistent", "could be reactive", "growing realization", etcetera).¹⁴¹ The transitions between sharpening, extending, flattening, rationalizing, qualifying, and so forth, identify shifts between the subjective view of Homolka (through the eyes and voice of Dr. McDonald), the subjective view of Dr. McDonald himself, and the supposedly objective and neutral view of science.

Dr. McDonald seems to have made a quantum leap by inferring from Homolka's physical

¹³⁸ See D. Klinck, *"Style, Meaning, and Knowing..."*, *supra*, note 117 at 387; M. Cortazzi, *supra*, note 9 at 61.

¹³⁹ See D. Klinck, *ibid.* For comprehensiveness, I have added the category of "compounds or extensions".

¹⁴⁰ See M. Cortazzi, *supra*, note 9 at 61 (storytellers may re-tell a story by rationalization - i.e. the explanation of incongruous features by making passages more compact, consistent and coherent with the storyteller's expectations).

¹⁴¹ See *ibid.* at 384.

and mental state, and corresponding presentation at trial, to her state at the time of the alleged criminal conduct. But how does the audience interpret and understand these suggested inferences and background assumptions? Dr. McDonald's inference on the changes of Homolka's mental and physical state seems to be carried more by the former's discourse, *supra*, rather than a factual foundation, or the logic and reason of science. The story of Dr. McDonald's presence at trial had many implications, perhaps to prejudice story developments and admissibility decisions by Justice LeSage.

Scientific opinion usually consists of tightly knit and integrated sentences which show causality, finality or qualification, and explanatory structures with some degree of complexity and parallelism. For example, Dr. McDonald's excerpt, *supra*, reveals some parallelism when juxtaposing its two major statements: firstly, Homolka's "relatively aggressive presentation" at trial seems inconsistent with the view of her as a "fearful, terribly dominated individual"; secondly, Homolka's earlier "lack of backbone" resulted in an "untenable, even life-threatening set of circumstances". McDonald used the medical metaphor, "spine to stand up" (for oneself), as a figurative (and stretched?) connection between the two latter statements.¹⁴² These metaphorical images support the story presented by McDonald, depicting Homolka as evolving (or "growing") from being spineless - "lacking strength of character"¹⁴³ - to the point of strong backbone - "firm and resolute character"¹⁴⁴ - at trial.¹⁴⁵ McDonald's opinion characterizes

¹⁴² I also sense some "postmodern irony" in this particular parallel; see S. Feldman, *supra*, note 15 at 1082 (self-reflexive use of modernist methods while understanding postmodern themes leads to the "metaphorical raised eyebrow, wink, or grin").

¹⁴³ Webster's Ninth New Collegiate Dictionary.

¹⁴⁴ *Ibid.*

¹⁴⁵ I read the textual progression of these images as suggesting Homolka's moral atonement. This subtext seems to contradict Dr. McDonald's subsequent discussion of Homolka's "moral

Homolka by describing and explaining changes in her mental and physical state between the time of the events at issue and the trial. This particular inference is carried by a metaphor of physical disposition, which is especially influential because it reminds the readers of physical abuse. McDonald's opinion overreached its usefulness to bolster Homolka's credibility and story, particularly the parts which were inconsistent with Bernardo's story. The apparent wit and authority of McDonald's narrative indicates the necessity for careful judicial review of the language and other forms of scientific opinion. The irony is that Justice LeSage apparently relied upon McDonald's excerpt, at least in the justification of his legal judgment, perhaps to prejudice his rulings in favour of the admissibility of theories on Battered Spouse Syndrome, Normalization, and Post Traumatic Stress Disorder.¹⁴⁶

b. The *Johnson* Trial: An Autopsy of a Medical Coroner's Opinion

In the *Johnson* case, the prosecution qualified and examined Dr. David Katz, the physician who had conducted the autopsy on Caldwell, the victim.¹⁴⁷ The trial transcript suggests several stories, the most plausible core of which I now re-tell. Early in the afternoon on that eventful day, Caldwell and Johnson had an argument in the town's local bar. Caldwell had been upset over Johnson's contact with a female friend. Words were exchanged. Caldwell drew his razor.

vacuity" at trial; see chapter one introduction. Moreover, the general tone of the excerpts from Dr. McDonald's report as quoted by Justice LeSage indicates the former's intrigue with Homolka as a "diagnostic mystery"; *R. v. Bernardo* at 47.

¹⁴⁶ See chapter one introduction. I acknowledge that my own inquiry into style, linguistics, and forms of narrative coherency was rather cursory and incomplete in absence of a thorough review of Dr. McDonald's entire opinion and the context of its making. The risk of overanalysis or misinterpretation always exists. This exercise was only intended to illuminate some of the many problems in the communications by scientists and other courtroom actors, and the construction of interdisciplinary stories.

¹⁴⁷ Transcript, *supra*, note 132, at 20-5 (Dr. Katz's testimony).

The situation was somehow diffused. Although Johnson left the bar, Caldwell stayed, socializing and drinking for several hours. For whatever reasons, Johnson returned to the bar that evening carrying a fishing knife. Johnson and Caldwell confronted each other. They stepped outside the bar. At this point, the basic story radically dichotomizes along two plausible events. In the following struggle, Johnson maliciously knifed a now drunk and unarmed Caldwell. In the alternative story version, Caldwell had again drawn his razor. Johnson used his knife in self-defence against an aggressive Caldwell. The differences between the two story versions rest on whether Caldwell had pulled out his razor from his pants pocket, assuming he was sober enough to defend himself, and the mechanics of the attack, according to medical opinion about the knife wounds and cause of death. The background issues centre on Johnson's motive and Caldwell's state of drunkenness.

At trial, the Crown's expert, Dr. Katz, noted that Caldwell was drunk at the time of his death. The doctor's opinion was based upon two lab test results of Caldwell's blood and urine samples, which had identified an alcohol content of 0.32 and 0.34 percent, respectively.¹⁴⁸ Dr. Katz and defence counsel for the accused, Frank Johnson, exchanged words:¹⁴⁹

Q. (Defence Counsel) So that your opinion in this case is that he might have been under the influence or been drunk, as a general proposition?

A. (Katz) Very, very likely that he was drunk.

Q. (Defence Counsel) As a general proposition.

A. (Katz) Yes.

Q. (Defence Counsel) But it does vary?

¹⁴⁸ Dr. Katz admitted that Caldwell had been dead for at least 10 to 12 hours prior to the taking of blood and urine samples.

¹⁴⁹ *Ibid.* at 24.

A. (Katz) It varies somewhat.

The exchange reflected a struggle between Dr. Katz, who had attempted to express his opinion as definitive, and defence counsel, who had evoked the doctor's generalization to show potential inaccuracies. Dr. Katz's initial conclusion of "[v]ery, very likely" was rather mysteriously transformed into a "general proposition" that "varies somewhat".¹⁵⁰ The exchange illustrates the transformative potential of considerate communication. Assuming that alcohol content is fixated upon death, and noting Caldwell's size (6'2" and approximately 200 lbs.), on the basis of common sense (or personal experience), the trier of fact may refer to the testimony of witnesses and physical evidence to roughly estimate Caldwell's state of drunkenness at the time of the incident. The trier of fact would likely compare her or his own opinion to that of Dr. Katz, and the version transformed through communications by defence counsel. An interdisciplinary story is generated from the contributions of the medical expert and legal counsel, in light of the trier of fact's stock stories and narrative typifications on the state of drunkenness. Where the credibility of Dr. Katz's opinion becomes "variable", a story arises about scientific error or procedural abuse, and so on. Defence counsel by the subtle use of language and other forms, and *estimating* the scientist's inclination to move to more abstract generalizations and areas of uncertainty, could lead Dr. Katz's responses, suggesting to the jury that the former had failed to make accurate observations, had failed to make valid and reliable medical opinions, or perhaps, had conspired against the accused (i.e. by declaring that the razor was in the victim's rear left pants pocket). In practice, the ethics of lawyers restrict the latter questions, in absence of some evidentiary foundation.

¹⁵⁰ Defence counsel repeatedly used the phrase "general proposition", language which any scientist is unlikely to refute in light of its common use for the results of scientific method, including hypothesis formation.

After reviewing the autopsy results, Dr. Katz located the stab wound to Caldwell's left chest by demonstrating on his own body. With medical jargon and apparent authority, he explained that the stab wound had extended through the rib, left lung, and into and almost through the heart. Defence counsel suggested to Dr. Katz that the "stab wound was caused by a knife in an upward direction", perhaps indicating that the accused was acting in self-defence by merely holding the knife outwards.¹⁵¹ Dr. Katz responded:

A. [Katz] No sir, it was impossible to tell the direction of the thrust.

Q. [Defence Counsel] You have no opinion on that subject?

A. [Katz] I do not.

Q.[Defence Counsel] Well, if you were to consider a situation where a person were holding a knife in his hand and someone, a victim, were to run at that person, is it possible from your examination that the victim, in fact, ran up on the knife that was being held by the assailant in this case?

A. [Katz] It is impossible to distinguish between the knife having been thrust by someone else or the person approaching the knife.

The language of "thrust" invoked by Dr. Katz may be the result of defence counsel's leading question (i.e. "knife in an upward direction"), or may indicate Dr. Katz's own intuition and personal beliefs, aside from the lack of scientific proof and factual foundation, that Johnson did (or did not) "thrust" the knife into Caldwell as a matter of self-defence.¹⁵² In this exchange,

¹⁵¹ Transcript, *supra*, note 132, at 25.

¹⁵² Dr. Katz apparently employed the word, "thrust", in an everyday sense: "to push or drive with force"; *Webster's Ninth New Collegiate Dictionary*. Inherent tension, however, exists from the other definitions of "thrust", particularly between the definitions of "a push upwards", and a "sideway force"; *Webster's, ibid*. The word "thrust" may be defined narrowly as counter to gravitational forces, or broadly, to act against any resisting force, whether vertical or horizontal in direction. The genealogy of the "push upwards" prong of "thrust" may indicate its common acceptance within the discipline of applied mechanics (i.e. the thrust of a rocket or jet engine upwards). In the *Johnson* case, the "push upwards" definition of "thrust" suggests that the accused acted in self-defense by swinging or holding the knife in an upwards motion. Although the latter comments will seem speculative to many readers, others may disagree and claim

defence counsel led the expert down an avenue of explanation, to perhaps neutralize Dr. Katz's opinion. The hypothetical in this excerpt suggested an alternative story favourable to the accused.¹⁵³ Dr. Katz, however, remained ethically steadfast in his opinion that one cannot distinguish between the two plausible story events at issue, as based on the evidence and knife mechanics. Upon re-examination, the prosecutor asked about the degree of force required for such a stab wound:¹⁵⁴

A. [Katz] Considerable force is required to penetrate as far into the body and into the heart as was...

Here, Dr. Katz simply acknowledged that considerable force was required for the stab wound, whether it was derived from running into the accused (a force generated in resistance to the motion of an external body mass), or the accused's stabbing motion (a force generated by the pivotal action of elbow and arm), or a combination of the two actions.¹⁵⁵ Legal counsel for both parties did not offer expert opinion in the areas of engineering mechanics, biophysics, human kinetics, and other related fields, to establish, if possible, a range of physical forces potentially generated by each event. As the prosecution noted in summation, it hardly seemed commonsensical for Caldwell to run into the knife from two to four feet away, unless he was very drunk or perhaps enraged.¹⁵⁶ Assuming Johnson had drawn his knife, some defensive manoeuvre by Caldwell was likely to have occurred during the time interval corresponding to

support for their views.

¹⁵³ The hypothetical was confusing, if not syllogistically inconsistent, since the main issue of "running into the knife" is first given as a basic assumption. The framing by the initial assumption may have prejudiced the following answer by Dr. Katz.

¹⁵⁴ Transcript, *supra*, note 132 at 25.

¹⁵⁵ *Ibid.*

¹⁵⁶ *Ibid.* at 83-7.

a separation distance of two to four feet.¹⁵⁷

The prosecution's story was strongly supported by Dr. Katz's discovery (during the autopsy) of a folded razor in the left rear pocket of Caldwell's pants. Caldwell was right-handed. The defence counsel in its summation argued that Caldwell, after receiving a deep stab to the heart, switched the razor to his left hand, and placed it back into his rear left pocket.¹⁵⁸ This defence argument was rather tenuous in its reliance upon the ability of an individual (and who was likely drunk) to rationally function for several seconds after experiencing a knife driven through his ribs, left lung, and into but not completely through his heart. Would someone as badly wounded as Caldwell have the energy and motive to place the razor back into his pant pocket? In Pennington and Hastie's reenactment of the *Johnson* trial, a mock jury began their deliberations with the issue of the razor's location, and the direct observations of Dr. Katz:¹⁵⁹

Juror 4. I don't think that the razor was ever pulled.

Juror 9. It is inconceivable that after a mortal wound, that the razor could be put away.

Juror 10. Yes, and the doctor did testify to the fact that the razor was in his back pocket.

The language and other forms used by Dr. Katz and legal counsel for both sides generated several plausible story events.¹⁶⁰ Dr. Katz's characterization of the degree of force required,

¹⁵⁷ I acknowledge, however, that these conclusions are rather speculative in absence of a trustworthy foundation of evidence.

¹⁵⁸ *Supra*, note 132 at 79-83.

¹⁵⁹ R. Hastie, S. Penrod, & N. Pennington, *Inside the Juror*, *supra*, note 32 at 154-5. The discussion by the mock jury then turned to the details of the physical attack, and the drunkenness of Caldwell; *ibid*.

¹⁶⁰ The communications by an expert witness may in effect "lead" legal counsel. And yet, counsel, at least in cross-examination, may present leading questions to test the credibility of an expert, and the accuracy of her findings. The considerate communications between the expert and legal counsel *lead* to some circularity.

the drunkenness of Caldwell, and the location of the razor, were key elements over the range of plausible stories. Dr. Katz's opinion, and each juror's belief of his story about the autopsy results, and his integrity, seemed to have influenced at least some of the jurors. The prosecution's summation relied upon Dr. Katz's opinion as an objective, neutral, stable reference for various key points based on the physical evidence, and the testimony of other witnesses.¹⁶¹

Pennington and Hastie concluded that jurors simultaneously develop stories involving the characterization of the parties, and "causal and intentional relations" among evidence, which fall under the different verdict categories and the requisite legal elements of human motive, actions and consequences.¹⁶² From the experiments with a mock jury, the authors suggested that the jurors' recall was less accurate on the technical evidence concerning the knife wound because of the rather complex testimony of Dr. Katz.¹⁶³ The *Johnson* case provides a brief illustration of how the language and other forms of scientists and lawyers spin "considerate communications", and generate interdisciplinary stories, sometimes to prejudice fact-finding.

2. Scientific Opinion in Appellate Judgments: Institutional Stories and the *RJR-MacDonald* Case

The *RJR-MacDonald* case illustrates confluences of scientific facts, legal norms, and judicial politics within the justificatory discourses of appellate courts.¹⁶⁴ The case involves the

¹⁶¹ Transcript, *supra*, note 132 at 85-6.

¹⁶² R. Hastie, S. Penrod, & N. Pennington, *Inside the Jury*, *supra*, note 32 at 204-9. In the *Johnson* case, the jury considered the verdict categories of first and second degree murder, manslaughter, or not guilty by self-defence; *ibid.*

¹⁶³ R. Hastie, S. Penrod, & N. Pennington, *Inside the Jury*, *ibid.* at 81.

¹⁶⁴ *R. v. RJR-MacDonald Inc.*, [1995] S.C.J. No. 68 (LaForest, L'Heureux-Dubé, Gonthier and Cory JJ. dissenting), rev'g (1993), 102 D.L.R. (4th) 289, [1993] R.J.Q. 375, 53 Q.A.C. 79, 48 C.P.R. (3d) 417, rev'g Chabot J. (1991), 82 D.L.R. (4th) 449, [1991] R.J.Q. 2260, 37

intersections of law and science in light of several institutional stories. By judicial politics, this thesis refers to narrative acts and institutional stories which support or undermine the roles of courts or Parliament to assess social science evidence in making and interpreting law.

In *RJR-MacDonald*, the government and tobacco producers generated interdisciplinary stories primarily on the theme of institutional constraints on authority and expertise - namely, the access to social science evidence on the effects of tobacco advertising, and government regulations on the same. The tobacco producers argued that the federal government had broadly worded the *Tobacco Products Control Act* (hereinafter, the TPCA) to supersede provincial jurisdiction over property and civil rights, and to violate the tobacco producers' freedom of expression under the *Charter*. The producers' factual stories and legal arguments were thematically centred on the image of an overbearing government and its product, the TPCA, as "paternalistic" and "totalitarian" in nature. The tobacco producers' story of institutional abuse was apparently accepted by Justice Chabot at trial. In contrast, the other justices at various court levels elaborated different "institutional stories", involving various storylines about the politics of the judiciary, and the court's lack of access to the social sciences. The underlying issue was the judiciary's consideration of scientific discourses and knowledge-claims to support institutional stories and *Charter* section one arguments. This thesis now focuses on the tobacco advertising prohibitions of TPCA s.4 (See Appendix B).

The Justices in *RJR-MacDonald* considered the probativeness of social science evidence, and whether or not the totality of such evidence met a civil standard of proof under the freedom of expression provision of *Charter* s.2(b), and the guarantee of rights and freedoms of s.1. The legal judgments at various court levels partly relied on interdisciplinary stories of social science,

C.P.R. (3d) 193, granting motions for declaratory judgment (the following references are to Quicklaw page numbers). See Appendix B for the relevant legislation.

law, process of proof, and politics. The case formally rested upon whether or not the TPCA was justifiable under *Charter* section 1, as guided by the *Oakes* criteria of rational connection, proportionality, and minimal impairment. The government led social scientific opinion, primarily in the fields of advertising/marketing and psychology, to show causation between tobacco advertising and consumption. The Court sought to answer the question of whether or not these disciplines had yet developed definitive conclusions on the causal link, against a civil standard of proof. The government suggested that for the relevant issues at hand the social sciences had been developed only to the extent of the interests of the tobacco industry. In opposition, the tobacco producers argued that the experts testifying for the government were biased, and that the government also had failed to disclose commissioned social science studies on the effectiveness of alternative means of advertising prohibitions. The defendants contended that the disclosure of these specific studies was integral to their proof of the government's less-than-minimal impairment.¹⁶⁵ In rebuttal, the government suggested that the tobacco producers could have obtained these social science studies through legal process, but instead, as a litigation strategy, deliberately did not make any attempts to obtain such disclosure.¹⁶⁶ The *RJR-MacDonald* case subsequently became a battle of social science evidence, and the parties (in)access thereof.

The decisions and legal judgments by the justices in *RJR-MacDonald* centred on the opinions of marketing experts and psychologists. The scientific evidence nurtured various interdisciplinary stories. In this case, the central theme was institutional, namely, the lack of access to the social

¹⁶⁵ The defendants' argument was supported by the five-justice majority of the Supreme Court; *ibid.* at 278 (per McLachlin J.) & 291 (per Iacobucci J.).

