

ESSAY ON THE MANY FACES OF TRUTH IN THE LAW OF EVIDENCE

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*Let's imagine that everything was destroyed and a new race or a new group of beings came to our planet and they tried to discover our culture through the things that we left, and they find my works of art. So I have totally changed everything and nobody will ever know the truth. In my imagination, that's what I'm doing. I sometimes think of it as archaeological ethnographic Dada.*³

INTRODUCTION

In Canadian common or civil law treatises on evidence, truth is identified as at the core of our judicial system. Ducharme writes: [translation] “The search of truth is the essential subject of the rules regarding the law of evidence [...]”⁴ Similarly, Sopinka states that the purpose of a trial “is the search for truth.”⁵ Others make more modest claims. For instance, Paciocco & Stuesser argue that the rules of evidence are there to “help the trier of fact to come to an accurate factual determination.”⁶ But still, the notion of an accurate factual determination implies an ideal of truth.

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³ Willie Cole, *Interview*, Social Studies 4 + 4 Young Americans, exhibition catalogue, Allen Memorial Art Museum, Oberlin, Oberlin College (1990) at 18; Quote reproduced from Jocelyne Lupien, “Willie Cole, An Archeology of the Future” (2005) 20 at *CJLS* 69.

⁴ Léo Ducharme, *Précis de la preuve*, 5d ed (Montreal : Bleue, Wilson & Lafleur, 1996) at 8, para 31. See also from the same author, *L'administration de la preuve*, 3d ed (Montreal : Bleue, Wilson & Lafleur, 2001) at 9, para 14 [*Ducharme*].

⁵ John Sopinka, Sidney N Lederman & Alan W Bryant, *The Law of Evidence in Canada*, 4th ed (Markham, Ontario : LexisNexis, 2014) at 12, para 1.37 [*Sopinka et al*].

⁶ David Paciocco & Lee Stuesser, *The Law of Evidence* (Concord: Irwin Law, 1996) at 1. See also, for criminal law precisely, Pierre Béliveau et Martin Vaclair, *Traité général de preuve et de procédure*

This article does not seek to challenge this ideal. From a normative point of view, searching for truth is essential to maintain the legitimacy of our adjudication systems. When people bring their disputes before a court, they trust that judges will administer justice in a fair and impartial manner, and that decisions will be made according to (admissible) *facts*. As such, the consistency between admissible facts, the law and the verdict of a judge ensures the authority and fairness of our judicial system. It is noteworthy, though, that despite all these considerations, it remains that there is no legal definition of the concept of truth.

During trials, judges are required to determine what happened in the real lives of people going to court. Hence, intuitively, it seems fair to assume that the decisions of judges must rely on what really happened in the world. However, this view implies that *truth* is something similar to what *happened* in the *world* and, moreover, that truth is something that can be *known*. Although this view is intuitive, and seems plausible at first glance, it remains that *truth* is a problematic notion and, furthermore, that *knowing* the truth is even more problematic. It is problematic insofar as what we take to be *true* often turns out to be *false*, or, at least, we often later reject some things that we assumed to be *true*. In law, this happens when decisions are quashed for reasons related to the information used in their making.

The central theme of this article is to show how different conceptions of truth are at work within our judicial system. Hence, the questions “What do we mean by truth ?” and “How can we know it ?” will direct our inquiry. There is no legal definition of truth and, as Justice Baudouin has stated, the concept is ambiguous at best.⁷ As such, we looked into other disciplines to see if there were any definitions of truth that could be used in law, and we found illuminating and promising avenues within philosophy literature.

In this essay, we aim to demonstrate that different conceptions of truth can be found in law. More specifically, we seek to expose how truth is realized in different ways during a trial. To make our task manageable, we limit our analysis to one type of

pénales, 22nd éd (Montréal : Les Éditions Thémis, 2015) at 243, para 566 : [translation] “Evidence in criminal law [...] refers to the evidence of facts.”

⁷ Honorable Jean-Louis Baudouin, *Droit et vérité* (Montréal: Thémis, 2010) at 4.

evidence, namely, the testimonies of lay and expert witnesses, and, more precisely, to the rules governing admissibility of observations made by witnesses, hearsay and experts' opinions, during the information gathering stage of the trial. We will not enter the domain of weighing evidence and the inductions that follow this process. Drawing permissible or impermissible inferences in legal decision-making is not a process founded on truth theories, but on logic.

Following Glanzberg, there are three main theories of truth in philosophy: the correspondence theory, the coherence theory and the pragmatist theory.⁸ Starting from this conceptual map, we will analyze the methods used in a trial to admit and test testimonial evidence narrated from a person who had personal knowledge of the events relating to the dispute, as well as hearsay and expert opinion. We will see that the rules of evidence, including the conditions under which the evidence can be admitted, specify how truth is to be found during a trial. Our goal is to show the many faces of truth in the law of evidence by explaining how different conceptions of truth are implicit in some types of evidence and the rules governing them.

1. Observations of Facts and the Correspondence Theory of Truth

The first sentence of *The Law of Evidence* reads: "The rules of evidence control the presentation of facts before the court."⁹ In Ducharme, it is written [translation]: "[...] evidence law is defined as the rules that governs the demonstration of the exactitude of a fact in front of the court"¹⁰ But what is a fact ?

A *fact* can be understood as a description of the world, and it is presupposed that it has a *mind-independent* existence. It is *objective* in the sense that a person can observe a fact 'out there' through her senses. Questions such as who, what, when and where can often be answered by some immediate perception. Normally, facts will be presented in a declarative form and can be determined to be true or false: "I saw the accused holding her gun in the direction of the victim"; "When I entered the room, I could immediately smell

⁸ Michael Glanzberg, *Truth*, online: The Stanford Encyclopedia of Philosophy <<http://plato.stanford.edu/archives/spr2013/entries/truth/>> [Glanzberg].

⁹ Sopinka et al, *supra* note 5 at 3, para 1.1.

¹⁰ Ducharme, *supra* note 4 at 1-2, para 3 *in fine*.

the gunpowder in the room”; “I heard a gunshot and a scream immediately after the shot,” etc. In the law of evidence, facts which lead to a dispute or to criminal charges are the chief concern. Generally speaking, facts are tendered as evidence through testimonies of ordinary witnesses who have personal knowledge of them. Witnesses come to court to report on the observations of events that they are able to make.

The evidence tendered by people testifying about facts they personally observed is admissible during a trial as long as these facts are relevant to resolve the issue in dispute and the witnesses have the (mental) capacity to tell the truth. Once admitted, the testimonies will be subject to cross-examination, the purpose of which is to verify the accuracy of the observations made by witnesses. Proven facts are taken to be *true*. In other words, we assume that the witnesses can provide us with an *adequate description of events that corresponds to reality*.

The correspondence theory of truth is the more intuitive one. It is the idea that the *truth* is related to *what is*. Following David,¹¹ this idea can be traced back to Aristotle : “Saying that what Is is not, and that what Is Not is, is false, while saying that what Is is, and that what Is Not is not, is the truth.”¹² and even Plato: “So the one who speaks true things about you says things that are as they are.”¹³

This idea is what Tricot refers to as the scholastic definition of truth: *adaequatio rei et intellectus*.¹⁴ According to Glanzberg,¹⁵ the correspondence theory of truth first appeared in the work of Russell¹⁶ and Moore.¹⁷ Its underlying idea is that a “belief is true

¹¹ Marian David, *The Correspondence Theory of Truth*, online: The Stanford Encyclopedia of Philosophy <<http://plato.stanford.edu/archives/fall2009/entries/truth-correspondence/>> [David].

¹² *Metaphysics*, 1011 b25. Our translation from Aristote, *Métaphysique*, french translation by J Tricot, (Paris: Librairie Philosophique J Vrin, 1991).

¹³ *Sophist*, 263b. Our translation from Platon, *Sophiste, Politique, Philèbe, Timée, Critias*, french translation by É Chambry (Paris: Garnier-Flammarion, 1969).

¹⁴ David, *supra* note 11 for the history of the correspondence theory of truth.

¹⁵ Glanzberg, *supra* note 8.

¹⁶ Bertrand Russell, *Philosophical Essays* (London: George Allen and Unwin, 1910) at 147-159; Bertrand Russell, *The Problems of Philosophy* (London: Oxford University Press, 1912).

¹⁷ GE Moore, *Some Main Problems of Philosophy* (London: George Allen and Unwin, 1953).

if and only if it corresponds to a fact.” A more contemporary formulation of this thesis would be that the objects of truth and falsity are *propositions*, rather than beliefs, and that propositions are true if and only if they correspond to reality.¹⁸ The correspondence theory of truth stipulates that sentences are true insofar as they are adequate descriptions of reality.¹⁹

In the law of evidence, adherence to truth as correspondence is implicit to the taking of evidence from witnesses testifying about direct observations they made personally. This conception easily leads to a form of naive realism: it assumes that reality is an independent criterion that enables one to determine whether or not propositions describing this reality are true or false.²⁰ According to the correspondence theory, it is possible to gather knowledge concerning this reality through observations.