¹⁶⁶ The government's position was apparently accepted by Justice LaForest, speaking on behalf of the four dissenting justices; *ibid.* at 219.

sciences by the judiciary, government, and tobacco producers, in order to meet the civil standard of proof under the *Charter*.

At trial, Justice Chabot prefaced his formal judgment with several paragraphs reflecting his disillusionment with the legal institution's attempts to resolve complex issues of social science.¹⁶⁷ This initial narrative frames the subsequent justificatory discourse. The reader can achieve a sense of the judicial politics prior to engaging Justice Chabot's judgment:

"The Court must emphasize at the outset that the role of the courts is not and must not be to arbitrate scientific debates. The Court does not have command of scientific knowledge, innate or acquired, *nor does it have the background necessary to comprehend the whole scientific dialectic, particularly when it gives rise to debates among experts*. The role of the Court is rather to evaluate the evidence placed before it, with the assistance of experts whose role it is to inform the Court as objectively as possible (in principle at least) as to the current state of knowledge in a given field of science. An expert's written report or his [sic] testimony does not necessarily bind the Court. *It is a question of relevance, probative value and credibility*. If in the end it proves necessary or relevant to the litigation, the Court reaches a conclusion on the validity or otherwise of a scientific affirmation on the preponderance of evidence. In pronouncing on a relevant scientific question, the Court does not intend to decide authoritatively or conclusively any scientific debate. Its decision bears solely on the case before it."¹⁶⁸

Justice Chabot went on to discredit much of the scientific opinion led at trial, with specific criticisms directed at the New Zealand *"Toxic Substances Board Report"*, and the report of Dr. Harris. For example, Justice Chabot quoted one passage of Dr. Harris' testimony, which seems convoluted, if not comical in form and substance. Dr. Harris had concluded:

"In respect of the international data, I've given an enormous number of qualifications and described the problem, but I find, again, the international data not to contradict the proposition that advertising may affect overall consumption. As I stated in the beginning, I have not considered all of the relevant social science data, so I do not feel it's appropriate for me to be a person to draw an ultimate conclusion concerning the overall effect of advertising on consumption. However, I find the evidence that I have examined from my point of view to be in the direction of an effect. That is, I do not find with scientific

¹⁶⁷ *RJR-MacDonald* (1991), 82 D.L.R. (4th) 449, [1991] R.J.Q. 2260, 37 C.P.R. (3d) 193, at 11-3 (QL).

¹⁶⁸ *Ibid.* at 11 (emphases are mine).

certainty that there is a stimulative effect of advertising on overall consumption, but I do find that the weight of the evidence I've examined falls in that direction."¹⁶⁹ [Footnote excluded]

Justice Chabot ruled irrelevant, or discounted the probative value of most of the expert opinion adduced at trial:

"...much of the expert scientific evidence relating to the effects of tobacco on health, however voluminous and instructive, was nevertheless, with respect, irrelevant to the case and, in the humble view of the court, served merely to colour the debate unnecessarily." [footnote excluded]

...

"Although there would have been much to say about certain exaggerations, not to say enormities and generalizations unworthy of a truly scientific mind, offered by some of the experts heard during the trial, this is not the issue."¹⁷⁰

Justice Chabot concluded on the issue of whether tobacco advertising affects consumption:

"In the face of all the documentation available prior to the adoption of the Act [TPCA], this possibility goes no further than speculation and certainly does not rise to the level of a probability."¹⁷¹

Justice Chabot also identified the underlying issue as not whether a causal link exists, but whether the state has "sufficient information in its possession to allow it to reach a decision and to act".¹⁷²

At the Quebec Court of Appeal, Justice Brossard, in dissent, essentially deferred to Justice

¹⁶⁹ *Ibid.* at 158-9 (QL). Dr. Harris' abundant use of "I" (rather than third person), in conjunction with the compartmentalization of sentences and expressed uncertainties, creates a rather unusual narrative, indeed.

¹⁷⁰ *Ibid.* at 99-100 (QL), per Justice Chabot (Que. Sup. Ct.). Justice Chabot ruled irrelevant expert opinion on the link between tobacco products and health problems. The issue before the court was the connection between advertising and tobacco consumption. Justice Chabot's conclusion of irrelevancy, however, was surprisingly narrow in light of his consideration, though *in obiter*, of all the stages of a *Charter* section one analysis, including the proportionality between the TPCA and its effects.

¹⁷¹ *Ibid.* at 159.

¹⁷² *Ibid.* at 100.

Chabot's criticism of expert opinion at trial. Justice Brossard concluded with striking confidence:

"Though psychology may still be an imprecise science, incapable of specifying with certainty where the influence of positive advertising on consumption among young people begins and ends, the record shows abundantly, through the evidence and the expert reports alike, that *marketing and advertising, on the other hand, are precise sciences*, encompassing many facets each of which addresses and is directed to fixed objectives and selected population segments. In other words, it is possible to control advertising without necessarily doing away with it entirely."¹⁷³

At the Supreme Court of Canada, Justice LaForest, speaking on behalf of the four dissenting justices, disagreed with Justice Chabot's factual findings. Justice LaForest reviewed the social and legislative facts (i.e. the studies on advertising/marketing and psychology) found at trial, and acknowledged problems of inaccessibility to the social sciences. Justice LaForest then deferred to Parliament and its enactment of the TPCA, suggesting that Parliament best represents the interests of many groups in society, and is more capable than courts in assessing the knowledge-claims of social scientists. The majority justices, in two separate opinions, held otherwise, contending that the government should have adduced expert opinion showing that informational and brand preference advertising alone affects tobacco consumption. The majority and dissenting opinions in *RJR-MacDonald* primarily differ by the extent to which social science evidence is expected from the government for its proof of minimal impairment, particularly in light of the (in)accessibility of the social sciences, and the respective roles of the judiciary and Parliament in assessing social science and various societal interests as a matter of law.

Justice LaForest specifically identified three expert opinions adduced at trial which focus on the causal connection between tobacco advertising and consumption.¹⁷⁴ In his report, "*The Functions and Management of Cigarette Advertising*", Dr. Richard Pollay stated (at 34):

¹⁷³ *Ibid.* at 284-5 (Que. C.A.) (emphasis is mine).

¹⁷⁴ See defence counsel's criticism of these three expert reports, as quoted and accepted in the dissenting Quebec Court of Appeal judgment per Brossard J., at 208-219.

"Advertising and promotional activities and communication serve to induce many changes in the public's perceptions, creating: more positive attitudes toward smoking and smokers; less consciousness and fear of any unhealthy consequences of smoking; a stronger self-image among smokers; more confidence of some social support for smoking; and perceptions that smoking is a cultural commonplace to be taken for granted. To smokers it is a reminder and a reinforcement, while to non-smokers it is a temptation and a teacher of tolerance."¹⁷⁵

Justice LaForest also considered Dr. Joel Cohen's report, *"Effects of Cigarette Advertising on Consumer Behaviour"*, which criticizes the potential separation of brand loyalty from other types of advertising (at 44):

"Cigarette advertising cannot be created so that it is only effective for brand switching. The ads are developed (and researched) to insure that they are maximally effective against targeted segments. Nonsmokers in those segments (e.g. young males) have similar motivations and concerns, and there is no way to lower a "magic curtain" around them in order to shield them from the enticement of such advertising."¹⁷⁶

Justice LaForest also regarded Dr. Michael J. Chandler's opinion, *"A Report on the Special Vulnerabilities of Children and Adolescents"*, which states (at 19):

"Adolescents are predisposed, as a function of their persistent cognitive immaturity, to view public disagreements between "experts" as evidence that everything is simply a matter of subjective opinion and a licence to "do their own thing". A warning by Health and Welfare Canada on a publicly advertised product would provide them with just the sort of evidence they feel is required to justify doing whatever impulsive thing occurs to them at the moment."¹⁷⁷

It is a rather mysterious process where a Supreme Court Justice cites social science evidence, without elaborating how the evidence supports factual propositions or legal interpretations. Although the above three excerpts from expert reports contain some overgeneralization and forms of subjectivity, many assertions were considered at least noteworthy by the majority and dissenting justices. Should the discourses and knowledge-claims

¹⁷⁵ *Ibid.* at 201 (S.C.C.). The last sentence of Dr. Pollay's report, with its abundant alliterations, sounds more like a Sunday sermon than a scientific study.

¹⁷⁶ *Ibid.* at 201-2.

¹⁷⁷ *Ibid.* at 203.

of social scientists require more careful scrutiny? For example, Dr. Chandler's concluding statement, *supra*, seriously stretched the most favourable notions of objectivity and neutrality. His final sentence that a government warning would provide "the sort of evidence they [adolescents] feel is required to justify doing whatever impulsive thing occurs to them at the moment" carries tones (if I may suggest for criticism) that identify Dr. Chandler's cynicism and scepticism towards the abilities and values of adolescents.¹⁷⁸ Perhaps, this statement merely reflects his frustration in researching a rather "imprecise science". I question whether Dr. Chandler's opinion deviated from the norms of his own discipline, and whether the statement, *supra*, would be acceptable across other disciplines and cultures of society. The most striking observation of the latter three excerpts of social scientific opinion is that they all purport (with appropriate tones of closure) to conclusively explain with precision the links between advertising and tobacco consumption. The adversarial system seems to urge the experts to attribute human motivations with such accuracy, as shown above; each expert *knows* (rather than "believes") that her or his generalizations are true.

Judges at all court levels have an important filtering role, and should be aware of how language and other forms sometimes embed stereotypes and prejudices, particularly in the communication of unanchored inferences by experts. Justice LaForest recognized that the above-mentioned expert reports were not "definitive or conclusive", but merely represent a "body of opinion".¹⁷⁹ He apparently used the experts' narratives as justification, according to his own meta-story of scientific facts, legal norms, and politics, under an overarching theme of the

¹⁷⁸ Dr. Chandler's opinion labels adolescent smokers in a rather narrow, stereotypical fashion: they are rebellious, impulsive, perhaps irresponsible, but most certainly susceptible to tobacco advertising.

¹⁷⁹ *Ibid.* at 204.

courts' deference to Parliament on issues of social policy. Justice LaForest generally supported a normative inquiry into *Charter* section one justification, rather than the strict adherence to a logical threshold. His focus on judicial politics apparently anchored an institutional story about the lack of access to social science, and its role within a normative framework of law.

Justice LaForest concluded that the social science evidence adduced represents a "body of opinion" that supports the TPCA, and justifies the infringement of freedom of expression under the minimal impairment branch of *Charter* section one. The government was better able than the courts to fairly decide complex issues of policy and science, especially in the situation where the tobacco industry has tremendous political force, and which has sponsored much of the science at issue to date.¹⁸⁰ The tobacco producers have through public media infiltrated deeply into the cultures of Canadian society, for example, by the sponsorship of various events, and the promotion of "healthy" images at individual and social levels. The question one begs to ask is how scientists themselves have become influenced by the tobacco industry's self-promotion as a cultural artifact.¹⁸¹

¹⁸⁰ The statistics indicate that approximately 6.7 million Canadians, or 28 percent of Canadians over the age of 15, consume tobacco products; R. Ferrence, *Trends in Tobacco Consumption, 1900-1987* (1989), from the Ministry of Health and Welfare, as introduced in *RJR-MacDonald*. Smoking causes the premature death of over 30,000 Canadians annually; see N. Collinshaw, W. Tostowaryk & D. Wigle, *Mortality Attributable to Tobacco Use in Canada* (1988) 79(3) Can. J. Pub. Health. This estimate may be out of date or conservative; see *The Vancouver Sun* (Tuesday, March 19, 1996) (medical experts estimate that smoking causes the premature death of over 45,000 Canadians a year).

¹⁸¹ See the report in *The Globe and Mail* (Monday, March 17, 1997), which discussed how federal agricultural scientists worked for many years to assist the tobacco industry to increase the level of nicotine in cigarettes, while other branches of the government sought to reduce the incidence of smoking. The Canadian government apparently spent millions of dollars on a tobacco research project at the Delhi Research farm in Southern Ontario. The tobacco industry through the Canadian Tobacco Research Foundation contributed many more millions of dollars to the same project. After acknowledging that nicotine levels must be maintained in cigarettes for their saleability, the chief scientist for Agriculture Canada concluded, "Well, I can tell you...that as a research scientist, I don't make policy"; *ibid.*

The judicial use of social science by appellate courts raises a number of concerns which range from the entrenchment of majoritarian values, to the import of individual values that are far "off the wall". In the *RJR-MacDonald* case, the various institutional stories by the appellate justices involved constructions of authority and expertise. The constructions of scientific opinion and interdisciplinary stories, as we have seen in *RJR-MacDonald*, raise concerns over the self-awareness and ethics of appellate judges.

3. Interdisciplinary Stories in Literature: Courtroom Drama in Melville's *Billy Budd, Sailor* and Dostoyevsky's *The Brothers Karamazov*

Some parallels may be drawn from ways to make sense of interdisciplinary stories in literary works to the use of expert opinion in actual legal cases. Herman Melville's *Billy Budd, Sailor* illustrates considerate communication by professional experts, in this case, the ship's surgeon, and Captain Vere as lawyer and co-adjudicator.¹⁸² In *Billy Budd*, Captain Vere invoked measured forms to convince a military tribunal that a young sailor, Billy Budd, must hang for striking dead an officer, John Claggart. The surgeon considered Captain Vere's rush to judgment against Billy Budd as potentially an aberration - a question of sanity or insanity. Fyodor Dostoyevsky's *The Brothers Karamazov* also sharply criticizes the instrumental use of psychiatric opinion, and its influences on story developments at trial.¹⁸³ The two literary works, *Billy Budd* and *The Brothers Karamazov*, illustrate how the story narrator, especially as an authoritative figure, may consider the audience and its reception of "measured forms". The construction of authority rests on the audience's access to experts' discourses, norms, and

¹⁸² H. Melville, *Billy Budd, Sailor* (H. Hayford & M. Sealts, eds., Bantam Books, 1984).

¹⁸³ F. Dostoevsky, *The Brothers Karamazov*, transl. by A. MacAndrew (Bantam Books, 1970).

knowledge-claims - the sinews of interdisciplinary stories in courtroom drama.

Through third person narrative, Melville tells the story of Billy Budd, which takes place around the year 1797 at a time of war, and just after a series of infamous mutinies, including what Melville refers to as the "Great Mutiny" at the Nore.¹⁸⁴ *Billy Budd* was a young sailor who had been transferred from the English merchant ship, the "Rights-of-Man", to the man-of-war, the "Bellipotent".¹⁸⁵ Captain Vere, the commander of the *Bellipotent*, maintained tight control over the ship's crew. Soon after his enrolment, the good-natured Billy Budd was befriended by many of the crew. The "Handsome Sailor", they called him. As Melville describes, Billy's "moral nature was seldom out of keeping with his physical make".¹⁸⁶ He personified a harmony of outer form and inner substance, a balance of femininity and masculinity. "Handsome is as handsome does", would say Claggart, the master-at-arms (at 31). As the story evolves, Claggart for rather mysterious reasons accused Billy of conspiracy to commit mutiny. This accusation occurred in the presence of Captain Vere, who then questioned the accused whether he was guilty. Unable to verbally express himself, Billy reacted by striking Claggart down, causing his death. Under the *Mutiny Act*, Captain Vere convened a military tribunal, which in the end found Billy guilty, and sentenced him to death - to be hung by the halter. Although he questioned Captain Vere's mental state, the ship's surgeon remained covert,

¹⁸⁴ *Ibid.* at 11-13.

¹⁸⁵ *Ibid.* at 6-7. The name *Bellipotent* could represent a blend of the words "belligerent" and "omnipotent", a combination (or even opposition) of assertiveness or feistiness, and widespread authority or unlimited power. Melville seems to navigate the abandonment of the formal "rights of man [sic]" and moral nature, to the instrumentalism of the language and other forms of those individuals and institutions, such as law and science, which tend to have widespread authority and power.

¹⁸⁶ *Ibid.* at 3. Melville described Billy: "To deal in double meanings and insinuations of any sort was quite foreign to his nature" (at 7).

preferring not to disclose his sentiments to the other officers.

The text of *Billy Budd* illustrates how experts' discourses may involve "measured forms" of "considerate" communication. Melville's omniscient narrator threads together five events, moving to and from the specific events, while suggesting several versions of the whole story. The key events are Billy's striking down Claggart; the surgeon's opinion of Captain Vere's state of mind; Captain Vere's testimony at trial as to what happened; his legal arguments; and the surgeon's forensic analysis of Billy's death. By "measured forms", Melville considerably communicates to establish an ongoing dialectic over generations of readers, like ourselves.

Returning to the story, the reader was told that Billy Budd had a speech impediment. He would stutter in some circumstances of fear and frustration. Upon Claggart's accusations of conspiracy to commit mutiny, Billy could not speak up. Captain Vere who was struck by Billy's disposition, exclaimed, "Speak, *man!*... Speak! Defend yourself!" (at 49). But Captain Vere soon realized that Billy had problems speaking. He comforted Billy, "There is no hurry, my *boy*. Take your time, take your time." But, as Melville describes:

"Contrary to the effect intended, these words so fatherly in tone, doubtless touching Billy's heart to the quick, prompted yet more violent efforts at utterance - efforts soon ending for the time in confirming the paralysis, and bringing to his face an expression which was as a crucifixion to behold. The next instant, quick as the flame from a discharged cannon at night, his right arm shot out, and Claggart dropped to the deck. Whether intentionally or but owing to the young athlete's superior height, the blow had taken effect full upon the forehead, so shapely and intellectual-looking a feature in the master-at-arms; so that the body fell over lengthwise, like a heavy plank tilted from erectness." (at 50)

Billy had considered Captain Vere's (rather patronizing) utterance, but could not verbally respond in light of his speech impediment. Instead, Billy performed his innocence by striking down Claggart. This passage suggests that Billy had reacted to Vere's insinuation that a man (but not a boy) would have defended himself physically against Claggart's accusations.

At this point, the gendered nature of Billy should be discussed. As John Claggart knew,¹⁸⁷ and in fact dwelled upon, Billy was both feminine and masculine.¹⁸⁸ With ill-will or sweet passion, Claggart vacillated in his deep gaze over the "Handsome Sailor". After one final glance before Captain Vere and his accusations, it was Billy who shot out at Claggart to topple him "lengthwise, like a heavy plank tilted from erectness" (at 32). In other words, the "measured forms" of Claggart and Vere, as social (and specifically, gender) constructions, seemed to have *caused* Billy's actions contrary to his moral nature. Here, Billy would have spoken if he could, but instead a physical response blasted out, no less a construction of Vere's insinuating forms which Billy in his naivete sensed as pre-judgmental - an injustice to his moral nature. The reader's assessment of Billy's response is socially and culturally contingent. And that *is* Melville's doing.

Returning to the same passage, one can see that Captain Vere's simile of "discharged canon

¹⁸⁷ As Richard Weisberg, J.C. Smith, and others have noted, John Claggart's initials, J.C., may stand for Jesus Christ; Lecture, U.B.C. (Fall, 1994).