Therefore, rules regarding the admissibility of *facts* show a high degree of convergence with the correspondence theory of truth. Indeed, judges, lawyers and parties implicitly assume that facts are objective and pertain to a mind-independent reality. Moreover, they assume that the adequate method to know this reality is for witnesses to testify directly in court about these observations and then to be immediately checked for their veracity and accuracy through cross-examination. The implicit method to acquire truth is to observe the world, and the best way to verify whether these observations are *true* is to submit them to a true or false test (refutation in law). As a result, the

¹⁸ Glanzberg, *supra* note 8.

¹⁹ The basic semantical clause for this theory is that a sentence ϕ is true if and only if ϕ *is* (in the world). So, for instance, it is true that 'snow is white' insofar as snow *is* white.

²⁰ The term “reality” brings us to open a parenthesis on realist and anti-realist theories. Realist theory assumes three theses: the object of knowledge is a mind-independent reality, the fact that propositions are true or false depends on that reality, and knowledge is acquired via true sentences regarding this reality. Anti-realist theory rejects one (or many) of these theses. Realism does not necessarily entail correspondence truth, nor does correspondence truth necessarily entail realism. For instance, one could assume the correspondence theory of truth while assuming that the object of knowledge is *not* a mind-independent entity. Similarly, one could assume the correspondence theory, and assume that the object of knowledge is a mind-independent entity but reject that our knowledge is the (true) description of this entity, for example in light of Kant's epistemology. Also, note that there are different variations of the correspondence theory. Moreover, it would be a mistake to think that a particular conception of truth necessarily implies a position within the realism/antirealism debate, or vice versa. Although questions regarding realism and truth are related, the reader must keep in mind that these two problems are not reducible to one another.

correspondence theory of truth is implicit to the rules of evidence regarding the tendering of *facts* by ordinary witnesses. However, as we will see, the notion of truth in hearsay and expert opinion can hardly be understood in terms of the correspondence theory.

2. *Hearsay and Coherence theory*

In the course of his testimony, John says: “My friend Henry told me that he was very afraid of Bob”. Let us assume that Henry is dead and that Henry said to nobody other than John that he was afraid of Bob. Bob is facing a murder charge of Henry. If John’s declaration is tendered to prove its content, i.e. that indeed Henry was very afraid of Bob, it is hearsay and, as a general rule, not admissible in a trial. Indeed, the definition of hearsay and the rule barring it is:

Written or oral statements, or communicative conduct made by persons otherwise than in testimony at the proceeding in which it is offered, are inadmissible, if such statements or conduct are tendered either as proof of their truth or as proof of assertions implicit therein.²¹

Hearsay cannot be seen as the proof of a fact, strictly speaking, for the witness (John) did not observe personally that Henry was afraid of Bob. John believes that Henry is afraid of Bob, because Henry told him so.

Beliefs, as opposed to *facts*, are *mind-dependent*. For some time in the history of the law of evidence, hearsay was completely excluded as a form of evidence because it was not possible to verify directly with Henry (through cross-examination) the truthfulness of the statement that he was afraid of Bob. In a sense, it was the unavailability of a method to verify the fact in case that justified, *inter alia*, the rule against hearsay. As such, hearsay can hardly be understood in terms of the correspondence theory given that the truth of a hearsay communication, although it is meant to support a fact, has no necessary relation with the truth of that fact. Although the fact “Henry told John that he was afraid of Bob” is (in principle) verifiable and can be established to be true or false, it does not have any incidence on the fact that Henry was actually afraid of Bob. The truth of “Henry told John that he was afraid of Bob” does not imply the truth of “Henry was afraid of Bob”. Put differently, even though little Sam, who is six years old, told his mother that

²¹ Sopinka et al, *supra* note 5 at 237, para 6.2; *R v Evans*, [1993] 3 SCR 653, 108 DLR (4th) 32; *R v Smith*, [1992] 2 SCR 915, 94 DLR (4th) 590; *R v O’Brien*, [1978] 1 SCR 591, 1977 CanLII 168 (SCC) [*O’Brien*].

monsters exist and he is afraid of them, it does not mean that it is true that monsters exist and that he is afraid of them, for monsters do not exist.

Over time, exceptions to the rule against hearsay emerged in case law to circumvent the rigidity imposed by such a prohibition, which often lead to the unnecessary exclusion of very useful information for judges and jury to understand what happened in a particular case. It is for this reason that exceptions were created relating to common categories of statements by unavailable witnesses, for example, admissions, dying declarations, declarations against interest and spontaneous declarations. As soon as the hearsay statement was identified to belong to one category of exceptions, it was admissible as evidence without further inquiry as to its truthfulness at the admissibility stage of the trial process. Hence, it is believed that some forms of hearsay can demonstrate sufficient reasons relating to reliability to be considered as fact.