¹⁸⁸ *Ibid.* at 32. On one occasion, Claggart comes across spilled soup on the "scrubbed gun deck":

"Now when the master-at-arms noticed whence came that greasy fluid streaming before his feet, he must have taken it - to some extent wilfully, perhaps - not for the mere accident it assuredly was, but for the sly escape of a spontaneous feeling on Billy's part more or less answering to the antipathy on his own. In effect a foolish demonstration, he must have thought, and very harmless, like the futile kick of a heifer, which yet were the heifer a shod stallion would not be so harmless." (at 32)

Melville had previously narrated the same event:

"...the greasy liquid streamed just across his path. Stepping over it, he was proceeding on his way, without comment, since the matter was nothing to take notice of under the circumstances, when he happened to observe who it was that had done the spilling. His countenance changed. Pausing, he was about to ejaculate something hasty at the sailor, but checked himself, and pointing down to the streaming soup, playfully tapped him from behind with his rattan, saying in a low musical voice peculiar to him at times, 'Handsomely done, my lad! And handsome is as handsome did it, too!'" (at 26/7)

at night" is juxtaposed to the metaphorical language, "arm shot out", "dropped to the deck", and the simile of a "heavy plank tilted", all suggesting that Claggart's demise was the consequence of a shot from either Billy's arm, or a cannon fired, perhaps, by mutineers.

Immediately afterwards, Captain Vere called for the surgeon. Upon confirmation of Claggart's demise, Captain Vere exclaimed, "Struck dead by an Angel of God! Yet the angel must hang!" (at 51). Melville's next chapter (only three paragraphs long), describes the surgeon's consideration of his superior's excited exclamations, which were "so at variance with his normal manner" (at 52). Melville summarized the surgeon's predicament over Captain Vere's state of mind:

"Was he unhinged?...But assuming that he is, it is not so susceptible to proof. What then can the surgeon do? No more trying situation is conceivable than that of an officer subordinate under a captain whom he suspects to be not mad, indeed, but yet not quite unaffected in his intellects. To argue his order to him would be insolence. To resist him would be mutiny." (at 52)

By remaining silent, the surgeon suspended his ethics. He became rudderless, acquiescing to the forceful flow of Vere's "discourse of power" and authority under martial law. The surgeon ignored his own intuition, as well as the rationalism of science, choosing instead to steer a course along Captain Vere's agenda. As an aside, Melville refused to provide much detail about the surgeon, and even failed to grace him with a proper name. The surgeon supposedly reflects an objective, neutral view to reality - an allegiance to nature, in contrast to Captain Vere's allegiance to the King. However, as we find out later, the surgeon is not so jagged as one might generally expect of nature, but rather polished in *his* communications.

The next chapter unfolds the dramatic trial scene. Melville begins by inviting his readers to participate:

"Who in the rainbow can draw the line where the violet tint ends and the orange tint begins? Distinctly we see the difference of the colours, but where exactly does the one first blendingly enter into the other? So with sanity and insanity. In pronounced cases there is

no question about them. But in some supposed cases, in various degrees supposedly less pronounced, to draw the exact line of demarcation few will undertake, though for a fee becoming considerate some professional experts will. There is nothing namable but that some men [sic] will, or undertake to, do it for pay.

Whether Captain Vere, as the surgeon professionally and privately surmised, was really the sudden victim of any degree of aberration, every one must determine for himself [sic] by such light as this narrative may afford.¹⁸⁹ (emphasis is mine)

Melville suggests that some professional experts, or readers, like ourselves, may have an interest to become considerate, and to venture opinions on difficult scientific, legal, moral and other issues. In the latter passage, Melville's use of the word "afford" connects the reader with an interest, whether social, cultural, or otherwise, to the professional expert *for hire*. The boundaries between "expert" and reader become hazy; here, the narrative temporarily moves away from the ethics and perspectives of the narrator (that is, Captain Vere, the surgeon, and Melville himself), to spotlight the reader's contributions. As Richard Weisberg asserts, the reader's recognition of considerate communication tends to move focus from analysis of utterances or narrative elements, to *consideration* of whole structures of narratives and stories, and in so doing, to cast light on moral issues.¹⁹⁰ Melville's story is re-interpreted over and over by generations of readers who each have stories about reading Melville's story, in light of stories about Melville's telling of the story.

Returning to Melville's text, Billy's trial was before a three-officer court appointed by Captain Vere. As the sole witness, Captain Vere testified as to what happened between Claggart and Billy. He agreed it was incredible to think that Budd could have been involved in the mutiny. But Captain Vere, true to his name, abruptly and forcefully responded to a question

¹⁸⁹ *Ibid.* at 52.

¹⁹⁰ R. Weisberg, "Accepting the Inside Narrator's Challenge: *Billy Budd* and the 'Legalistic' Reader." (1991) 1 *Cardozo Studies in Law & Literature* 27 at 38.

initially directed at Billy, who doing to his nature could not communicate a response. Captain Vere shot into the discourse with legal argument in hand, as many a defence lawyer would, *except* in this case, contrary to the accused's interests. Captain Vere argued:

"Quite aside from any conceivable motive actuating the master-at-arms, and irrespective of the provocation to the blow, a martial court must needs in the present case confine its attention to the blow's consequence, which consequence justly is to be deemed not otherwise than as the striker's deed." (at 57)

The argument in essence was that the law requires no proof of intent, provocation was not a defence, and that there exists a legal presumption of causation between Billy's blow and Claggart's death. To Billy, it was an overwhelming sense of betrayal, an injustice, a devastating blow to his moral nature. In short, Captain Vere's "measured forms" had tied a noose around Billy's neck ready to suspend him.

The reader may become more aware of Captain Vere's agenda of domination by more closely scrutinizing his discourse. For example, in the latter passage, Captain Vere shifts from his descriptive stance as a witness, employing the term "must needs" to suggest an imperative duty or requirement. The three officers of the court also seemed surprised by Captain Vere's utterance, *supra*. As Melville wrote, "Couched in it seemed to them a meaning unanticipated, involving a prejudgment on the speaker's part. It served to augment a mental disturbance previously evident enough." (at 57)

Captain Vere then exchanged his supposedly descriptive stance for an authority position - the legal co-adjudicator who oversaw the martial court. Here, again, Captain Vere used measured forms, in light of the "illegal" conduct and the urgency of the situation - the potential for the ship's crew to commit mutiny, particularly at a time of war - convincing the court that Billy Budd *must* hang. Now, I will not disclose the details of Captain Vere's legal argument, but will say that it was dramatic, combining style and substance to effect rhetorical force. At one

point, "Starry Vere" sensed the officers' uncertainty:

"But something in your aspect seems to urge that it is not solely the heart that moves in you, but also the conscience, the private conscience. But tell me whether or not, occupying the position we do, private conscience should not yield to that imperial one formulated in the code under which alone we officially proceed."¹⁹¹

And subsequently,

"War looks but to the frontage, the appearance. And the Mutiny Act, War's child, takes after the father. Budd's intent or non-intent is nothing to the purpose." (at 60)

Here, the metaphor of child and father seems to parallel Captain Vere's relationship to Billy Budd, especially at that critical moment - when the boy, Billy, let loose and struck Claggart. Melville again draws his readers into the debate of whether or not Captain Vere or John Claggart himself (and *not* Billy Budd) in fact *caused* Claggart's death. Billy symbolizes a fusion of form and moral substance, objectivity and subjectivity - a natural mirror who (which) reflects those who go before him (it). Was the issue about Billy's mental state? That is, whether he had intent or non-intent to commit homicide. Or was the issue about provocation, in its legal sense, as Melville had mentioned in a previous passage.¹⁹² Or was the issue one of physical causation by either Billy Budd, *or* Captain Vere. The solutions involve social constructions contingent on the situated reader. And this lasting measure was Melville's doing.

The members of the martial court, some of them reluctantly, concluded that Billy must face the halter. The possibility of sentence mitigation was suspended, again by Captain Vere's

¹⁹¹ H. Melville, *supra* at 60. Although Captain Vere had identified the clash of military duty under the *Mutiny Act* and *his own* moral scruples, he argued against interpretive leniency: "But do these buttons that we wear attest that our allegiance is to Nature? No, to the King." *ibid.* at 59. Melville entered into the ongoing debate between natural law and legal positivism, focusing on how "measured forms" separate from moral substance.

¹⁹² See *ibid.* at 57.

arguments.¹⁹³ Just prior to his demise, Billy uttered, "God bless Captain Vere!", causing a "resonant sympathetic echo" from his fellow seamen.¹⁹⁴ Billy had become not only self-aware, but also aware of others' constructions of himself. After Billy Budd's hanging, Captain Vere dissolved the gathered crew before the customary time; he again invoked "measured" forms because of "what he deem[ed] to be temporarily the mood of his men" towards mutiny. (at 74)

Later, Melville described the phenomena of Billy's hanging. Upon being hanged, Billy's body did not undergo spasmodic movement as expected from common experience and the scientific knowledge of the times. Afterwards, the purser, who Melville characterized as accountant-like, questioned the surgeon about Billy's lack of body movement upon hanging - that is, the lack of "muscle spasm". The surgeon replied carefully and considerately, with the precise measurement often attributed to experts:

"Your pardon, Mr. Purser. In a hanging scientifically conducted -and under special orders I myself directed how Budd's was to be effected - any movement following the completed suspension and originating in the body suspended, such movement indicates mechanical spasm in the muscular system. Hence the absence of that is no more attributable to will power, as you call it, than to horsepower - begging your pardon." (at 71)

The purser pressed further:

"But this muscular spasm you speak of, is not that in a degree more or less invariable in these cases?" (at 71)

¹⁹³ Captain Vere ended his rather lengthy theatrical performance before the tribunal by pointing out that the proceedings "should be summary"; he stressed that the tribunal could make only one of two choices, "condemn or let go"; *ibid.* at 61.

¹⁹⁴ *Ibid.* at 71. These parting words, or suspended "measured forms" (measured in the sense that they were directed at the conscience of Captain Vere), symbolize the release of Billy's spirit from physical body, prior to his hanging. Here, the separation of substance and form occurs through the words of Billy, rather than an action (such as Billy's fated "cannon ball" strike against Claggart). The readers are not confined to the literal words of the text, but may actively interpret the same. Forms and substance often separate and unite to perhaps create a sense of action - the PERFORMATIVE.

The surgeon then discussed one possible hypothesis, which involved the analogy of winding a watch too far, causing its mechanism to snap. Within the realm of science, however, the latter approach led nowhere. The surgeon conceded that in Billy's case the event was phenomenal "in the sense that it was an appearance of the cause of which is not immediately to be assigned" (at 72).

The purser was not content with this answer, and cross-examined the surgeon further on the issue of whether or not the unexplained absence of muscle spasm resulted from Billy's own restraint, rather than suspension by the halter. The surgeon retorted:

"'*Euthanasia*, Mr. Purser, is something like your *will power*: I doubt its authenticity as a scientific term - begging your pardon again. It is at once imaginative and metaphysical - in short, Greek. But,' abruptly changing his tone, 'there is a case in the sick bay that I do not care to leave to my assistants. Beg your pardon, but excuse me.' And rising from the mess he formally withdrew." (original emphasis)

The surgeon's angst for such non-scientific language as "euthanasia" and "will power", which he specifically labelled as "Greek", leads the reader to reconsider Melville's prior characterizations which had used many allusions to Greek mythology. The surgeon overtly refused to consider the forms of communication from outside, instead segregating them from the scientific enterprise, where supposedly discourse reflects knowledge - a correspondence to reality. The surgeon, however, seemed to fathom a moral struggle with his outer forms; perhaps, he had lost faith in the rationalism of science.

Near the end of the novella, Melville again communicates to the readers:

"The symmetry of form attainable in pure fiction cannot so readily be achieved in a narration essentially having less to do with fable than with fact. Truth uncomprisingly told will always have its ragged edges; hence, the conclusion of such a narration is apt to be less finished than an architectural finial." (at 75).

In other words, the reader should be prepared to fill in details to perhaps smoothly close the story of *Billy Budd*. The paucity of information at times given by Melville comforts the present

generation of readers, but also allows future generations to achieve an understanding.¹⁹⁵ Melville's narration directs the readers through various ethical struggles on controversial issues of science and justice, those which have recurrently transpired and will continue to do so over the history of humankind. Future readers will actively consider whether in *Billy Budd* justice was formally served, whether Vere was insane, or sane though prejudicial, and whether Billy in fact committed euthanasia. Melville tells the readers about his own views on science, justice, and literary theory, and in so doing, elaborates a set of social and cultural assumptions. He cordially invites the readers' participation.

Melville's *Billy Budd, Sailor* focuses on the power and authority of experts who invoke considerate communication to the exclusion of "outsiders", such as Billy Budd. And Melville, himself, through his narration and characters uses considerate communication to keep the readers aware of the folds between form and substance, objectivity and subjectivity, scientific facts and legal norms, masculinity and femininity, and so on. Under a facade of the formal *Mutiny Act* and the norms of the times, of war and potential mutiny, Captain Vere subjectively steered the facts and legal argument against Billy Budd. As a symbol of moral nature and natural law, Billy had challenged the formalism and the positivism that supported Vere as *the* authority.

Melville through his story, *Billy Budd, Sailor*, attempts to consider the reader's awareness and cultural assumptions. We all have stereotypes - stock stories and narrative typifications that guide cognitive processes leading to our understandings. The literary dimensions provide textual space for us to cognitively roam, where the author's text faces the cultural assumptions of the reader. In particular, the pragmatics (such as performative acts) of telling a story may channel the reader's movement to gain some overall sense of the text, beyond literary-cognitive spaces.

¹⁹⁵ R. Weisberg, *Poethics*, *supra*, note 5 at 111.

Melville considerably communicates to readers from various cultures and disciplines. He tells the reader that there is "a considerate way of historically treating [events]", such as the Great Mutiny (at 12). The reader may consider these events through disciplinary lenses, such as law, literature, science, sociology, history, and religion. The cultural diversity and multi-disciplinary backgrounds of Melville's readers support an ongoing dialectic and the engagement of various interpretive strategies, norms, and knowledge-claims. At times, Melville directs the readers with precise measurement, sometimes abruptly suspending them from the positivism and literalness of *the* text. For example, Melville's narrative slows down - his narrative acts alter the time-space relations -around story events where form and substance separate, such as Billy's striking down of Claggart, and consequently, at Billy's hanging. Otherwise, Melville describes the actions of Billy as spontaneous and innate - he had a sense for, but did not *know* the meaning of justice. Whereas, Captain Vere and the surgeon used drawn out, scientized forms of considerate communication. Captain Vere witnessed Billy's actions. The surgeon observed Captain Vere's actions. But the reader, in order to relate the actions of these two characters, must go through the narrator. Who is the narrator? Is the narrator withholding information that may be useful to the reader? Is the narrator being provocative, just as Billy (if he could speak at the time) might have argued against Claggart? Should we focus on the ethics of the narrator, just as the narrator focuses on us, the readers? Do we search for the narrator's unity of inner self and outer forms in a specific situation and point in time? Or, should we, as readers, look at our own unity?

The objective, esoteric language of scientists and lawyers can suspend the audiences' judgments - a rather de-humanizing process that closes stories and limits participation. The danger is that when experts' discourses are seen as neutral and objective, the focus moves away from not only the experts (as narrators), but also the audiences (as readers). The spotlight turns

to the text of expert opinion *itself* - its logic and reason, its embedded though covert social and cultural assumptions. In *Billy Budd*, Captain Vere used a scientized language which in effect suspended and marginalized Billy's voice. Similarly, the surgeon whose actions were suspended under the fear of Captain Vere's authority - a fear that perhaps would have subsided *but for* the lack of scientific proof of Captain Vere's abnormal mental state. These suspensions of action apparently arose from the language of the abstract, the conceptual, and the hypothetical, rather than the language of the real, the concrete, and the contextual. For example, Captain Vere before the martial court and under the *Mutiny Act*, dismissed the legal argument of "provocation", which would involve consideration of a wider factual context, focusing instead on the presumption that a blow was to have a "consequence justly...to be deemed not otherwise than as the striker's deed" (at 57). Captain Vere's argument in favour of a presumption was forcefully advanced by a discourse of the hypothetical - the potential for the ship's crew to commit mutiny - which became a key issue of law and policy during Billy's trial. Or, perhaps, this constructed hypothetical identifies Captain Vere's irrationality. As we have seen, the surgeon had developed a hypothesis. In relation to the phenomenon of Billy's lack of spasmodic movement upon hanging, the surgeon employed the analogy of a watch spring mechanism that was overwound to the breaking point. The hypothesis, however, dissolved as the surgeon realized that it was too abstract and untestable. At that moment, in that context, the hypothesis could not be demonstrated or proven, just like the question of Captain Vere's abnormal mental state.

Our stories of reading *Billy Budd* also arise in part from stories about Melville's telling of a story. Each reader interprets the narration of expert opinion to constitute in part the narrator, such as the expert. Melville, however, actively demonstrates a caveat against the separation of

form and substance, or the telling of a story, and the story itself. Any communications of specialized and rather inaccessible knowledge-claims to human nature, such as the question of sanity and insanity, and the application of normative systems, such as the law, relates to the narrators' self-awareness and sensitivity to the acts of narration, or the stories about telling stories, and the consideration of potential influences on audiences.

In *Billy Budd, Sailor*, Melville warned of one's ill-fate from the abandonment of moral nature. Although Melville acknowledged the fallacies of positive law, he also revealed that the covert consideration of natural law is dependent upon the situated applicator (one who interprets and uses law), and not universal values. Melville demonstrated that the recognition of interrelationships of form and substance may influence one's views to communications between disciplines, such as law and science. The discourses of Captain Vere and the surgeon illustrate how authors, even Melville himself, invoke language and other forms to sometimes instrumentally sidestep one's responsibilities to society, to displace humanity. Or, the "measured forms" may perhaps form a basis of self-delusion.

An author may considerably communicate to actively engage and include the reader, leaving room for her or his social and cultural experiences. On the other hand, considerate communications can be a mere facade over dominant norms and subjective interests, or "discourses of power" which suspend and exclude audiences. Melville's novella, *Billy Budd, Sailor*, ends with a poem - a poetic reproach that seems to express his own sentiments - through the words of Billy Budd, who at the time was locked away in a cell on the night before his hanging:

"O,

'tis me,

not the sentence

they'll suspend."¹⁹⁶

In practice, rhetoric within the courtroom, and perhaps scientific forums, tends to support the separation of form from substance, facts from law, logic from values, ethics from poetics. This rationalist approach, however, seems to lack a critical edge for inquiry into legal-factual disputes.