But what is interesting to note about these exceptions is the rationale behind them, which could be interpreted in terms of the coherence theory of truth. The coherence theory of truth does not assume that the truth of a proposition that expresses a belief depends upon the proposition's concordance with reality; rather, it claims that the truth of the proposition depends upon the set of beliefs from which the proposition is taken.²² In other words, the truth of a proposition does not depend upon the world, but rather depends upon a set of beliefs, or some conception of reality.²³ The emphasis is not upon the relation between *beliefs* and *reality* but rather between *propositions* and *beliefs*.

This definition of truth relies upon an implicit definition of coherence, which must satisfy two conditions: *consistency* (non-contradiction, otherwise *ex falso sequitur*

²² The coherence theory of truth is often seen as an adversary to the correspondence theory of truth insofar as it rejects that there is a distinction between *beliefs* and *what makes beliefs true*: James O Young, *The Coherence Theory of Truth*, online: The Stanford Encyclopedia of Philosophy <<http://plato.stanford.edu/archives/fall2008/entries/truth-coherence/>> [Young].

²³ As an example of a coherence theory of truth, Dorsey defines truth such that ϕ is true in some set of beliefs if and only if (1) ϕ is a member of the set and the set is coherent *or* (2) ϕ is a member of a coherent set that is obtained via some minimal modifications of the previous set (the latter condition allowing for revision of beliefs): Dale Dorsey, "A Coherence Theory of Truth in Ethics" (2006) 127(3) *Philosophical Studies* 493 [Dorsey].

quodlibet) and *derivability*.²⁴ Coherence is defined by Dorsey²⁵ such that a set of beliefs is *coherent* if and only if its members are logically consistent with each other and with each other's 'consequences', and each sentence ϕ in the set of beliefs can be derived from a subset of the set of beliefs.²⁶

The exceptions such as admissions, dying declarations, declarations against interest and spontaneous declarations are admissible because the declarant's hearsay statements have been made in such conditions that it would be reasonable to believe that they are reliable.²⁷ Different assumptions are made to justify the various exceptions to the rule against hearsay. Here are some examples of the exceptions and their traditional rationales:

1. **Declarations against pecuniary or proprietary interest:** "There exists the belief that when a person asserts a statement against his or her pecuniary or proprietary interest, it is not likely to be false, as a monetary disadvantage can ensue from such a declaration."²⁸
2. **Declarations against penal interest.** "[A] person is as likely to speak the truth in a matter affecting his liberty as in a matter affecting his pocketbook."²⁹
3. **Declarations made in the course of business duty:** "[A] declarant would fear censure and dismissal should an employer discover an inaccuracy in the statement."³⁰

²⁴ Dorsey, *supra* note 23 at 498. That said, the notion of *derivability* here is understood in an informal, intuitive, not well-defined way: Young, *supra* note 22 at 2.

²⁵ *Ibid* at 497-99.

²⁶ Note that the notions of 'consequence' and 'derivation' are used in an intuitive, ambiguous way, and not in the manner they are used in logic. The term *inferred* is perhaps more accurate than *derived*.

²⁷ Sopinka et al, *supra* note 5 at 255, para 6.62.

²⁸ *Ibid* at 285, para 6.166; *Tucker v Oldbury Urban District Council*, [1912] 2 KB 317 at 321 (CA), 1912 WL 17524 (Westlaw).

²⁹ Sopinka et al, *supra* note 5 at 287, para 6.171; *O'Brien*, *supra* note 21 at 599. More precisely, [translation] "In common law, a declaration made by someone against his own interest can be admissible in favor of the accused" under certain conditions : Béliveau-Vauclair, *supra* note 6 at 370-71, para 834.

³⁰ *Ibid* at 296, para 6.197; *Poole v Dicus* (1835), 1 Bing. NC 649 at 652. See also JD Ewart, "Admissibility at Common Law of Records" (1981) 59 Can Bar Rev 52 at 54.

4. **Dying declarations:** “[T]he general principle on which this species of evidence is admitted is, that they are declarations made in extremity, when the party is at the point of death, and when every hope of this world is gone: when every motive to falsehood is silenced, and the mind is induced by the most powerful considerations to speak the truth; a situation so solemn, and so awful, is considered by the law as creating an obligation equal to that which is imposed by a positive oath administered in a Court of Justice.”³¹

The rationale behind the acceptance of hearsay as testimonial evidence suggests that the coherence theory of truth is also at work since we assume that exceptions to the rule against hearsay are compatible with some of our beliefs. In the case of declarations against pecuniary or proprietary interest, we *believe* that when a person asserts something that is against her interest, that assertion is not likely to be false. Similarly, we *believe* that a person is likely to tell the truth on matters that can negatively affect her liberty. The same goes for declarations made in the course of business duties, where we *believe* that a declarant would fear censure and dismissal, and dying declarations, where we *believe* that statements made by a person close to death are more likely to be truthful. In all of these examples, the admissibility of hearsay as testimonial evidence depends upon its integration within a wider range of beliefs.

The hearsay of John testifying that Henry told him that he was afraid of Bob may express the belief of John in the proposition, “Henry was afraid of Bob”. If, for instance, Henry told this to John from his deathbed, then John’s belief would be consistent with our beliefs regarding dying declarations, and as such it would be considered as proof of the fact that Henry was actually afraid of Bob. Hence, the coherence theory of truth is at play: a proposition will be considered as *true* depending on whether our beliefs regarding the truth of this proposition are consistent with a wider set of beliefs, such as our beliefs concerning acceptable exceptions to the rule against hearsay.

There has been much criticism of the rule prohibiting hearsay and the admission of some forms of hearsay based on categories of exceptions. Authors, such as Sopinka *et*

³¹ *Ibid* at 358, para 6.364; *R v Woodcock* (1789) 1 Leach 500, 168 ER at 353.

al. are of the opinion that distinguishing ‘good’ from ‘bad’ hearsay, “if it make any sense at all, should go to the exercise of weighing evidence...”³² This criticism has been heard and partially accepted by the Supreme Court of Canada.

In 1990, the Supreme Court started to develop a principled approach to hearsay in *R v Khan*,³³ and it later expanded it in *R v Smith*,³⁴ *R v B (KG)*³⁵ and in *R v Hawkins*.³⁶ In *Hawkins*, the Court decided that the principled approach “has become firmly entrenched in our jurisprudence.”³⁷ As a result of this case law, if hearsay does not fall within a traditional exception, but is nonetheless found to be necessary³⁸ and reliable³⁹ (the test of threshold reliability and not ultimate reliability), it will be admissible.⁴⁰ Otherwise, hearsay is still presumptively inadmissible, as Justice Fish stated in the more recent decision of *R v Baldree*.⁴¹

Under the principled approach, the test of threshold reliability “is limited to an examination of the surrounding circumstances of the prior statements to determine whether there are sufficient guarantees of trustworthiness to counteract the traditional hearsay dangers.”⁴² In *Khan*, for example, the Supreme Court held that the child's

³² Sopinka et al, *supra* note 5 at 243, para 6.23

³³ *R v Khan*, [1990] 2 SCR 531, 59 CCC (3d) 92 [*Khan*].

³⁴ *R v Smith*, [1992] 2 SCR 915, 94 DLR (4th) 590 [*Smith*].

³⁵ *R v B(KG)*, [1993] 1 SCR 740, 79 CCC (3d) 257.

³⁶ *R v Hawkins*, [1996] 3 SCR 1043; 111 CCC (3d) 129 [*Hawkins*].

³⁷ *Ibid* at 155.

³⁸ On the criteria of necessity, see Sopinka et al., *supra* note 5 at 256, para 6.65. See also Beliveau-Vauclair, *supra* note 6 at 357-367, paras 805-24.

³⁹ On the criteria of reliability, see Sopinka et al., *supra* note 5 at 256, para 6.66. See also Beliveau-Vauclair, *supra* note 6 at 357-367, paras 805-24.

⁴⁰ *Smith*, *supra* note 34 stated that the application of the principled approach is not limited to the particular facts stated in *Khan*, *supra* note 33.

⁴¹ *R v Baldree*, 2013 SCC 35 at para 6, [2013] 2 SCR 520.

⁴² *Hawkins*, *supra* note 37 at para 81; In *Smith*, the Court reiterated that reliability “is a function of the circumstances under which the statement in question was made.” When a statement has been made under circumstances which “substantially negate the possibility that the declarant was untruthful or mistaken, the hearsay evidence may be said to be ‘reliable’, i.e., a circumstantial guarantee of trustworthiness is established.”

statement to her mother was found to pass the test of threshold reliability. *Khan* was a sexual assault case, in which the infant complainant described the criminal act to her mother shortly after it occurred. The child was not permitted to testify at trial, and the issue was whether her mother would be permitted to testify as to the statements made to her by the child shortly after the event. The Court was of the opinion that the “child had no motive to falsify her story, which emerged naturally and without prompting. Moreover, the fact that she could not be expected to have knowledge of such sexual acts imbues her statement with its own peculiar stamp of reliability.”⁴³ Thus, even under the principled approach, the admissibility of hearsay also depends upon our beliefs regarding its reliability.