In *The Brothers Karamazov*, Fyodor Dostoyevsky tells a story about the very passionate and sensual Dimitri (also known as Mitya), one of four brothers, who stood trial for the murder of his father. Dostoyevsky's novel is complex and convoluted with psychological realism. In particular, *The Brothers Karamazov* illustrates the use of psychiatric opinion during fact investigation and Dimitri's trial. In the chapter entitled, "*The Medical Experts and a Pound of Nuts*", Dostoyevsky with satire expressed his thoughts on the use of medical opinion in resolving factual-legal issues in the courtroom. The chapter begins with the conclusion that the medical experts at Dimitri's trial were not helpful, but had merely "contributed a touch of comedy" because of their differences.¹⁹⁷

Dostoyevsky characterized in detail the three medical doctors introduced by the prosecution at Dimitri's trial. The prejudices and partisanship reflected by the communications of these doctors colour the reader's own judgment of Dimitri's conduct. First, Dr. Herzenstube, an old, local doctor testified to the abnormality of Dimitri's mental processes, which he declared could

¹⁹⁶ H. Melville, *supra* at 78 (the form is mine). Melville tells us that the poem was a collaborative work by the *Bellipotent's* crew after Billy's death - a sort of post-mortem, social construction of Billy's voice; *ibid.* Melville's novella, *Billy Budd, Sailor* was left unfinished at the time of his death, and published 33 years later, in 1924; see intro, *ibid.* The irony is ominous. One may even suspect that Melville purposefully suspended this life-ending text for discovery by future generations.

¹⁹⁷ F. Dostoyevsky, *The Brothers Karamazov*, *supra* at 807.

have been deduced from both past and present acts.¹⁹⁸ Dr. Herzenstube with a degree of seriousness typical to his profession supported the latter proposition with evidence of Dimitri's unusual behaviour in entering the courtroom.¹⁹⁹ The doctor described the abnormality of the sensual Dimitri walking into the courtroom with his eyes stubbornly fixed ahead of him, without his "normal" admiration for the women who were seated on the left.²⁰⁰

Next, the learned doctor from Moscow testified that Dimitri's behaviour was "abnormal, and abnormal to the highest degree".²⁰¹ This "sharp and incontrovertible" doctor was very learned, indeed, with his "specialized and learned language" that had to be translated by the narrator for the reader's understanding.²⁰² The doctor from Moscow contended that Dimitri's actions just before the trial were "contrary to common sense", including the use of words which were "incomprehensible or meaningless in their context".²⁰³ The Moscow doctor refuted Dr. Herzenstube's claim, concluding his testimony with the assertion that, if anything, Dimitri in entering the courtroom should have looked to the right (and not to the women at the left) where defense counsel was seated - his only hope for the future.²⁰⁴

And finally, Dr. Varvinsky, a young local doctor, suggested that Dimitri was perfectly normal; all of Dimitri's actions could be accounted for by a range of emotions from jealousy and

¹⁹⁸ *Ibid.* at 808.

¹⁹⁹ *Ibid.*

²⁰⁰ *Ibid.*

²⁰¹ *Ibid.* at 809.

²⁰² *Ibid.*

²⁰³ *Ibid.*

²⁰⁴ *Ibid.* at 810.

anger to inebriation.²⁰⁵ The doctor noted that in entering the courtroom, Dimitri had done the right thing: he had shown his sanity by looking straight ahead to the presiding judge who would ultimately decide his fate.²⁰⁶ Upon hearing this testimony, Dimitri approvingly shouted from his seat: "Bravo, doctor, you tell 'em!".²⁰⁷

In final summation, the prosecutor discussed the medical experts' opinions, and then concluded that a more likely explanation was that Dimitri had been excessively emotional rather than predisposed to insanity.²⁰⁸ The prosecutor supported his argument with detailed elaborations of Dimitri's jealousy over his lover, Grushenka, and her relationship with his father, and how this motive related to the many minute details of a story of crime ending with Dimitri's patricide. The prosecutor, however, relied upon scientific opinion to characterize Smerdyakov, the bastard brother and the butt of Dimitri's accusations of patricide. Smerdyakov had allegedly suffered from an epileptic seizure at the critical point in time, near the crime scene. He was the focus of an alternative story of patricide that could have supported Dimitri's defence. Prior to Dimitri's trial, Smerdyakov had committed suicide in a "fit of violent madness".²⁰⁹ The prosecutor explained:

"According to psychiatrists of the highest standing, epileptics are inclined to constant, morbid self-condemnation; they are tormented by a feeling of guilt, which is often, of course, quite unfounded, and sometimes go as far as inventing sins and crimes for

²⁰⁵ *Ibid.*

²⁰⁶ *Ibid.*

²⁰⁷ *Ibid.* This holler was not the only one of Dimitri's outbursts at trial. Subsequently, Dimitri and his lover Grushenka reacted wildly to the opposing testimony of Katerina (also known as Katya), the third person since excluded from a passionate love triangle; *ibid.* at 832-33.

²⁰⁸ *Ibid.* at 844-5.

²⁰⁹ *Ibid.* at 851.

themselves."²¹⁰

Dimitri's trial focused on the evidence of Smerdyakov's epileptic fit, a medical phenomenon which, according to psychiatric experts, rendered Smerdyakov incapable of killing his father in spite of strong motives to do so.²¹¹

Fetyukovich, the defence counsel for Dimitri, in his final summation to the jury criticized the prosecutor's misuse of psychology:

"[T]he only reason I have dabbled in psychology here is to demonstrate to you that you can use it to arrive at whatever conclusions suit you best. It all depends on who uses it. Psychology tempts even the most responsible and serious people to create fictions, and they cannot really be blamed for that."²¹²

In summation, Fetyukovich recurrently expressed his theme that "psychology is a blade that cuts both ways".²¹³ In the end, the much-in-love Dimitri was convicted for murder.

Dostoyevsky's chapter on medical experts raises the reader's awareness of how psychology may be malleable in both ways to the extent of the interests of the author and the audience. The literary works, *Billy Budd*, *Sailor* and *The Brothers Karamazov* illustrate how the use of psychiatric opinion within interdisciplinary stories may vary according to the views of the author and the audience, or specifically, the author's consideration of the audience, and the audience's consideration of the author. Interdisciplinary stories may have powerful effects on courtroom dramas and trial outcomes. Dostoyevsky's two novels, *Crime and Punishment* (1865-6), and *The Brothers Karamazov* (1879-80) reflect his fascination with the psychological dimensions of crime

²¹⁰ *Ibid.*

²¹¹ *Ibid.* at 852-3.

²¹² *Ibid.* at 878.

²¹³ *Ibid.* at 876, 878, 883 & 887.

and fact investigation, including the use of realist psychology.²¹⁴ Dostoyevsky, like other famous storytellers who have actually suffered injustices before the law, turned his own page to investigate the ethics and conscience of actors legal processes.

4. Authorial Responsibility and Professional Ethics

The Morin inquiry recently brought to the public's attention some very disturbing practices by expert witnesses.²¹⁵ Guy Paul Morin went through two trials and a conviction for first degree murder primarily based on the evidence of two dubious informants, and the hair and fibre analysis by Stephanie N., a specialist from the government crime laboratory. Guy Morin was subsequently exonerated after novel DNA testing excluded him as the source of semen found on the child victim's underpants. At the two trials, Stephanie had testified about a "match" (her language) between fibres found at the crime scene and those within Morin's car. At the following *Morin* inquiry, legal counsel, James Lockyer, Tim Lipson, and Earl Levy, cross-examined Stephanie N.:

[counsel for Mr. Morin]: "Are you now telling us your evidence didn't really advance the case one way or the other?"

[expert witness]: "That's right."

...

²¹⁴ Fyodor Dostoevsky, himself, was tried for the charge of sedition. He was sentenced to death and nearly executed, before being saved by a last minute reprieve to four years of hard labour in the prison camps of Siberia; *ibid.*, intro by A. MacAndrew, transl; F. Dostoyevsky, *Crime and Punishment*, intro. and transl. by D. Magarshack (Penguin Books, 1966). Dostoevsky's "crime" - sedition against Tsar Nicholas I - was to read someone else's letter in a small gathering which politically criticized the views of one of Gogol's works; see *Crime and Punishment*, *ibid.* at 11.

²¹⁵ The *Morin* Inquiry was commissioned to investigate the wrongful conviction of Guy Paul Morin. See *supra*, note 87; chapter 1 (note 55) & chapter 2 (note 61).

[counsel for C.L.A]: "You seem disturbed that your findings may have been twisted and distorted by the police and prosecutors in this case."

[expert witness]: "As to the strength of them, yes."

...

[counsel for Mr. Morin]: "The judge isn't the expert. The Crown attorneys aren't the experts. You are the expert... Did it ever occur to you that the jurors - who were hearing evidence of hair and fibres for the first time in their lives - might be getting led down the garden path?"

[expert witness]: "No, it never did occur to me."²¹⁶

...

[counsel for prosecutors]: "I'm going to suggest you are really trying to exonerate yourself of any potential responsibility for the conviction of Guy Paul Morin by shifting the blame or responsibility to the Crown or police."

[expert witness]: "No, I don't think so. I think my fault would be that [my] opinions were not expressed or understood as they should have been."²¹⁷

Professional ethics may be defined as a set of values and principles which govern individuals (and groups) within a profession.²¹⁸ The courtroom communications by experts, lawyers and judges are grounded in professional ethics and other sites of normativity which generally evolve

²¹⁶ The *Morin Inquiry* transcript, reported in *the Globe and Mail* (April 10, 1997). The jurors who convicted Morin acknowledged that they had considered the hair and fibre evidence as factual and reliable, and a key factor in their decision; *the Globe and Mail* (April 8, 1997).

²¹⁷ The *Morin Inquiry* transcript, reported in *the Globe and Mail* (April 11, 1997).

²¹⁸ See generally, the *Legal Profession Act*, S.B.C. 1987, c. 25; *Provincial Court Act*, R.S.B.C. 1979, c.341; *Supreme Court Act*, R.S.C. 1985, S-26; *Crown Counsel Act* S.B.C. 1991, c. 10; *Medical Practitioners Act*, R.S.B.C. 1979, c.254; *Psychologists Act*, R.S.B.C. 1979, c.342; *Forensic Psychiatry Act* R.S.B.C. 1979, c.139; *Engineers and Geoscientists Act*, R.S.B.C. 1979, c. 109. Since statutory law is considered an act of government, and therefore subject to the *Charter*, the interpretation of the above *Acts*, including regulatory codes of ethics, should be consistent with *Charter* values.

with society.²¹⁹ Professional codes, disciplinary rules, and other textualized norms to some extent elaborate the actors' responsibilities. The norms underlying authorial responsibility and professional ethics warrant close attention as potential sites of hegemony, especially against outsiders, such as Guy Paul Morin. This section briefly sets forth two statutory examples of how professions attempt to govern themselves.

Under the *Medical Practitioners Act*, R.S.B.C. 1979, c.254, the College of Physicians and Surgeons of British Columbia regulates the ethics of medical practitioners. The duties and objects of the College include:

2.1 (2)

- (d) to establish, monitor and enforce standards of practice to enhance the quality of practice and reduce incompetent, impaired or unethical practice amongst members;
- (e) to establish and maintain a continuing competency program to promote high practice standards amongst members;
- (f) to establish a patient relations program to seek to prevent professional misconduct of a sexual nature;
- (g) to establish, monitor and enforce standards of professional ethics amongst members;

The Code of Ethics under the *Engineers and Geoscientists Act*, R.S.B.C. 1979, c. 109 provides another interesting example:

1. The Engineer will be guided in all his professional relations by the highest standards of integrity.
 - (a) He will be realistic and honest in the preparation of all estimates, reports, statements and testimony.
 - (b) He will not distort or alter facts in an attempt to justify his decisions or avoid his responsibilities.
 - (c) He will advise his client or employer when he believes a project will not be successful or in the best interests of his client or his employer or the public.
 - (d) He will not engage in any work outside his salaried work to an extent prejudicial to his salaried position.
 - (e) In the interpretation of contract documents, he will maintain an attitude of scrupulous

²¹⁹ See S. McGuire & R. MacDonald, *"Judicial Scripts in the Dramaturgy of the Small Claims Court"* (1996) 11:1 Cdn. J. of Law & Society 63 (discuss empirical findings on the attitudes of judges about their responsibilities in small claims court).

impartiality as between parties and will, as far as he can, ensure that each party to the contract will discharge the duties and enjoy the rights set down in the contract agreement.

- (f) He will not use his professional position to secure special concessions or benefits which are detrimental to the public, his clients or his employer.

- 5. The Engineer may express an opinion on an engineering subject only when founded on adequate knowledge and honest conviction.

- (a) In reference to an engineering project in a group discussion or public forum, he will strive for the use of pertinent facts, but if it becomes apparent to the engineer that such facts are being distorted or ignored, he should publicly disassociate himself from the group or forum.

The *Code of Ethics* advances a set of norms for each professional engineer's substantive work, as well as communications to clients and the public. The more obvious sites of normativity include an engineer's (the patriarchal language suggests a male engineer's) honesty, integrity, and responsibility to ensure a realistic factual basis, with adequate knowledge of all pertinent factors, while keeping in mind the interests of the general public and the client or employer. The *Code* requires that engineers be careful in their communications so as not to distort or alter facts to avoid responsibility. For example, the engineer should therefore be cautious in the use of considerate communication within the public forum of a courtroom where justice is paramount.

Further to recent discussions on professional ethics in Fyodor Dostoyevsky's *The Brothers Karamazov*, Herman Melville's *Billy Budd*, and the *Johnson* and *Morin* cases, I consider William Shakespeare's *Merchant of Venice* (1596-7) as an illustration of the authorial responsibility and ethics of a judge. For example, in the *Morin* case, *supra*, the judge interpreted the law and expert opinion, ruling that the latter was relevant and admissible, and therefore could be presented to the jury without risk of prejudice to fact-finding. In *Merchant of Venice*, the acting judge, Portia, literally interpreted a contractual provision to require certainty according to technological standards, and the state of science at the time. Portia instrumentally applied "the law" according to a specific set of positive, logical thresholds. With robust courtroom presence,

Portia communicated considerably, using "measured forms" to achieve her notion of justice.

Portia, *in cognito* as a local magistrate, adjudicated a civil action brought by Shylock, a Jewish merchant, who claimed a bond of forfeit against a competing merchant, Antonio. According to the literal text of the contract, the consequences of forfeit were Shylock's attainment of "a pound of flesh" nearest to Antonio's heart. For what appear to be spiteful reasons, Shylock mercilessly sought the pound of flesh against Antonio. The judge, Portia, at first glance declared that Shylock had a lawful claim to Antonio's flesh.(IV i, line 229) She recommended that Shylock have mercy, and to accept triple the bond's value, as offered by Antonio's friend, Bassanio. Shylock refused the offer. He chose to strictly act "by the law".(IV i, line 237) Portia, however, reconsidered the facts. She literally interpreted the contract, and declared that Shylock must obtain a mechanical balance to weigh the pound of flesh. Moreover, the presence of a surgeon was necessarily implied to ensure that Antonio does not bleed to death. Shylock countered by literally showing that the requirement of a surgeon was not stated within the four corners of the contract.(IV i, line 118) Shylock steadfastly remained by his legal position. Portia then reconsidered the law of Venice. She found that according to the law, if Antonio's blood is drawn, then Shylock's lands and goods would be confiscated by the State.(IV i, line 345) Portia also re-interpreted the Bond to require exactly one pound of flesh (within a "twentieth part"); the scale should not turn an "estimation of a hair" more or less.(IV i, line 324) Shylock knew his defeat, and attempted to leave. But Portia again turned to the law. This time she noted that if an "alien", such as Shylock, attempts to seek the life of a citizen, such as Antonio, then the alien must forfeit half of his property to the State (the other half goes to the victim), and the alien's life lies at the mercy of the Duke. (IV i, line 345) And so the irony unfolds. In the end, Shylock is granted *his* mercy.

Shakespeare's *Merchant of Venice* mocks the formalism of law, and as an aside, the

positivism of technological standards in adjudication. This classic play focuses on the ethics of the courtroom participants (Antonio, Bassanio and Shylock) and the Judge (Portia). Portia relied on measured forms in attempts to convince Shylock to have mercy on Antonio, avoiding the positivism of the law of contract. Before the courtroom audience, Portia eloquently spoke to Shylock:²²⁰

"The quality of mercy is not strained; it droppeth as the gentle rain from heaven upon the place beneath. It is twice blest; it blesseth him that gives and him that takes. 'Tis mightiest in the mightiest; it becomes the throned monarch better than his crown. His scepter shows the force of temporal power, the attribute to awe and majesty, wherein doth sit the dread and fear of kings; but mercy is above this scept'ed sway; it is enthroned in the hearts of kings, it is an attribute to God himself, and earthly power doth then show likest God's when mercy seasons justice. Therefore, Jew, though justice be thy plea, consider this: That, in the course of justice, none of us should see salvation. We do pray for mercy, and that same prayer doth teach us all to render the deeds of mercy. I have spoke thus much to mitigate the justice of thy plea; which if thou follow, this strict court of Venice must needs give sentence 'gainst the merchant there." (IV, i, lines 183-204).

Without a forthcoming resolution, Portia formally interpreted the Bond to require technological certainty (i.e. no blood spilt according to the surgeon, and exact weight by a mechanical scale). The reader, of course, is aware of Portia's interests in her love for Bassanio, Antonio's best friend.²²¹ The contemporary reader also faces questions about whether Shakespeare's play, and specifically, Portia's judgment was anti-semitic - perhaps, a reflection of the professional ethics and societal values of the times. The reader interprets Portia's judgment according to the state of technology and science of the present. But how would the judgment be rendered assuming that science and technology have advanced to the point that

²²⁰ See also *Billy Budd*, *supra*, at 59-60. By intensity and timing, Portia's speech was similar to the virtuoso narrative of Herman Melville's Captain Vere. In contrast, a less-than-merciful Captain Vere invoked considerate communications to persuade the court to strictly apply the *Mutiny Act*, ultimately causing Billy Budd's execution.

²²¹ When Bassanio offered Shylock three times the Bond's value, he spoke not of his own money, but rather the money of his love, the very wealthy Portia.

Shylock could exercise the bond by reliably carving out exactly one pound of Antonio's flesh without spilling a drop of blood, or causing his death? The technological standards in *Merchant of Venice* were employed as sites of normativity within considerate communications towards Portia's notion of justice. The literal interpretation affected the legal participants to an extent according to the technological (and scientific) knowledge, norms and politics of the times. As science and technology advance, and the larger context changes, would the literalness of Portia's interpretation tend to have less dramatic consequences for Shylock's views?

The various interdisciplinary stories between scientific facts and legal norms within *Billy Budd*, *Sailor*, *Merchants of Venice*, *Brothers Karamazov*, and the *Johnson* and *Morin* cases illustrate ways to make sense of text, and to recognize sites of normativity. A poethics of interdisciplinary stories focuses on those sites which underpin authorial responsibility and professional ethics over communications, in light of situated audiences. Similarly, each audience has a responsibility to interpret the communications, in light of the situated author. The focus on sites of normativity also turns our attention to each actor's sense of humanity.

D. A Poethics of Interdisciplinary Stories

A poethical approach, as set forth in chapter one, may be applied to interdisciplinary stories and the law of evidence. A poethics of interdisciplinary stories (between scientific facts and legal norms) involves consideration of not only the content of the stories, but also the stories about telling stories. A poethical approach shifts focus from the purported objectivity of scientific opinion as an oral or written text, where the scientist's role as third-person, omniscient narrator is essentially covert, to focus on the authorial responsibility of "telling" an interdisciplinary story, in light of situated audiences. A poethics of telling interdisciplinary stories rests on authorial responsibility to consider how the audience might interpret the same.

Similarly, each trier of fact has a responsibility for listening to interdisciplinary stories, in light of the situated authors. A poethics of reading interdisciplinary stories requires consideration of each author's story about telling the story, as well as the content of the story itself; the reading involves interpretive movement back and forth between atomistic and holistic conceptions. Thus, a poethical approach considers interactions of (or dialogues between) the author and the audience through the text - where the modernist and postmodernist would momentarily meet.

Under a poethical method, the judge would apply the admissibility criteria to novel scientific opinion, with consideration of sites of normativity and authorial responsibility. A poethical method also re-frames the concept of relevancy (and *prima facie* admissibility), as will be shown in chapter four, moving beyond the rationalist separation of logic from values, to unities of form and substance. Poethics support the consideration of the larger structures of narratives and stories which facilitate the trier of fact's access to the overall "production" of scientific opinion from its origins to the rhetoric of courtroom practices.

An inquiry into "Law and Literature" draws upon a "story jurisprudence", illustrating a plurality of possible ways to make sense of admissibility criteria and interdisciplinary stories. A poethics focuses on the judicial awareness of outsiders' inaccessibility to relationships between form and substance. When one considers theory in practice, the only way to escape the continuous quagmire of postmodernism is to identify, as best we can, the sites of normativity, and the language and other forms (or aesthetics) by which we move between these sites. The sites of normativity are reflected by the practices, codes, and rules of interpretive communities. The sites assume a relatively fluid core - the shared structures of signification that enable the recognition and challenge of unethical communications. The potential for hegemony between disciplines and cultures, however, remains problematic. A poethics of interdisciplinary stories

would at least support a more participatory society with wide access to story narratives from various cultures and disciplines.

E. Conclusion

Within the courtroom, scientific experts may support specific stories, and persons who benefit from those stories. The authorial responsibility and professional ethics of scientists, lawyers and judges underpin the development of interdisciplinary stories and decision-making by triers of fact. A poethics of interdisciplinary stories supports the courtroom actors' awareness of relationships between authors and audiences through texts. The realities of text warrant as much attention as the text of realities. If speech acts, then action speaks. How can we effectively communicate temporal and spatial orders to show what supposedly caused something else? Within judicial processes, interdisciplinary stories between legal norms and scientific facts provide some detail about the overall production of science and the logic of causation. The unusual bedfellows of law, science and literature provide disciplinary perspectives to the (de)construction of interdisciplinary stories. This thesis has discussed modern and postmodern approaches to the audience's interpretation of interdisciplinary stories, informally illustrating problems of the "hermeneutic circle" and its generative philosophy.²²²

Interdisciplinary stories about novel scientific opinion are compared to legal elements (which loosely frame narratives acceptable to law and society), perhaps according to the trier of fact's

²²² The hermeneutic circle involves movement from an initial interpretation of the whole meaning of the text, to analyses of its elements in relation to the whole text, to a revised understanding, and so on. The elements are interpreted with social and cultural expectations of an understanding of the whole. See generally I. Maclean, "Reading and Interpretation", in A. Jefferson & D. Robey (Eds.), *Modern Literary Theory* (London: Batsford Academic and Educational, 1982); S. Feldman, *supra*, note 15 at 1063-8. The term "hermeneutic circle", not surprisingly, has been interpreted differently by scholars; see S. Feldman, *ibid*.

stock stories and narrative typifications which are based on personal experiences, demonstrated logic, and common sense rules.²²³ The scientist's authoritative language of causation or association, however, can suggest plausible, coherent stories between scientific facts and legal norms. Where novel scientific opinion is ruled irrelevant or otherwise inadmissible, a specific story version, such as those which are "off the wall", may be excluded from fact-finding. On the other hand, scientific opinion may prejudicially support alternative stories, without a foundation anchored in evidence, common sense, and shared communications between disciplines and cultures. Scientific opinion may also support the introduction of otherwise inadmissible evidence as a factual foundation for the former.

The trier of fact's access to the forms and content of interdisciplinary stories leads us back to chapter one, where this thesis had initially defined expert opinion as the skill, experience, or knowledge inaccessible to most persons. Any access to scientific opinion and interdisciplinary stories assumes some structures of signification shared across the interpretive communities of scientists, lawyers, judges, jurors, and other actors. For scientific opinion, the courtroom audience will likely gather a clearer sense of meaning if the scientist uses real and concrete language that performs and demonstrates scientific method, relating to the familiar narrative typifications of scientific testing that many persons have experienced through public media. In particular, scientific opinion seems most influential, whether probative or prejudicial, if it is demonstrable through the physical and emotional senses according to plausible stories consistent with the other evidence.

²²³ See W. Wagenaar, P. van Koppen & H. Crombag, *Anchored Narratives: The Psychology of Criminal Evidence* (Hemel Hempstead: Harvester Wheatsheaf, 1993); B. Jackson, *Making Sense in Law*, *supra*, note 2 at 177-184; W. Bennett & M. Feldman, *Reconstructing Reality in the Courtroom* (New Brunswick: Rutgers University Press, 1981).

CHAPTER FOUR: ADMISSIBILITY OF NOVEL SCIENTIFIC OPINION

Under a poethical approach, evidence scholars may rethink the rationalist criteria for the admissibility of novel scientific opinion. The approach supports a broader inquiry into the judge's mediation of scientific opinion through evidentiary concepts such as logical relevancy, necessity (in assisting the trier of fact), probative value, reliability, prejudicial effects.¹ The poethical method seems particularly useful when applied to an interdisciplinary story between scientific facts and legal norms. As Donald Nicolson asserts, "law and fact cannot be separated because law and the discourses with which it is associated are part of the process by which facts are defined".² The poethical method explores potential unities of form and substance, rather than dwelling on the rationalist separation of logic and values, fact and law.

A poethics of law and interdisciplinary stories re-frames the concept of relevancy. The current approach of logical relevancy disregards the narrative constructions and interactions of courtroom actors, instead privileging communications of formal, analytical, and logical essence. In contrast, the notion of legal relevancy seems consistent with a poethical approach which acknowledges the constructions of scientific opinion in the courtroom. Under the poethical method, evidence scholars and practitioners focus on access to sites of normativity within interdisciplinary stories and law. The method seeks out points of resistance for outsiders, counter to the hegemonic forces of dominant paradigms within law and science. The poethical method thus turns on the authorial responsibilities of scientists, lawyers, and judges, in light of the situated jurors. The method can supplement the existing rules and principles for admissibility

¹ *R. v. Mohan*, [1994] 2 S.C.R. 9.

² D. Nicolson, *"Truth, Reason and Justice: Epistemology and Politics in Evidence Discourse"* (1994) *The Modern L. Rev.* 726 at 737.

of novel scientific opinion.

A. Admissibility Criteria for Novel Scientific Opinion

Under the current law in Canada, relevant evidence is *prima facie* admissible, but subject to the exclusionary rules of law and policy. Judges consider probative value and prejudicial effects and other policy concerns, including undue consumption of time, and the potential for misleading or confusing the jury. The law requires that evidence first be logically relevant in that it makes a factual proposition more or less probable than if the evidence were not led.³ The factual proposition must be material to a legal issue. Although the law is relatively stable,⁴ evidence scholars continue to debate whether the concept of logical relevancy should include consideration of value-laden inferences and background assumptions - constructions which can prejudice fact-finding.⁵

³ *R. v. Morris*, [1983] 2 S.C.R. 190 (relevancy of newspaper clipping on sources of the supply of heroin, linking to the accused's import of narcotics). The United States *Federal Rules of Evidence* R.401 sets forth a similar definition of logical relevancy: "to make the existence of any fact that is of consequence to the determination of the action more probable or less probable than it would be without the evidence". See also *R. v. Mohan*, [1994] 2 S.C.R. 9 at 20-3, where Justice Sopinka, on behalf of the entire court, rather hesitantly discussed the distinction between logical and legal relevancy, prior to formally supporting the logical relevancy standard.

⁴ *R. v. Mohan*, *supra*. The issue of relevancy at trial and pre-trial (for disclosure and production of evidence) has recently generated much judicial debate; see *R. v. Seaboyer*, [1991] 2 S.C.R. 577 (relevant evidence excluded under rape shield provisions); *R. v. O'Connor*, [1995] 4 S.C.R. 411; *R. v. Carosella* (February 6, 1997) (S.C.C.) (the Crown failed to disclose and produce potentially relevant evidence of a crisis counsellor's notes from an interview with the rape victim).

⁵ See R. Delisle, "The Admissibility of Expert Evidence: A New Caution Based on General Principles" (1994), 29 C.R.(4th) 267 at 267/8; D. Paciocco, "Techniques For Eviscerating the Concept of Relevance" (1995), 33 C.R. (4th) 365. See M. MacCrimmon, "Trial by Ordeal" (1996) 1 Can. Crim. L.R. 31; M. MacCrimmon & C. Boyle, "Equality, Fairness and Relevance: Disclosure of Therapists' Records in Sexual Assault Trials (Canadian Institute for the Administration of Justice Conference: Filtering and Analyzing Evidence in an Age of Diversity, October 13-16, 1993). See also B. Watson, "The Psychosocial Courtroom: Toward a New

1. Logical Relevancy

"Admissibility is determined, first by relevancy, - an affair of logic and experience, and not at all of law; second, but only indirectly, by the law of evidence, which declares whether any given matter which is logically probative is excluded."⁶

The classical approach to admissibility estranges a minimal threshold of probativeness as an "affair of logic and experience", from value-laden issues of law and policy. In particular, logical relevancy attempts to separate the probativeness of the link between the evidence and a factual proposition, from the integrity of the evidence - the reliability of its factual foundation.⁷ Under logical relevancy, the judge considers the probativeness of the evidentiary link apart from its original context (i.e. the discovery or production of evidence). The judge determines the link's probativeness, without regard for potential influences on the jury. At this stage, the judge focuses on the inference itself (the text) rather than its author or the audience. For testimonial evidence, the notion of logical relevancy suspends the narrativisation of pragmatics (the communications that contextually link evidence to a factual proposition) from semantics (the meaning of the link - its probativeness and prejudice). This first stage basically disregards authorial responsibility over testimonial evidence in context.

Theory of Argumentation" (1996) 11:1 Cdn. J. of Law & Society 99 (reasoning and argumentation in the courtroom, including those under the concept of relevancy, involves a synthesis of logical and emotional modes).

⁶ J. Thayer, *Preliminary Treatise on Evidence at Common Law* (1898), from R. Delisle, *Evidence: Principles and Problems* (2nd ed.) (Carswell, 1989) at 9/10. Some debate, however, exists over whether logical relevancy is a question of fact or law. See *R. v. Mohan*, *supra*, at para18 ("[r]elevance is a matter to be decided by a judge as question of law"); *Cloutier v. R.*, [1979] 2 S.C.R. 709. But see R. Delisle, "*The Admissibility of Expert Evidence...*", *supra*, note 5 at 267 ("relevancy is 'an affair of logic and experience, and not at all of law'"); *Morris v. R.* (1983), 36 C.R. (3d) 1 (S.C.C.). See also R. Delisle's annotation to *Corbett v. R.*, [1988] 1 S.C.R. 670, in (1988) 67 Cdn. Bar Rev. 706 at 711 (a judicial ruling on relevancy is an exercise of discretion "according to *his* logic based on *his* life experience").

⁷ For the integrity of testimonial evidence, the judge also considers the trustworthiness of communications, including the communicator's perception, memory, and sincerity.

The logical relevancy threshold dichotomizes the issues of admissibility and weight, and therefore the roles of judge and jury. The judge has jurisdiction over the admissibility question, whereas the trier of fact (the jury or judge) weighs the evidence. Opposing legal counsel may counter the *prima facie* admissibility of logically relevant evidence.⁸ In practice, this "presumptive" shift seems to influence the pragmatics of discourse, typically to motivate the argument of opposing counsel in favour of the exclusion of evidence on the basis of law or policy.⁹

⁸ See *R. v. Mohan*, [1994] 2 S.C.R. 9 (logically relevant evidence is "*prima facie* admissible") at 16. Although cases to date have avoided the language of "presumption", the effect of current law is to channel counsel's arguments according to a hierarchy of logical relevancy, the exclusionary rules, and the exceptions to the exclusionary rules. If relevant evidence renders a factual proposition more or less probative, a legal consequence would follow from its exclusion. Does the conclusion of logical relevancy in effect create a rebuttable "presumption" of admissibility? I believe so. See P. Giannelli, "*The Admissibility of Novel Scientific Evidence: Frye v. United States, a Half-Century Later*" (1980) 80 Columbia L. Rev. 1197 at 1246 ("[i]n effect, the relevancy approach places the burden on the party opposing admissibility (citation omitted)"). See also R. Bessner, "*The Admissibility of Novel Scientific Techniques in Criminal Trials: Voice Spectroscopy*" (1987-88) 30 C.L.Q. 294 at 311-13. See generally, R. Delisle, *Evidence*, *supra*, note 6 at 142-7 (discussion about factual and legal presumptions). The language of relevancy may itself privilege evidence by suggesting admissibility on the basis of logic and experience, especially within a more liberal paradigm where judges tend to error on the side of inclusion of evidence (sometimes with the mediation of jury instructions) rather than its exclusion. The judge, however, can be convinced by opposing counsel's arguments that relevant evidence should be excluded on a particular basis of law or policy. The judge is obliged to at least consider (though not expressly in a legal judgment) the potential exclusionary rules or exceptions in deciding for or against admissibility. In courtroom practices, these judicial decisions may occur within seconds, allowing brief opportunity for opposing counsel to convince the judge that an exclusionary rule should apply to relevant evidence. For the admissibility of scientific opinion, however, a more time-consuming *voir dire* is held. Judges, however, may subsequently screen the scientist's language and other forms during testimony; *R. v. Millar* (1989), 71 C.R. (3d) 78 (Ont. C.A.).

⁹ See H. Trautman, "*Logical or Legal Relevancy - A Conflict in Theory*" (1952) 5 Vanderbilt L. Rev. 385 at 413 (the separation of logical relevancy from exclusionary rules and other policy considerations assists "understanding and evaluation in terms of a more rational and efficient administration of judicial trials"). Trautman also argued that logical analysis, rather than legal precedent, would support new developments in human experiences, particularly those from the sciences; *ibid.*

In *R. v. Abbey*¹⁰, Justice Dickson (as he then was), on behalf of the majority, acknowledged that the logical relevancy "test" requires the application of the judge's "logic and experience to the circumstances of the particular case".¹¹ For scientific opinion, a factual foundation should first be established before assigning any weight.¹² Scientific opinion involves conclusions on the likelihood of a fact in issue, or generalizations to assist the understanding of other evidence, which by legal definition are *prima facie* external to the trier's logic and experience. The threshold for logical relevancy requires that scientific opinion render a connection (an inference) between the foundational evidence and a factual proposition more or less probable than without the scientific opinion. As discussed in chapter one, the question of logical relevancy is the very reason for the existence of scientific opinion. The scientist concludes on the factual proposition or key evidence at issue. The logical analysis seems paradoxical and perhaps circular if the judge assumes the reliability of the scientist's theories, methods, and foundation of adjudicative facts, as well as those facts regularly relied upon in the scientific field. Thus, for scientific opinion, the concept of relevancy seems only useful if one considers the interrelationships of two levels: scientific theories and methods, and factual foundations.

The application of a logical threshold, "more or less probable", to scientific evidence always involves value-laden constructions. Justice LaForest in *Corbett v. R.* [1988] 1 S.C.R. 670 at 720, discusses logical relevancy in general:

¹⁰ [1982] 2 S.C.R. 24, 29 C.R.(3d) 193.

¹¹ *Ibid.*

¹² *Ibid.* In *R. v. Lavallee* (1990), 76 C.R.(3d) 329 (S.C.C.) at 364, Justice Sopinka in *R. v. Abbey* acknowledged that where expert evidence has no weight, it is irrelevant and therefore inadmissible.

"[A]t the stage of the threshold inquiry into relevancy, basic principles of the law of evidence embody an inclusionary policy, namely that any item of evidence which, as a matter of common sense, logic and human experience, has *any* tendency to prove a fact in issue, ought, *prima facie*, to be admitted to assist in the discovery of truth because the cumulative effect of such evidence may be sufficient to prove a fact in issue".

The norms and politics under any concept of relevancy seem inescapable in light of inclusionary and exclusionary policies. The concept of relevancy always involves questions of blended logic and values. A rejuvenated approach to relevancy could, for example, consider issues of evidentiary probativeness (including scientific validity and reliability) in light of the norms and politics of scientific communities, as well as prejudice to fact-finding, in light of the situated triers. This blend becomes more apparent (and internal distinctions less noticeable) where scientific opinion addresses an ultimate issue - a question of fact entwined with one of substantive law. The constructions of scientific opinion before courtroom audiences are always to some extent normative and political. The current logical relevancy threshold thus disregards the relationships between the form and substance of scientific opinion in a courtroom context.

2. Legal Relevancy

Legal relevancy has long been considered as an alternative approach to logical relevancy.¹³

American evidence scholar, John Wigmore, recognized the "Relevancy Rules" as those which define the sufficiency of probative value:

"If it be desired to enlarge that term [Relevancy], and make it synonymous with Admissibility, this can be done. But the rules for probative value, no matter what they be called, will remain distinct in nature from the other rules..."¹⁴

¹³ See generally, H. Trautman, "*Logical or Legal Relevancy...*", *supra*, note 9.

¹⁴ *Wigmore on Evidence* (Cdn. Ed.) V.1 (1905), s.12(1)(a). Wigmore relied upon Thayer as authority for distinguishing affairs of logic from those of law; *ibid*.

Wigmore emphasized the distinction between the facts of "rational probative value",¹⁵ and those with a "sufficiency of probative value" for admissibility, especially for trial with a jury:

"The judge, in his [sic] efforts to prevent the jury from being satisfied by matters of slight value, capable of being exaggerated by prejudice and hasty reasoning, has constantly seen fit to exclude matter which does not rise to a clearly sufficient degree of value. In other words, legal relevancy denotes, first of all, *something more than a minimum of probative value*. Each single piece of evidence must have a plus value."¹⁶

Wigmore concluded that relevant (and admissible) evidence "does not need to have strong, full, superlative, probative value, does not need to involve demonstration or to produce persuasion by its sole and intrinsic force, but merely to be worth consideration by the jury".¹⁷

In *Cloutier v. R.*, Pratte J., on behalf of the majority of the Supreme Court of Canada, expressed support for the notion of legal relevancy:

"For one fact to be relevant to another, there must be a connection or nexus between the two which makes it possible to infer the existence of one from the existence of the other. One fact is not relevant to the other if it does not have *real probative value* with respect to the latter" (Cross, *On Evidence*, 4th ed. [1974], at p.16).¹⁸ (emphasis is mine)

¹⁵ *Ibid.* at s.9.