3. *Opinion Evidence and the Pragmatist Theory of Truth*

As a general rule witnesses are not permitted to offer their opinion in court. As noted previously, they are restricted to their observations. There are some limited exceptions to this rule. For example, testimony as to apparent age, sobriety or state of repair is admissible. Although opinion evidence may be offered by lay persons or experts as a result of these exceptions, only expert scientific or technical opinion will be discussed in this section for it offers a clear example of the application of the pragmatist theory of truth. Courts have long recognized an exception to the opinion rule for expert witnesses.⁴⁴ Admissibility of expert opinion is governed by four criteria: (1) Necessity in assisting the trier of fact;⁴⁵ (2) Relevance;⁴⁶ (3) Absence of any exclusionary rule that would be offended by the admission of the opinion;⁴⁷ and (4) A properly qualified

⁴³ *Khan*, *supra* note 33 at 548.

⁴⁴ Sopinka et al, *supra* note 5 at 784, para 12.35; *Folkes v Chadd* (1782), 3 Doug. KB 157, 99 ER 589 (KB); *Beckwith v Sydebotham* (1807), 1 Camp. 116, 170 ER 897 (KB).

⁴⁵ Expert opinion is ‘necessary’ where it provides information likely to be outside the experience and knowledge of a judge or jury. Sopinka et al, *supra* note 5 at 791-99, paras 12.50-12.68. See also Béliveau-Vauclair, *supra* note 6 at 482-84, paras 1046-50.

⁴⁶ The ‘relevance’ inquiry requires a finding of both logical relevance and a determination that the benefits of the evidence (in terms of materiality, weight, and reliability) outweigh its costs (in terms of the risk that it may be accepted uncritically by the trier, its potential prejudicial effect, and the practical costs associated with its presentation). Sopinka et al, *supra* note 5 at 791-95, paras 12.50-12.58. See also Béliveau-Vauclair, *supra* note 6 at 482, para 1045.

⁴⁷ Sopinka et al, *supra* note 5 at 819, para 12.120. See also Béliveau-Vauclair, *supra* note 6 at 484-86, paras 1051-53.

expert.⁴⁸ After an examination of these four criteria during a *voir dire*, a judge will determine if the expert opinion is admissible.⁴⁹

In this section, we will analyse the fourth criterion of admissibility, “a properly qualified expert,” which is related to the notion of truth. Expert testimony can be understood in terms of pragmatist truth since it is assumed that the expert will have good reasons to believe (will be justified to believe) in her scientific opinion given the methodology from which it results and its concordance with empirical research. As such, even though the accepted knowledge within a field may change over time, the expert’s opinion can be seen as reliable when it results from a scientific inquiry process, which provides the expert (and *a fortiori* a court) with a reasonable justification to *believe* in the truthfulness of her claim.

As presented in a trial, an expert opinion contains two types of information. The first type is the basic information necessary for the understanding of scientific or technical issues involved in the case. Very often, this basic information is comprised of facts, but it can also be composed of hearsay.⁵⁰ The second type of information is the opinion that an expert provides to a court, and which derives from the basic information. Beside the credentials of an expert, both components of the expert opinion can be scrutinized by judges and counsel under the “properly qualified expert” criterion during a *voir dire*. However, in the case law, this fourth criterion is treated differently depending on whether the expert presents *established* or *novel* scientific evidence.

⁴⁸ *Ibid* at 822-27, paras 12.130-12.143. See also Béliveau-Vauclair, *supra* note 6 at 486-87, paras 1054-56.

⁴⁹ *Ibid* at 823, para 12.133; *R v Mohan*, [1994] 2 SCR 9 at 71: If opposing counsel opposes the admission of the expert’s testimony, this issue becomes a preliminary question for the judge alone to determine “for it is a question of law”.

⁵⁰ Sopinka et al, *supra* note 5 at 838-39, paras 12.169-12.170: An expert’s opinion will be based on experience and education received. The latter is naturally comprised of the study and readings of works of authorities in the field and information and data culled from numerous sources. As stated by Martin J.A. in *R v Valley*: “An expert opinion in forming an opinion may, of course, draw on works of a general nature which form part of the corpus of knowledge with an expert in a particular field would be expected to be acquainted,” (1986) 13 OAC 89, 26 CCC (3d) 207 at 240 (CA). An expert’s knowledge is made up of the distilled assertions of others not before the court. Recognition of this hearsay basis of expertise has been acknowledged by Canadian courts for some time: *Brownell v Black* (1890) 31 NBR 594 (CA); *CPR v Jackson* (1915), 52 SCR 281; *R v Anderson* (1914), 7 Alta LR 102; *R v Abadom*, [1983] 1 All ER 364, [1983] 1 WLR 126 (CA); *Reference re Sections 222, 224 and 224A of the Criminal Code* (1971), 3 CCC (2d) 243 at 254 (NBCA).