¹⁶ *Ibid.* at s.28. See R. Delisle, *Evidence, supra*, note 6 at 18. See also W. Twining, *Theories of Evidence: Bentham and Wigmore* (London: Weidenfeld & Nicolson, 1985) at 152-61. Twining criticized Wigmore's approach of "plus value" as "conflating analytical questions about the concept of 'relevance' and institutional questions about the respective roles of judge and jury"; *ibid.* at 154. To the contrary, and in light of the construction of scientific opinion in the courtroom, I suggest that evidence scholars should look more closely at the latter conflation, especially the actors' communications over relevancy issues. As Wigmore asserts, "When a fact is offered as evidence, the very offering of it is an implication that it has some bearing on the proposition at issue, - that it tends naturally to produce a conviction about that proposition"; *ibid.* at s.27. The pragmatics (and performatives) of the judge's relevancy determinations may have stronger influences on the jury than widely believed.

¹⁷ J. Wigmore, *ibid.* at s.29.

¹⁸ *Cloutier v. R.*, [1979] 2 S.C.R. 709, 12 C.R.(3d) 10 at 731 (S.C.R.) (admissibility of evidence to show that the accused was a marijuana user where the legal issue was the necessary mens rea for importing marijuana). The majority of the Supreme Court of Canada in *Cloutier* held that evidence which merely proved the accused to be the type of person likely to commit the type of crime charged was irrelevant and inadmissible in absence of a "sufficient logical

Pratte J. referred to the decision of *R. v. Barbour*, [1938] S.C.R. 465, which involved evidence of prior quarrels between the accused, Barbour, and the deceased woman. The quarrels were to be led as "enmity or ill-will" towards a motive for homicide. Duff C.J.C. in *Barbour* acknowledged that no question of general principle arose from the case, prior to concluding:

"The facts in each case must be looked at, and if, reasonably viewed, they have no probative tendency favourable to the Crown or adverse to the prisoner in respect of the issue joined between them, it is the duty of the court to exclude the evidence. The responsibility of the judge in such cases is a grave one if there is any risk that the evidence tendered may prejudice the prisoner." (at 470)

The *Cloutier* criteria of "real probative value" or "sufficient nexus" is a more burdensome threshold than logical relevancy. The language of "sufficiency", and the construction of "real", suggest the consideration of blended logic and values in light of a whole picture grounded in real testimony or physical evidence. The language of *Cloutier* also leads one to ponder whether or not the relevancy threshold distinguishes between correspondences to reality, and forms of narrative coherency. The *Cloutier* judgment, at the minimum, fosters a more contextual approach to relevancy as a critical first stage for admissibility. The reach of context to be considered varies with sites of normativity which guide interpretations of "sufficient" or "real". For example, the *Cloutier* court apparently favoured the common law presumption of an accused's innocence - a societal value that underpins the administration of the criminal justice system.

A more burdensome threshold for relevancy, however, could limit the access to outsiders' discourses and knowledge-claims. The advocates for legal relevancy favour the requirement of some sufficient foundation of evidence (towards a correspondence to reality and/or narrative coherency) as an initial threshold. On the other hand, the proponents of logical relevancy generally assert that some liberal, adventurous fishing expeditions are required prior to

connection"; *ibid.* The decision of *Cloutier* has since been distinguished; see *R. v. Morris*, [1983] 2 S.C.R. 190.

concluding there exists no fish to catch. The rationalist assumption is that wide access to information is first required prior to determining whether or not a sufficient nexus exists. The wide access is through an easily attainable threshold for logical relevancy. However, as previously shown, this access results in the privilege of relevant evidence as *prima facie* admissible. Moreover, the judicial application and communication of any logical threshold (or correspondence to reality) will always involve human constructions over sites of normativity. The courtroom actors may accept or challenge the sites, but only if accessible.

Although the logical relevancy test remains predominant in evidentiary analysis, the *Cloutier* test has shown a slight revival in recent cases and proposed legislation.¹⁹ The legal relevancy approach may support an inquiry into the logic and values which comprise scientific opinion, especially if novel to the legal courtroom. The following questions should be investigated: how and where to draw the line for the sufficiency of probative value in light of prejudices to fact-finding; and who gets to draw the line. A legal relevancy threshold, at least, moves judges beyond the rationality of logical probativeness, to consider the sufficient trustworthiness of evidence for *prima facie* admissibility. The sufficiency threshold urges judges to think about relationships between logic and value, form and substance, always in context - in other words, the pragmatics and semantics of novel scientific opinion in light of interdisciplinary stories.

¹⁹ See *R. v. Pugliese* (1992), 71 C.C.C.(3d) 295 (Ont. C.A.) (clear nexus between accused's attempts to sell cocaine in other person's possession to charge of possession for the purpose of trafficking). See also recent criminal cases on disclosure and production; *R. v. Carosella* (February 6, 1997) (S.C.C.); *R. v. O'Connor*, [1995] 4 S.C.R. 411. In response to the *O'Connor* case, the federal government has proposed Bill C-46, where defence lawyers would have to show "likely relevance" to a trial issue for the disclosure of the confidential records of rape victims; *The Vancouver Sun* (March 22, 1997).

3. Admissibility "Tests" for Novel Scientific Opinion

The Supreme Court of Canada in *R. v. Mohan*, *supra*, (see the facts: Appendix A) ruled that novel psychiatric opinion was inadmissible to show that the accused pediatrician did not fit within specific categories of sexual deviance. The defence expert had categorized the putative perpetrator according to elements of a criminal offence, and personality types based on patterns from a series of sexual crimes against young children. The Supreme Court held that in criminal cases the admissibility criteria required that novel psychiatric opinion be "relevant and necessary to assist the trier of fact". The *Mohan* standard appears to be more burdensome than the previous threshold of "relevant and helpful",²⁰ but not as strict and deferential to scientific communities as the American *Frye* "general acceptance" test.²¹ The *Mohan* criteria supports the principles of necessity and reliability (in Wigmore's terms, "the circumstantial guarantees of trustworthiness") which underlie the exceptions to the hearsay exclusionary rule.²² The Court seems to move towards a principled approach to the admissibility of novel scientific evidence on a case-by-case basis, rather than a categorical approach according to formal validity and

²⁰ See *R. v. Béland and Phillips*, [1987] 2 S.C.R. 398, per Wilson J. (in *obiter*); *Grant v. Dube* [1992] B.C.J. No. 2204 (B.C.S.C.). See R. Delisle, "*The Admissibility of Expert Evidence*", *supra*, note 5 at 268 (helpful or necessary means that the expert's information "must be beyond the ken of the average lay person of ordinary intelligence"). Delisle suggested that the concept of "helpfulness" (or necessity) supports the judicial consideration of the "reliability or validity of the science proposed", in light of "human fallibility" in assessing its weight; *ibid.* The judge's consideration of the integrity of scientific opinion relative to the cognitive competence of jurors, however, should lead to inquiry into the scientist's forms of communication. Questions about scientific validity and reliability should involve inquiry into the value-laden constructions of scientific discourses, especially those "measured" for the courtroom.

²¹ *Frye v. United States* 293 F. 1013 (D.C. Cir. 1923).

²² See 5 Wigmore, *Evidence* (Chad. Rev.), s.1420; R. Delisle, *Evidence*, *supra*, note 6 at 364. I prefer using Wigmore's terminology of "circumstantial guarantees of trustworthiness" instead of "reliability", which has strong scientific connotations. See also *R. v. Smith*, [1992] S.C.R. 915 at 929-33.

reliability criteria.

Although Justice Sopinka in *Mohan, supra*, considered the reliability of psychiatric opinion, he refrained from expressly questioning the validity of underlying theories and methods, or the psychiatrist's forms of communication.²³ In his annotation to *Mohan*, Ron Delisle referred to the leading American case, *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, which had recently dealt with the issue of an admissibility standard for novel scientific opinion.²⁴ The United States Supreme Court in *Daubert* applied the *Federal Rules of Evidence* to embrace the "relevancy and helpful" standard, rather than the *Frye* general acceptance test. The court in *Daubert* asserted that novel scientific evidence should be relevant and reliable, where reliability is to be based on the scientific validity of theories and methods, and their application to the case at hand.²⁵ Delisle concluded that Canadian courts should be well aware of the *Daubert* criteria.²⁶

In Canada, Justice Sopinka in *R. v. Mohan*, without mention of the *Daubert* decision, set forth the standard for novel scientific evidence:

"In summary, therefore, it appears from the foregoing that expert evidence which advances a novel scientific theory or technique is subjected to special scrutiny to determine whether it meets a basic threshold of reliability and whether it is essential in the sense that the trier of fact will be unable to come to a satisfactory conclusion without the assistance of the expert. The closer the evidence approaches an opinion on an ultimate issue, the stricter the

²³ Justice Sopinka did not mention the terms "valid", "validity", or "scientific criteria" in the *Mohan* judgment.

²⁴ R. Delisle, "*The Admissibility of Expert Evidence...*", *supra*, note 5 at 271. The *Mohan* court disregarded the United States Supreme Court decision in *Daubert v. Merrell Dow Pharmaceuticals* (1993), 113 S.Ct. 2786 (admissibility issue of scientific opinion indicating that Benedictin causes birth defects). The novel scientific opinion at issue in *Daubert* was based on animal studies, pharmacological studies, and re-analysis of previously published studies in the fields of epidemiology and statistics.

²⁵ *Daubert, ibid.*; R. Delisle, "*The Admissibility of Expert Evidence...*", *supra*, note 5 at 271.

²⁶ R. Delisle, *ibid.*

application of this principle."²⁷ (emphasis is mine)

Justice Sopinka's "basic threshold of reliability" is a more stringent approach that attempts to control the distortion to fact-finding, as well as the usurpation of the functions of the jury.²⁸ Justice Sopinka, co-author (with S. Lederman and A. Bryant) of the authoritative textbook, *The Law of Evidence in Canada* (Butterworths, 1992), had specifically considered the legal relevancy standard of "sufficient connection", and even acknowledged the possible inclusion of the balancing task of probative value and policy concerns as an "aspect of relevance".²⁹ Justice Sopinka used the word "sufficient" often in his judgment to clarify issues of character evidence (i.e. the accused's disposition to commit a crime), in relation to admissibility issues of scientific opinion. At one point, he stated, in agreement with the trial judge:

"The expert's group profiles were not seen as *sufficiently reliable* to be considered helpful. In the absence of these indicia of reliability, it cannot be said that the evidence would be necessary in the sense of usefully clarifying a matter otherwise unaccessible, or that any value it may have had would not be outweighed by its potential for misleading or diverting the jury." (at 38 SCR) (emphasis is mine)

Justice Sopinka emphasized the "reliability versus effects" balancing task, perhaps even to be considered as "an aspect of relevancy".³⁰ The balance requires a sufficient threshold of evidence in light of potential prejudice and other policy concerns. The more stringent concept of "necessity" replaced the previous "helpfulness" branch of admissibility criteria.³¹ Justice

²⁷ *R. v. Mohan*, *supra*, at para28.

²⁸ *Ibid.*

²⁹ See *R. Delisle*, *supra*, note 5, at 268.

³⁰ *Ibid.*

³¹ *Ibid.* See also L'Heureux-Dubé J. in *R. v. Marquard*, [1993] 4 S.C.R. 223 who stated: "Expert evidence is permitted as an exception to the usual rule excluding opinion evidence in recognition of the fact that the average person, even if given information, may not possess the necessary knowledge in some cases to assess its significance or to draw the

Sopinka seemed to rely upon the rationalist language of "necessity" as a control mechanism over the sufficiency of evidentiary probativeness to assist the jury.³² In contrast, the standard of "helpfulness" involves a less stringent "balance" of probative value (or reliability) and prejudicial effects.

Justice Sopinka's mention of an "aspect of relevance" has re-energized the debate between supporters of logical or legal relevancy. In his annotation to *Mohan*, Ron Delisle quickly closed the door to further debate.³³ He rejected the balancing task as "an aspect of relevancy", and instead promoted a separate exclusionary stage to avoid confusion of courts in using the traditional concept of relevance.³⁴ Yet, a more sensitive inquiry into blended logic and values (perhaps at the expense of some confusion, as Delisle suggests) seems preferable over the privilege of logically relevant evidence as *prima facie admissible*. The argument becomes more solid for novel scientific opinion, in light of the opposing party's lack of access to scientific discourses and novel scientific theories and methods, and the serious potential to prejudice the jury's fact-finding.

correct inferences in a particular context (*R. v. Abbey*, [1982] 2 S.C.R. 24 at p. 42)".

³² Justice Sopinka, however, caveated against judging the criteria of "necessity" by a strict standard; *ibid.* at 23.

³³ R. Delisle, *supra*, note 5 at 268. Delisle's annotation, however, ends with his support for the criteria of "'relevance and helpfulness' measured against the counterweights of consumption of time, prejudice and confusion"; *ibid.* at 273.

³⁴ *Ibid.*

B. Experts, Stories and the *Charter*: Further Reflections on Relevancy

"The facts determine what law is relevant; the law, what facts are relevant."³⁵

"[E]xperiential data can be said to be relevant or irrelevant only with respect to a given hypothesis; and it is the hypothesis which determines what kind of data or evidence are relevant for it."³⁶

"[We use] the theory to explain the story and the story to critique and revise the theory. Through this back-and-forth interplay, theory can inform practice, and practice can give meaning to theory."³⁷

To determine what evidence is relevant, we turn to a story as context. To consider parts of a story, we turn to the concept of relevancy. (the author)

Any concept of relevancy is dubious in light of the constructions of communications and the circularity of reasoning. When considering relevancy, the judge constructs scientific opinion according to her or his own logic and experiences, and with some deference to the experiences and logic of scientists. In light of this circularity, the relevancy of scientific opinion depends on the norms and politics of the actors - the judges, lawyers and scientists. An overt inquiry into the admixture of probative value and potential prejudice to fact-finding would seem to better support the "legitimacy" of a relevancy determination.³⁸ Where scientific opinion involves the

³⁵ J. White, *The Legal Imagination: Studies in the Nature of Legal Thought and Expression* (Boston: Little, Brown, 1973) at 820. See R. Weisberg, *Poethics: and Other Strategies of Law and Literature*, (Columbia U. Press, 1994) at 229.

³⁶ C. Hempel, *Aspects of Scientific Explanation* (1945) 54 *Mind* 1, reprinted in P. Achinstein (Ed.), *The Concept of Evidence* (1983), from R. Allen, "Factual Ambiguity and a Theory of Evidence" (1994) 87 *Nw.U. L. Rev.* 604. Hempel acknowledged that the definition of "relevance [for a hypothesis] presupposes an analysis of confirmation and disconfirmation"; *ibid.*

³⁷ B. Miller, "Give Them Back Their Lives: Recognizing Client Narrative in Case Theory" (1994) 93 *Michigan L. Rev.* 485 at 488/9 ("weaving clients' stories into case theory").

³⁸ See also D. Sperber & D. Wilson, *Relevance: Communication and Cognition* (Oxford: Basil Blackwell, 1986) at 119 ("having contextual effects is a necessary condition for relevance, and that other things being equal, the greater contextual effects, the greater the relevance"). The authors illustrate 3 types of cases where an assumption lacks contextual effects: (1) where the

language of an ultimate legal issue, the question of logical relevancy becomes one of legal culpability - a question of logical probativeness transforms to a question of sufficient proof of probativeness for substantive law. Where scientific opinion and legal norms coincide under an ultimate legal issue, more strenuous efforts seem required to expose relationships between form and content. The potential prejudice to the jurors' fact-finding become more substantial.

Justice Sopinka, on behalf of the unanimous *Mohan* court, succinctly explained how the requirements of "relevancy and necessity" relate to the underlying principles of the ultimate issue "rule":

"[E]xperts [should] not be permitted to usurp the functions of the trier of fact. Too liberal an approach could result in a trial's [sic] becoming nothing more than a contest of experts with the trier of fact acting as referee in deciding which expert to accept.

Although the [ultimate issue] rule is no longer of general application, the concerns underlying it remain. In light of these concerns, *the criteria of relevance and necessity are applied strictly, on occasion, to exclude expert evidence as to an ultimate issue*. Expert evidence as to credibility or oath-helping has been excluded on this basis. See *R. v. Marquard*, [1993] 4 S.C.R. 223, per McLachlin J. "³⁹

In the case of an ultimate legal issue, the determination of relevancy turns on a judge's careful inquiry into how scientific opinion infers a factual proposition and supports one or several legal norms at issue. This seems to be a legal relevancy standard that varies according to the closeness of the scientist's inference to the forms and substance of the material law.

The role of the judge is to consider relevancy, the exclusionary rules, and the probative value (or trustworthiness) of scientific opinion in light of its prejudicial effects. Prejudice may

assumption contributes new information which does not link up with present information in the context; (2) the strength of the assumption, which is already present in the context, is unaffected by the new information; (3) the assumption is inconsistent with the context, and too weak to change it; *ibid.* at 121. Here, one may consider the "context" as consisting of a collection of detailed, value-laden stories. The information and its assumptions may fit or influence stories of the past, present, or future (such as a hypothetical or generic story to be placed in context).

³⁹ *R. v. Mohan*, *supra*, (at 24/5) (emphasis is mine).

result from the jury's lack of access to specific factual stories, for example, interdisciplinary stories between scientific facts and legal norms - those stories that tell us how scientists and jurors (or even judges) may have been influenced by the law, legal process, and the other courtroom actors. Prejudice may arise from the use of stories to characterize the parties or witnesses, such as the use of scientific opinion solely to bolster the credibility of the accused.⁴⁰ The judge screens scientific language and other forms that are relatively inaccessible to the jury, and potentially prejudicial to fact-finding, especially in cases where the form and content of scientific opinion coincides with that of an ultimate legal issue.⁴¹

The concept of relevancy initially frames the existing structure of the law of evidence which consists of several stages: first, rational inquiry under logical relevancy; second, an inquiry under the formal exclusionary rules; and the overall consideration of probative value (or reliability) in light of policy concerns, such as prejudice to fact-finding, undue consumption of time, and so on. The current framework primarily rests in the hands of judges and legal counsel, at times to the exclusion of outsiders' discourses and knowledge-claims.

Any notion of relevancy should have a degree of flexibility that supports interdisciplinary discourses and multi-disciplinary approaches. A threshold for relevancy, and *prima facie* admissibility, may vary with sites of normativity and story jurisprudence. Although the concept of relevancy maintains judicial focus on the relationships between the forms and content of scientific opinion, a problem arises from the privilege of specific sites of normativity, or story narrations. As a fundamental principle in our society, the access to justice through concepts such

⁴⁰ See *R. v. Mohan*, *supra*.

⁴¹ In *Mohan*, Justice Sopinka held that judges could rely upon jury instructions for some control over the prejudicial effects of scientific opinion; *ibid.* at 24 The tenuous assumption is that jury instructions at the trial's end are effective for eliminating or ameliorating prejudices.

as relevancy supports a careful review of scientific opinion for discriminatory assumptions and inferences, including the underlying norms within stock stories, narrative typification, and other general expectations or background assumptions. The judicial consideration also involves the pragmatics of interdisciplinary discourses, for example, how scientists communicate their knowledge-claims in response to legal inquiry generally, and to the leading questions of lawyers, particularly.

Judicial practices involve sites of normativity which inform evidence concepts and logical thresholds. The sites reflect may reflect the various experiences and beliefs within society. For example, *Charter* values evolve with society and its diverse collection of unfolding stories about human experiences within law, science and other disciplines and cultures. Under a relevancy approach, the *Charter* values of equality and fairness at trial, *inter alia*, to some extent inform the judicial determination of relevancy.⁴² That is, *Charter* values influence the range of a judge's comparison of interdisciplinary stories of scientific facts (and legal norms) to stock stories and narrative typification. The sites of normativity move each judge to question the definition of relevancy, or how one "fits" evidence to fact, the sufficiency of evidence for a "fit", and the background assumptions. The comparison may involve consideration of several levels of stories, from the concrete (i.e. the case details of characters, settings, events, and so on) to the abstract (i.e. institutional stories of police or prosecutorial abuse, and so on). For the admissibility of novel scientific opinion, this comparison would seem to involve the pragmatics and semantics of scientific discourses in the courtroom.

⁴² I refrain from any debate on whether or not the *Charter* formally applies to the judicial application of the common law of evidence. *Charter* jurisprudence on evidence is limited simply because judges prefer to first decide cases on the common law, if at all possible. Although *Charter* values implicitly underlie many judicial practices and legal judgments, the formal application of the *Charter* occurs primarily under narrowly-defined issues between the State and individual.

Judicial practices therefore can be influenced by *Charter* values, such as ss. 7 (the right to life, liberty and security of person, and the right not to be deprived thereof except in accordance with the principles of fundamental justice), 11(d) (presumption of innocence until proven guilty according to law in a fair and public hearing by an independent and impartial tribunal), 11(c) (not to be compelled to be a witness in proceedings against that person in respect of the offence), and 15 (equality before and under the law, and equal protection and benefit of the law). The criminal justice system is supported by the pillars of "fundamental justice", which apparently include, *inter alia*, the right to a fair trial, and the right to make full answer and defence. The principles of fundamental justice reflect the values underlying *Charter* rights ss.8 to 15, indicating support for a combined atomistic and holistic approach to interpretation.⁴³ The concept of a "fair trial" under s.7, in conjunction with ss.11(c) & (d) and s.15, has jurisprudentially evolved to a broad focus.⁴⁴ Recent legal decisions have supported a more expansive concept of "fair trial", moving beyond the interests of the accused to encompass the interests of victims and society in the administration of justice.⁴⁵ *Charter* values generally

⁴³ See generally, *R. v. Crawford*; *R. v. Creighton*, [1995] 1 S.C.R. 858 (under section one, the application of *Charter* values must take into account other interests and, in particular, other *Charter* values which may conflict with their unrestricted and literal enforcement).

⁴⁴ See M. MacCrimmon & C. Boyle, "*Equality, Fairness and Relevance...*", *supra*, note 5; *R. v. Lyons*, [1987] 2 S.C.R. 309 at 362 (*Charter* s.7 "entitles the person to a fair hearing; it does not entitle him to the most favourable procedures that could possibly be imagined"). See also *R. v. Seaboyer*, [1991] 2 S.C.R. 577 (whether statutory exclusion of evidence of past sexual conduct of the complainant infringed the accused's right to make full answer and defence).

⁴⁵ See also *R. v. Lavallee* (1990), 76 C.R.(3d) 329 (S.C.C.) at 330. Madame Justice Wilson for the majority of the Court recognized that where a victim of domestic abuse faces charges of murdering her abusive spouse, and argues self-defence, the fairness and integrity of the trial process provides her the opportunity to present the jury with expert opinion on Battered Woman Syndrome; *ibid.* See also *R. v. O'Connor*, [1995] S.C.J. No. 98 (disclosure of complainant's medical, counselling and school records in accused's trial for sexual offenses); *L.L.A. v. A.B.*, [1995] S.C.J. No. 102 (privilege over medical files of complainant in a sexual assault trial).

support the trial participant's meaningful access to the form and content of scientific opinion.

In the courtroom, the parties generally have expectations of fair opportunity to express their stories through personal narratives, or the supposedly neutral and objective narratives of science.⁴⁶ For example, in domestic homicide cases, as a matter of fairness, the accused has the opportunity to present his story, perhaps to rebut a prosecutor's inference linking cyclical and escalating patterns of domestic abuse to "intimate femicide". The lawyer for the accused may cross-examine the Crown's experts, or lead contrary expert opinion. The values of fairness and fundamental justice under *Charter* section 7 contribute to judicial practices in establishing limits to the evidence of prior domestic abuse that could prejudice the accused by inferring his propensity to commit crime. The mention of previous bad acts would characterize the accused as likely to be a bad person, and therefore the one who committed the crime. An accused may successfully challenge the fairness of the trial if an evidence rule or principle limits his right to make full answer and defence.⁴⁷ The accused's *Charter* rights include the opportunity to tell his story personally, or through other witnesses, and the narratives of science, assuming the existence of some factual foundation. But should the accused be required to testify in order to

⁴⁶ For access to justice, the expectations of citizens generally evolve with technological advancements that support public media and other access to popular culture. For example, the narratives of science and law from film and television may be considered as a "story jurisprudence" that could influence the jurors' fact-finding. The jurors' personal experiences of the narratives of courtroom drama and scientific testing, whether real or fictional, may be stored for later use, perhaps to become stock stories and narrative typification. See generally, S. Redhead, *Unpopular Cultures: The Birth of Law and Popular Culture* (Manchester: Manchester University Press, 1995). See also R. Schank, *Tell Me A Story: A New Look at Real and Artificial Memory* (Toronto: Collier MacMillan, 1990).

⁴⁷ See *R. v. Seaboyer*, [1991] 2 S.C.R. 577. See D. Paccioco, "The Charter and the Rape Shield Provisions of the Criminal Code: More About Relevance and the Constitutional Exemptions Doctrine" (1989) 21 Ottawa L. Rev. 119 at 120 (legislation should not deprive the accused of probative evidence that could raise a reasonable doubt). See also *R. v. Carosella* (February 6, 1997) (S.C.C.); chapter one, notes 35 & 103.

avail scientific opinion based on prior interviews with the former? The answer would seem dependent on the relevancy of the story to be told by scientific opinion, and whether the same story could be told in another way. The accused's opportunity to communicate his story has become a more serious concern with the recent technological evolution of society, and the advancement of the state's investigatory tools, such as DNA and other forensic analysis. Fairness at trial also supports the victim's opportunity to tell her story directly, or through physical evidence, and the narratives of scientists and other witnesses.

The current concept of logical relevancy serves as an initial filter at the admissibility stage, according to a judge's experiences, logic and common sense. A rejuvenated notion of legal relevancy, however, could focus on the blend of logic and values, drawing to the fore the judge's assumptions and sites of normativity. Under this approach, the judge may inquire into stories, whether from common experiences or novel science, which support or undermine inferences between the evidence, factual propositions, and ultimate legal issues. For the judge and jury, the meaning of scientific opinion, and the probativeness of its link to a factual proposition, would seem to require consideration of stock stories (or even, hypotheticals as story frames) or stories about existing facts. The judge would consider whether there exists a sufficient factual basis, or an acceptable story, in support of the inference between scientific opinion and factual proposition. The factual foundation includes some admissible evidence (or adjudicative facts), and facts regularly relied on by scientists in the field.

The norms and politics of relevancy arise over the inclusion and exclusion of specific stories, and the participation by storytellers (i.e. outsiders) and storylisteners (i.e. the jurors). A most perplexing problem, indeed. The threshold for probative value (or reliability) in light of prejudice, whether or not "an aspect of relevancy", may vary with context, such as institutional constraints (or the norms and politics of science). Under judicial scrutiny, the

processes of storytelling and listening carry themes and sites of normativity towards the ends of justice. The judges apply evidentiary gates to regulate the rhetoric of law and science, and the (de)construction of interdisciplinary stories that may influence the trier's fact-finding.

C. Factual Foundations, Hearsay Concerns, and Storytelling Strategies: The Hypothetical Question?

Scientific opinion may be introduced at trial by way of a hypothetical question.⁴⁸ In this scenario, legal counsel ask the scientific expert to assume a set of facts, and to provide an opinion based on those facts. The scientific opinion remains in abstract form until all factual assumptions are proven at trial. Thus, the trier of fact maintains the task of comparing the scientist's generalizations to the specific facts of the case. The hypothetical question itself frames scientific facts according to legal norms (i.e. from adjectival and substantive law) which rest on stock stories and narrative typification. The hypothetical question moves the storylisteners to the abstract, where they await for a factual foundation, though sometimes only to face the judge's final instructions to disregard the scientific opinion.

According to Canadian case law, a factual foundation of only "some admissible evidence" is required for scientific opinion to be introduced, with problems of the admixture of admissible and inadmissible evidence going to weight.⁴⁹ The *Lavallee* requirement of "some admissible

⁴⁸ See *Bleta v. R.*, [1964] S.C.R. 561; J. Sopinka, S. Lederman & A. Bryant, *The Law of Evidence in Canada* (Butterworths, 1992) at 537; R. Delisle, *Evidence: Principles and Problems*, *supra*, note 6 at 481-3. See *Wigmore on Evidence* (Cdn. Ed.) V.1 (1905) at s.686, who sharply criticized the hypothetical question because it artificially limits the responses by experts (leading to a "partisan conclusion", as suggested by counsel), and misleads or confuses the jury; in short, it is "misused by the clumsy... [and] abused by the clever". Wigmore was so appalled that he recommended a complete ban on hypothetical questions; *ibid*.

⁴⁹ *R. v. Lavallee* (1990), 76 C.R.(3d) 329 (S.C.C.) at 362. See M. MacCrimmon, "Developments in the Law of Evidence: The 1989/90 Term" (1991) 2 S.C.L.R. 385 at 389 (the *Lavallee* decision suggests, *inter alia*, that expert evidence can be used to learn about diverse

evidence" suggests concern over the lack of access to novel scientific opinion (here, "Battered Women Syndrome") that would be helpful in providing a previously untold story, but which relied partly on inadmissible evidence.⁵⁰ The *Lavallee* court relied on jury instructions to warn jurors that they should not accept as true facts discussed by the scientist but not proven. In light of the recent *Mohan* decision, and a more stringent gatekeeping role for judges, the *Lavallee* requirement of "some admissible evidence" may be re-interpreted to suggest a sufficient foundation of adjudicative facts, and facts regularly relied on by scientists in the field. The factual foundation should show that the probative value (or trustworthiness) of novel scientific opinion applied to the specific case facts would outweigh its prejudicial effects. The judge considers the jury's potential application of scientific opinion to the facts of the case, even if the opinion is to be presented as a set of generalizations to fit a hypothetical question.

The *Mohan* decision indicates only mild concern over the sufficient probativeness of the factual foundation for novel scientific opinion. Should the factual foundation as a whole satisfy the requirements of relevancy and necessity. The basic principles underlying the exceptions to the hearsay exclusionary rule are reliability (or circumstantial guarantees of trustworthiness)⁵¹ and necessity.⁵² Although the facts regularly relied on by scientists in the field may be based

experiences, the accused can put her story through expert opinion and other evidence, and the expert evidence rule can control the range of stock stories for fact-finding).

⁵⁰ *R. v. Abbey*, [1982] 2 S.C.R. 24, 29 C.R.(3d) 193 at 214 (C.R.). See M. MacCrimmon, *ibid.* at 403 ("By distinguishing the facts of the case from facts of expertise, *Lavallee* implies that all relevant expert testimony will be admissible").

⁵¹ 4 Wigmore, *Evidence* (Chadbourn rev. 1972) at s. 1053.

⁵² See *Ares v. Venner*, [1970] SCR 608; *R. v. Khan*, [1990] 2 S.C.R. 531; *R. v. Smith*, [1992] S.C.R. 915 at 933 ("'necessity' refers to the necessity of the hearsay evidence to prove a fact in issue"). See R. Delisle, "Hearsay" (1993) CIAJ Annual Conference (Vancouver) ("A discretionary approach to the [hearsay] rule, based on principle, rather than pigeon-holing would be more sensible"). See also C. Callen, "Hearsay and Informal Reasoning" (1994) 47 Vanderbilt

on inadmissible hearsay, the factual foundation as a whole ought to satisfy the criteria of relevancy and necessity. The two principles also support access to the scientist's background assumptions and reasoning processes. The *Mohan* decision seems to return us to the critical issue of where to draw the line for an acceptable admixture of inadmissible and admissible evidence. To what extent should the leading party establish a factual foundation for scientific opinion? This delicate "balance" identifies the extent to which the accused and the state may effectively tell their stories. The parties should not be able to tell stories, especially interdisciplinary stories about novel scientific opinion, without some sufficient evidentiary basis. Where the factual foundation for expert opinion does not apparently exist, the opinion is considered irrelevant.⁵³

Following the *Mohan* criteria, the admissibility of scientific opinion may be "essential" or "necessary" where facts are integral story elements that cannot otherwise be proven. The judge,

L. Rev. 43 at 45 ("courts, rulemakers, and scholars have failed to develop a workable and accurate model of informal reasoning on which a clear understanding of hearsay could rest"). Hearsay may involve at least four inferential dangers: "honesty or sincerity, verbal ability, perceptive ability, and when necessary, memory" (E. Morgan, *Hearsay Dangers and the Application of the Hearsay Concept* (1948) 62 Harvard L. Rev. 177 at 178, from C. Callen, *ibid.*).

⁵³ See R. Delisle, *Evidence: Principles and Problems* (3rd ed.) (Carswell: 1993), who argues that we should make the distinction between facts regularly relied upon by experts, and those from the specific case. See also Wardle, "R. v. Abbey and Psychiatric Opinion Evidence: Requiring the Accused to Testify" (1984) 17 Ottawa L. Rev. 116, at 122-23 (expert opinion entirely founded on hearsay is irrelevant since its factual foundation provides the only inference between the opinion and the case). Where expert opinion involves facts regularly relied upon within the field of expertise, the expert may testify, perhaps even in absence of adjudicative facts. Where expert opinion relies on some facts not regularly relied upon within the field of expertise, and no admissible evidence exists for support of the application of expert opinion to the specific case, the opinion is considered irrelevant. The latter two propositions, however, also depend on other factors, such as the juror's access to scientific discourse (are the language and other forms simple, clear and understandable?) and knowledge-claims (is the reasoning complex and esoteric?) The issue turns to whether or not the jurors are cognitively up to the task of applying the expert's generalizations (through a hypothetical question) to the facts of the case. The judge should consider the probativeness and prejudice from potential uses of the expert's generalizations, and interdisciplinary stories, keeping in mind jury instructions as a possible curative device.

however, faces the problem of how to know what facts are integral to which specific stories - a question of relevancy. The principles of necessity and trustworthiness may vary with institutional constraints, or the judge's lack of access to scientific discourses and knowledge-claims. For example, an institutional constraint would arise where abused women lack opportunity to tell their stories through Battered Spouse Syndrome, or other scientific opinion. The application of the principles of necessity and trustworthiness, however, will always depend on sites of normativity, such as *Charter* values and the professional ethics of scientists, lawyers, and judges. A relevancy inquiry should attempt to consider the prejudice from institutional limits to stories of sexual assault victims, who may fear an invasion of privacy and further abuse at the hands of the legal system. The legal relevancy approach may also inform the pre-trial and ongoing trial obligations to disclose and produce an evidentiary basis for scientific opinion.⁵⁴

The *Abbey* decision, and to a lesser extent, the *Lavallee* decision, indicate support for the introduction of scientific opinion at the end of the trial. The court in *Abbey* required the existence of a full factual foundation, perhaps at the expense of the hypothetical question.⁵⁵ In

⁵⁴ The Supreme Court of Canada has recently considered the notion of relevancy for disclosure of a victim's confidential records, such as a psychiatric therapist's records made subsequent to the alleged incidents; see *R. v. O'Connor*, [1995] S.C.J. No. 98 (disclosure of complainant's medical, counselling and school records in trial involving sexual offenses); *L.L.A. v. A.B.*, [1995] S.C.J. No. 102 (privilege over medical files of complainant in sexual assault trial). See also *Vancouver Community College v. Phillips, Barratt* (1987), 20 B.C.L.R. (2d) 289 (S.C.) ("relevancy" for the production of expert opinion). See also the *Evidence Act* R.S.B.C. 1979 c.116, ss.10-12 (disclosure requirements for proceedings, other than those in the Court of Appeal, Supreme Court, or Provincial Court); *Canada Evidence Act* R.S.C. 1985, C-5 (for civil or criminal proceedings, each party may lead not more than five expert witnesses, except with leave of the presiding judge).

⁵⁵ The Court in *R. v. Lavallee* (1990), 76 C.R.(3d) 329 (S.C.C.), however, explained the *R. v. Abbey*, [1982] 2 S.C.R. 24, 29 C.R.(3d) 193 decision, suggesting that hypothetical questions could be used, where the facts exist, even though some of the factual foundation relies on inadmissible evidence. See also *R. v. Allender*, [1996] B.C.J. No. 224 (B.C.C.A.), per Wood J. (in dissent) (in obiter) at para30 (relevancy analysis considers whether expert opinion is entirely hypothetical) & para53 (relevance requires a factual foundation for expert opinion).

this scenario, storytelling strategies would fit the presentation of scientific opinion at the end of a narrative sequence of events at trial.⁵⁶ The factual story would be primarily developed prior to the scientists' narratives. The abstract generalizations of scientists would then be applied to the facts as a dramatic end to the courtroom presentation of evidence. Ron Delisle in his annotation to *Lavallee* suggested that scientific opinion should be led after the proffer of all other evidence to ensure the existence of a sufficient basis of admissible evidence.⁵⁷ The approach would confirm sufficient adjudicative facts to warrant the introduction of scientific opinion, reduce wasted trial efforts, limit prejudicial influences of ultimately inadmissible scientific opinion, and avoid reliance on the haphazard use of jury instructions. The detriments would include the reduced opportunities of the parties to strategize the temporal order of evidence and case theory development. The approach would support a more stable and contextual determination of admissibility on a case-by-case basis. Where a foundation of adjudicative facts for scientific opinion is not accessible, the concept of relevancy would strictly apply to account for institutional constraints, such as the lack of access to scientific discourses and knowledge-claims in light of serious potential for prejudice to jurors' fact-finding. The latter would be even more applicable under a hypothetical question, especially one which frames an ultimate legal

But see M. Minnow & E. Spelman, *"In Context"* (1990) 63 S. Calif. L. Rev. 1597 at 1622 ("[t]he move to context, then, is an attempt to shift the location of significance: writers emphasizing context have done so out of a sense that the significance of particular facts about persons and events was being obscured by the processes of abstraction necessary for the formulation of general empirical statements or universally applicable moral rules").