—Established scientific evidence

What is considered established scientific evidence depends on the idea that there exists traditional academically based sciences (for example, chemistry) and established professions (for example, engineering).⁵¹ For these types of expertise, an expert will meet the test of a properly qualified expert if she demonstrates that she possesses special knowledge and experience going beyond that of the trier of fact. As long as the witness possesses skills in the field in which she testifies, her testimony will be admissible: The admissibility of such [expert] evidence does not depend upon the means by which that skill was acquired.⁵² As long as the court is satisfied that the witness is sufficiently experienced in the subject-matter at issue, the court will not be concerned whether his or her skill was derived from specific studies or practical training.⁵³

In the law of evidence, the skills of the expert are taken to constitute good reasons to rely on and believe her opinion. However, it is not clear in the case law whether other explicit objective factors, such as methodological criteria, are used to determine if the research *per se* is valid. Consider for example the 2007 Supreme Court minority opinion written by Bastarache J. in *R v. Trochym*.⁵⁴ He expressed the view that post-hypnosis evidence was an established technique for it had been used for almost 30 years and reported in several cases.⁵⁵ As a consequence, Bastarache J. reasoned, the court does not have to assume a gatekeeper function for established evidence. As long as it has been found reliable in the past, the methodology does not have to be resubmitted for scrutiny in every other case in which the same expert evidence is examined during a *voir dire* to determine its admissibility. Since hypnosis evidence has been “previously accepted as legitimate by our courts,” it is admissible as a technique and the results of its use (including the “potential frailties created by the means of refreshing the memory”), goes

⁵¹ Sopinka et al, *supra* note 5 at 801, para 12.73.

⁵² *R v Wade* (1994) 89 CCC (3d) 39 (Ont CA); Sopinka et al, *supra* note 5 at 623, para 12.41.

⁵³ *R v Marquard*, [1993] 4 SCR 233, 25 CR (4th) 1 at 14-15 (CR); Sopinka et al, *supra* note 5 at 623, para 12.41.

⁵⁴ *R v Trochym*, [2007] 1 SCR 239 [*Trochym*].

⁵⁵ *R v Trochym*, *supra* note 54 at para 132.

to weight.⁵⁶ Deschamps J., writing the majority opinion of the Court in *Trochym*, appeared to be of the opinion that, whether the science was novel or established, methodological evidence needs to be presented during the *voir dire*:

Just as financial results (*established science*) contained in a report must be found to be prepared on the basis of a technique that has a reliable scientific foundation, post-hypnosis memories (*novel science*) must be demonstrated to be sufficiently reliable before being put to the trier of fact.⁵⁷ (Text in brackets added.)

Given the developments in science, a justified belief in an expert's opinion requires that the expert's opinion indeed be adequate to what is established within her field of expertise. In the case of established scientific evidence, experts usually have good reason to believe in the scientific opinion they provide because, as Royer writes, expert opinion is based on [translation] "proven methods and techniques or on generally accepted scientific principles."⁵⁸

Therefore, if the technique has been tested, or if the scientific principles are generally accepted and the proof has already been made in previous cases, it would be redundant and inefficient to require counsel to tender evidence to this effect in subsequent cases, unless of course something 'new' can be stated about the technique or the science, or its application. In *Trochym*, Bastarache J. believed that there was insufficient evidence in the particular case to challenge the admissibility of hypnotically

⁵⁶ *Ibid* at paras 138, 145.

⁵⁷ *Ibid* at para 24. In a 2010 case, *R v Morelli*, [2010] 1 SCR 253 at para 161-62 [*Morelli*], Deschamps J. (dissenting) seemed to rely, however, on the *frequency* and *notoriety* of a fact (the propensity of child pornography offenders to collect and hoard such materials) encountered by experts (enforcement officials working in computer technology) to determine that this factual knowledge was not novel in a case in which the validity of a search warrant was contested. Therefore, admissibility of this fact could have been questioned on the basis of the qualifications of the officers, but not the methodology used to find this fact.