⁵⁶ But see A. Champagne, D. Shuman & E. Whitaker, *"An Empirical Examination of the Use of Expert Witnesses in American Courts"* (1991) 31 Jurimetrics 375 at 378 (the earlier the expert opinion is presented in the trial, the more influential it is for jurors), citing Brekke & Borgida, *"Expert Psychological Testimony in Rape Trials: A Social-Cognitive Analysis"* (1988) 55 J. Pers. and Soc. Psychology 372.

⁵⁷ *"Lavallee: Expert Opinion Based on 'Some Admissible Evidence' - Abbey Revisited"* (1990), 76 C.R.(3d) 329 (S.C.C.) at 369.

issue. Scientific opinion, however, may rely on a factual foundation that is partly inadmissible (with jury instructions to alleviate any prejudicial effects).

The requirement of a complete or near complete factual foundation to scientific opinion would limit the introduction of inadmissible evidence, or the use of "fishing expeditions", as well as the remotest stories or hypotheticals, under the guise of novel scientific opinion.⁵⁸ The evidentiary foundation may involve generalizations and discriminatory beliefs that would otherwise be excluded as prejudicial.⁵⁹ At one level, the concept of relevancy screens the theories and methods of scientific opinion. At another level, relevancy applies to require an adequate factual foundation for scientific opinion. At both levels, the difficulty seems to be the identification of inferences, background assumptions, and sites of normativity. More stringent requirements for a factual foundation would limit the use of hypotheticals, and reduce access to scientific opinion for interpretation of other evidence, as well as for the support or challenge of factual propositions.

A hypothetical question, itself, provides a frame, which not only channels scientific opinion and interdisciplinary stories, but also separates the consideration of scientific theories and methods from an adequate factual foundation, perhaps to prejudice the trier's fact-finding. The hypothetical question led by legal counsel precariously generates an interdisciplinary story *between scientific facts and legal norms*. A hypothetical states (or even restates) which factual assumptions and issues, or parts of the story, are important - those story elements to be

⁵⁸ See R. Lempert, *"Experts, Stories, and Information"* (1993), 87 N.W.U. L. Rev. 1169 at 1180 (inadmissible evidence might encourage the jury to construct a story, aside from unpersuasive expert opinion).

⁵⁹ See *R. v. Seaboyer*, [1991] 2 S.C.R. 577. See M. MacCrimmon, *Developments in the Law of Evidence: The 1990-91 Term* (1992) 3 S.C.L.R. 269. The majority in *Seaboyer* required that hypothetical evidence merely be probative, rather than necessarily reliable; *ibid.* at 319.

"necessarily" addressed by the authority and power of science. The very act of asking a hypothetical question formally disrupts the flow of evidence at a trial. The jurors become acutely aware of this unusual event, particularly in light of the fact that experts are the only witnesses allowed to give opinions about uncommon events. The hypothetical question is a performative device that can be dangerously prejudicial. The hypothetical also privileges information as *prima facie* admissible or even proof, similar to the effects of logical relevancy on the admissibility question. The scientist responds by a narrative with designs for the hypothetical question and the audience(s). The structure of a hypothetical question thus warrants close attention for its influences on the probative value and prejudice of novel scientific opinion. For admissibility, the judge may consider the potential worth of a hypothetical question to the jurors' story construction.

The concept of relevancy seems to involve value-judgments about assurances of trustworthiness (or validity, reliability, logical probativeness, etc.). Under the formal constraints of a legal system, the best that judges can do is to overtly reason relevancy decisions beyond a logical threshold, to inquire into blended logic and values - a consideration of logical probativeness of the form and substance of a scientist's opinion, as well as potential prejudice to jurors' fact-finding.

D. The Judge as Gatekeeper and Metaphorical Mediator

The recent decision of *R. v. Mohan, supra*, has established a more stringent standard for the admissibility of novel scientific opinion, with emphasis on reliability and prejudicial effects. The judge as gatekeeper now has a more active role over assessments of the relevancy and necessity of scientific opinion. This role also encompasses interdisciplinary communications about scientific opinion. The judge has a responsibility to ensure that the expert clarifies

ambiguities, obscurities, or other misunderstandings, and presents all relevant information.⁶⁰

Judges, however, are not the independent and neutral gatekeepers commonly believed. Rather, each judge participates as a courtroom actor who mediates the discourses of knowledge-claims within a larger context of norms and politics. The judge screens the language and other forms of interdisciplinary communications for an "army of metaphors" masquerading as "the truth", or single threads of metaphors which characterize others, suggest causation, or otherwise contribute to a story that could prejudice the jurors' decision-making.⁶¹ In this sense, judges become metaphorical mediators of interdisciplinary stories. Whether mediators or not, judges have a duty to oversee the courtroom proceedings so that participants have meaningful access to novel scientific opinion and interdisciplinary stories. Judges should be critically aware of the narrativisation of pragmatics, as part of the "telling" of interdisciplinary stories, as well as the semantics (the content of interdisciplinary stories), which may prejudice the trier's fact-finding. Each judge has an authorial responsibility to ethically communicate and render admissibility decisions while keeping in mind the situated triers. The responsibility rests on sites of normativity which ought to remain open for support or critical challenge.

A "story jurisprudence" of actual legal cases and works of literature illustrates some of the relationships between authorial responsibility, and novel scientific opinion. Judges or jurors may apply the law to facts (or vice versa) according to sites of normativity, as reflected within an evolving story jurisprudence. Within an interpretive community, authors have a responsibility over the production and communication of text, whether it be novel scientific opinion, or the

⁶⁰ See *R. v. Millar* (1989), 71 C.R. (3d) 78 (Ont. C.A.) (judge has discretion to require experts' language to be "less conclusory", if it can be given "just as accurately").

⁶¹ For a detailed discussion on metaphors, see G. Lakoff & M. Johnson, *Metaphors We Live By* (University of Chicago Press, 1980).

admissibility criteria. The awareness of judges and other courtroom actors evolve through their personal experiences about ways to make sense of prejudicial language and other forms within interdisciplinary discourses.

The logical-legal relevancy debate always seems to turn to the politics of the courtroom actors, especially judges, lawyers and scientists. What seems important is the context of courtroom discourses, and the "production" of science. Under an aura of objectivity and neutrality, scientists render opinions from collectivized principles that may indirectly lead, at least in criminal cases, to the emancipation or imprisonment of individual accused. As interpreters and mediators (for clients and others), scientists communicate knowledge through apparently authoritative and exclusive acts.⁶² The role of scientists sometimes goes beyond empirical descriptions, to centre on scientific consensus and public debate.⁶³ Scientists can effectively normalize a range of social and political actions. The deference versus education debate, as previously discussed, always seems to involve issues of norms and politics. Law and

⁶² See N. Stehr & R. Ericson (Eds.), *The Culture and Power of Knowledge: Inquiries into Contemporary Societies* (de Gruttyer, 1992) at 75 (the expert is the interpreter and mediator between the objectivity of science, and the subjectivity of the client and her or his personal needs). As van den Daele points out, scientists and other experts may ask themselves: what mixture of control and chance can we tolerate for responsible action; "*Scientific Evidence and the Regulation of Technical Risks*", in N. Stehr & R. Ericson, *ibid.* at 331.

⁶³ W. van den Daele, *ibid.* at 334. See also A. Rip, "*Expert Advice and Pragmatic Rationality*", in N. Stehr & R. Ericson, *ibid.* 363 at 370 (experts mix science and politics under pragmatic rationality, attempting to account for societal effects of potential standards). Rip contended that experts create pragmatically rational and "robust" opinions for desired societal effects; expertise is not descriptive, but prescriptive in its mix with politics; *ibid.* at 374. Rip concluded that experts should be held accountable for their pragmatic choices; *ibid.* at 375. We may rethink the concept of relevancy, to move beyond logical probativeness, and to include consideration of the "robustness" (the norms and politics) of scientific opinion. See also W. Twining, *Rethinking Evidence: Exploratory Essays* (Evanston, Illinois: Northwestern University Press, 1994) at 81, who discussed the political dilemma between holistic (or communitarian) thinking and atomistic (or liberal) conceptions which separate fact, law, and value. As Twining points out, some concern arises over the erosion of such principles as "judge the act, and not the actors"; *ibid.*

science tend to claim power over other discourses and knowledge-claims to be considered in legal disputes between individuals, groups and the state. Within the constraints of the legal courtroom, a problem arises over how to "challeng[e] a form of power without accepting its own terms of reference and hence losing the battle before it has begun".⁶⁴ The inquiry into legal and judicial practices involving the use of scientific opinion to advance the interests of the actors may be critically approached from the outside - for example, from the perspectives of literature and literary theory. Should we not also critically question the assumptions of neutrality and independence in the processes by which individuals become and carry on as judges who regulate what, when and how the scientific opinion may be brought before the jurors? In particular, we ought to rethink the processes leading to the appointments of judge, the impartiality and independence of the judiciary, the jury system as a democratic institution, and how other legitimizing forms of law and science become entwined with sites of normativity, especially in the context of the courtroom. Once we better understand the norms and politics of judges and their decisions of whether or not scientists should be allowed to engage the jurors in courtroom practices, then we may approach with confidence the judicial interpretation of novel scientific opinion and interdisciplinary stories. In the meantime, each judge ought to carefully screen scientific opinion within a voir dire, and subsequently during testimony before the jury, for language and other forms that prejudice fact-finding.

⁶⁴ C. Smart, *Feminism and the Power of Law* (1989) at 5. Smart recognized that power derives from parallel discourses of rights and normalization; *ibid.* at 8. That is, the challenging rights of individuals and groups, and the normalizing, collectivizing forces of science, may through discourses collaborate or struggle against each other. We could also consider the dichotomy of scientific facts and legal norms as a division of labour; D. Nelken, "The Truth About Law's Truth", in *European Yearbook in the Sociology of Law* (Giuffrè, 1993) at 96.

E. Conclusion

The utterances and narrative acts by scientists, lawyers, judges, and other courtroom actors may constitute a "telling" of one or several interdisciplinary stories. The scientist describes a story about her or his qualifications, and then narrates specific events, such as research, design, experimentation, observations, and analysis. Scientific opinion thus can involve "competing truth claims of systems of measurement and systems of narrative".⁶⁵ The judge and jury interpret the story about scientific opinion in light of stock stories and narrative typification of what is good science or scientific method. As Steve Fuller argues, science contributes to the construction of self, as much as the narratives that we normally tell to connect our past to the future.⁶⁶ The performative utterances and narrative acts by scientists "demonstrate" the logic of causation to normatively (and politically) engage triers of fact, perhaps to persuade them of the acceptability of a specific standard. In doing so, the communications by scientists can disqualify the voices of outsiders, in favour of the apparent objectivity and neutrality of science. The pragmatics and semantics of stories about novel scientific opinion can prejudice the triers' decision-making.

A poethics of interdisciplinary stories (between scientific facts and legal norms) involves consideration of not only the content of stories, but also stories about telling stories. A poethical approach shifts focus from the purported objectivity of scientific opinion as an oral or written text, where the scientist narrates in a third-person, omniscient voice, to focus on authorial responsibility (the "ethics") over "telling" an interdisciplinary story (the "poetics"), in light of the situated audience of judge and jury. The approach supports authorial responsibility over the

⁶⁵ See L. Hirsham, *"It Will be Pleasanter to Tell You a Story"* (1993) 13 Cardozo L. Rev. 445.

⁶⁶ S. Fuller, *"Knowledge as Product and Property"* in N. Stehr & R. Ericson, *supra*, note 62, at 178.

acceptance of sites of normativity, and the avoidance of confusing literary-cognitive spaces. The approach seems useful for screening "discourses of power", such as the "measured forms" of considerate communications by scientists and lawyers.

Under a poethical method, the judge would apply the admissibility criteria for novel scientific opinion, with consideration of sites of normativity and authorial responsibility. The judge assesses the "probative value" and "prejudice" to jurors' fact-finding based not only on what scientists say, but also how they say it. Beyond or within the *Mohan* criteria of relevancy and necessity, the judge would consider accessibility to the norms and practices which generate novel scientific opinion. In doing so, the judge screens the form and content of interdisciplinary stories, in light of stories about telling these stories. The poethical method re-frames the concepts of relevancy (and thus *prima facie* admissibility) and the hypothetical question, encouraging judges to think beyond the rationalist separation of logic from values, fact from law. Under a poethical approach to relevancy, the judge would consider the logic and values underlying novel scientific opinion, including issues of reliability and prejudicial effects, in light of the situated jurors. The judge would also account for institutional constraints, such as the lack of access to sources of novel scientific opinion and plausible interdisciplinary stories. The concept of relevancy applies to scientific theories and methods, as well as factual foundations. The use of a hypothetical question should first require a foundation of admissible evidence - adjudicative facts, as well as those facts regularly relied upon by scientists in their fields. The factual foundation ought to be sufficiently trustworthy, as measured against prejudicial effects, to ensure the "relevancy" and "necessity" of novel scientific theory and method in application to the facts of the case.

The rationalist tradition has privileged logical relevancy over the approach of legal relevancy. A logical threshold for *prima facie* admissibility, especially when applied to novel

scientific opinion (and its factual foundation), can prejudice the trier's fact-finding by disqualifying or privileging the form and content of specific evidence. A poethical approach to relevancy may support a more participatory process overall, but relies on the judge's access to sites of normativity inextricably tied to scientific discourses and knowledge-claims. The parties should also have access to scientific opinion, and thus meaningful opportunity to present their stories through novel perspectives.

An inquiry into "Law and Literature" draws upon a "story jurisprudence", illustrating a plurality of possible ways to make sense of admissibility criteria and interdisciplinary stories. A poethical method shifts the focus away from the "rationalist tradition" of evidence scholarship, to other approaches to the admissibility of novel scientific opinion. This thesis has explored relationships between the application of law to scientific opinion as text (or story narrative), its authorship and production, and the audiences' interpretive communities within the various disciplines and cultures of society. In the courtroom, each judge has a duty to consider the probative value (or trustworthiness) of evidence and its prejudice to fact-finding, including the use of hypothetical questions. Judges and other actors should be well aware of outsiders' inaccessibility to relationships between form and substance. The access to knowledge-claims and sites of normativity tends to be more elusive under discourses of power, such as interdisciplinary communications in the courtroom.

The individual politics of courtroom actors locate interdisciplinary stories and the admissibility criteria within a larger context. The approach to evidence concepts, such as relevancy and necessity, are situated in the politics of an interpretive community - the judiciary. These evidentiary questions turn back to the issue of who are the decision-makers, and by what processes do they attain their power over discourses and knowledge-claims. The politics of the judiciary, along specific sites of normativity, inform the admissibility criteria as to the extent

that jurors may defer to science. Scientists also make their decisions and selections of what facts are worthy of consideration within a social and political context. The knowledge-claims and arguments of scientists are always situated within the specific or generic story narratives of their production and evaluation. The communications by judges, lawyers, and scientists - unusual bedfellows, indeed - thus entwine interdisciplinary stories with norms and politics. And yet, any attempts to unravel language and other forms from value-laden constructions can only occur within an interpretive community. The actors should be more aware of how their audiences can participate through story construction based on the former's discourses, which can be incomplete, underinclusive or overinclusive, and so on. The actors' awareness of sites of normativity underlying their own courtroom communications would provide a step towards a more sensitive and participatory process. Justice need not suspend itself by the "measured forms" of law and science.

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APPENDICES

APPENDIX A

SUMMARY OF FACTS: R. V. MOHAN, [1994] 2 S.C.R. 9, PER JUSTICE SOPINKA

The respondent, a practising pediatrician in North Bay, was charged with four counts of sexual assault on four of his female patients, aged thirteen to sixteen at the relevant time. The alleged sexual assaults were perpetrated during the course of medical examinations of the patients conducted in the respondent's office. The complainants had been referred to the respondent for conditions which were, in part, psychosomatic in nature.

Evidence relating to each complaint was admitted as similar fact evidence with respect to the others. The complainants did not know one another. Three of them came forth independently. Following a mistrial, which was publicized, the fourth victim came forward, having heard about the other charges. Three of the four complainants had been victims of prior sexual abuse. With respect to two of them, the respondent knew about their sexual abuse at the hands of others. The alleged assaults consisted of fondling of the girls' breasts and digital penetration and stimulation of their vaginal areas, accompanied by intrusive questioning of them as to their sexual activities. All of the complainants testified that the respondent did not wear gloves while examining them internally. The respondent, who testified in his own defence, denied the complainants' evidence.

At the conclusion of the respondent's examination in chief, counsel for the respondent indicated that he intended to call a psychiatrist who would testify that the perpetrator of the offences alleged to have been committed would be part of a limited and unusual group of individuals and that the respondent did not fall within that narrow class because he did not possess the characteristics belonging to that group. The Crown sought a ruling on the admissibility of that evidence. The trial judge held a voir dire and ruled that the evidence tendered on the voir dire would not be admitted.

The jury found the respondent guilty as charged on November 16, 1990. He was sentenced to nine months' imprisonment on each of the four counts, to be served concurrently, and to two years' probation. The respondent appealed his convictions and the Crown appealed the sentence. The Court of Appeal allowed the respondent's appeal, quashed the convictions and ordered a new trial. Accordingly, the Court of Appeal found it was not necessary to deal with the Crown's sentence appeal and refused the Crown leave to appeal. The appellant sought leave to appeal to this Court against the decision of the Ontario Court of Appeal pursuant to s. 693 of the Criminal Code, R.S.C., 1985, c. C-46. On December 10, 1992 leave to appeal was granted by this Court.

APPENDIX B

TOBACCO PRODUCTS CONTROL ACT S.C. 1988, C. 20

3. The purpose of this Act is to provide a legislative response to a national public health problem of substantial and pressing concern and, in particular,
 - (a) to protect the health of Canadians in the light of conclusive evidence implicating tobacco use in the incidence of numerous debilitating and fatal diseases;
 - (b) to protect young persons and others, to the extent that is reasonable in a free and democratic society, from inducements to use tobacco products and consequent dependence on them; and
 - (c) to enhance public awareness of the hazards of tobacco use by ensuring the effective communication of pertinent information to consumers of tobacco products.
4. (1) No person shall advertise any tobacco product offered for sale in Canada.
 - (2) No person shall, for consideration, publish, broadcast or otherwise disseminate, on behalf of another person, an advertisement for any tobacco product offered for sale in Canada.
 - (3) For greater certainty, subsection (2) does not apply in respect of the distribution for sale of publications imported into Canada or the retransmission of radio or television broadcasts originating outside Canada.
 - (4) No person in Canada shall advertise a tobacco product by means of a publication published outside Canada or a radio or television broadcast originating outside Canada primarily for the purpose of promoting the sale in Canada of a tobacco product.

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