⁵⁸ Jean-Claude Royer, *La preuve civile*, 3d ed (Cowansville : Editions Yvon Blais, 2003) at 307, para 476; *Leroux v Cake*, JE 790317 (CA); Jacques Fortin, *Preuve pénale* (Montréal: Thémis, 1984) at 740-742. Isabelle Saint-jean and Claude Verge, *Les lignes directrices relatives au rôle des experts : les attentes de la Commission des lésions professionnelles* (Montréal : Institut canadien, 2004) at 5 : « Outre son caractère objectif et impartial, le sérieux de la démarche de l'expert permet aussi d'évaluer la force probante de son opinion. Il importe de vérifier si l'opinion est basée sur des faits validés ou sur des généralités et si l'expert a fait preuve d'une rigueur scientifique, entre autres s'il s'est appuyé sur des sources identifiées et fiables. » in Claude Lavoie, *L'expert : son rapport et son témoignage* (Cowansville : Editions Yvon Blais, 2007) at 78.

refreshed memories, but he nevertheless concluded that evidence could be presented in future cases to demonstrate “that it is time for Canadian courts to reconsider the long-standing admissibility rule for hypnotically refreshed memories.⁵⁹” We will come back to this question regarding the classification of novel science or technique in the next section. For now, it suffices to say that when judges admit an expert opinion founded on established scientific techniques or principles, these grounds provide a reasonable justification to believe in the truthfulness of this opinion. It is in that sense that the jurisprudence regarding experts’ testimonies can be understood in the light of the pragmatist theory of truth, which we explain next.

Following Hookway,⁶⁰ pragmatism is a doctrine that was introduced by Charles Sanders Peirce, William James and John Dewey. The main idea of pragmatism is that the content of a hypothesis can be clarified by establishing its practical consequences⁶¹ and this implies that *true beliefs* are consistent with empirical research.⁶² Although the pragmatist theory of truth assumes that *reality* is an objective criterion that enables us to determine the truth-value of propositions, it is important to see that this theory is different from the correspondence theory insofar as it assumes that *truth* results from the convergence of our inquiries (empirical research) rather than from an immediate perception of some *fact*.⁶³ This *inquiry process* is at the core of the pragmatist theory of truth.⁶⁴ The inquiry process, which Peirce called the *scientific method*, is characterized by *deduction*, *induction* and *abduction*,⁶⁵ and its main characteristic is that it is constrained by *reality*, a *reality* that is independent from our beliefs.⁶⁶

⁵⁹ *R v Trochym*, *supra* note 54 at paras 147, 160 (Bastarache J.).

⁶⁰ Christopher Hookway, *Pragmatism*, online: The Stanford Encyclopedia of Philosophy <<http://plato.stanford.edu/archives/spr2010/entries/pragmatism/>> [Hookway].

⁶¹ Hookway, *supra* note 60 at 5.

⁶² Glanzberg, *supra* note 8 at 10.

⁶³ Hookway, *supra* note 60 at 10.

⁶⁴ Susan Haack, “The Pragmatist Theory of Truth” (1976) 27 *British journal for the philosophy of science* at 231-49 [Haack].

⁶⁵ *Ibid* at 245. The problem of induction was first formulated by David Hume, *Traité de la nature humaine*, vol 4 (Paris: Flammarion, 1740), who stated that an induction relies upon the assumption that the future will be in uniformity with the past (i.e., that nature is uniform). A *deductive* inference (a *deduction*) is an

The main difference between the pragmatist theory of truth and the coherence theory of truth is that *reality* plays a much more important role in the pragmatist theory. It emphasizes that our beliefs are generated by some independent reality, and moreover that one can only be justified to believe in something when it has been empirically tested. While the pragmatist theory maintains that our beliefs must be consistent with empirical research (which is the justification for the criteria used to examine the admissibility of new scientific evidence), the coherence theory says that our beliefs must be consistent with our beliefs about empirical research (which seems to be the justification for the criteria used to examine the admissibility of established scientific evidence).

With respect to novel science, case law is even clearer regarding the importance of methodology to determine admissibility.

—*New scientific evidence*

New scientific evidence either derives from new principles and technologies or from new fields of specialization.⁶⁷ In *Trochym*, the question as to whether post-hypnosis could be labelled as new was central to this case. Indeed, Deschamps J. ruled in that case that post-hypnosis was a novel ‘science’, but she did not provide reasons for reaching this qualification.⁶⁸ Bastarache J. disputed this finding of Deschamps J. in pointing out that a scientific technique or knowledge is considered ‘novel’ in two situations only: “[...] when it is new, or when the application of recognized scientific knowledge or technique is new.”⁶⁹

In *J.-L.J.*, the expert in issue was characterized as a “pioneer in Canada” in trying to use a generally recognized therapeutic tool, penile plethysmograph, as a forensic

inference where the conclusion is presented as being a necessary consequence of the premises. An abduction is an inference in the sense that one observes a phenomenon, postulates some hypothesis to explain this phenomenon and then test the hypothesis via empirical experimentation.

⁶⁶ Haack, *supra* note 64 at 233.

⁶⁷ Sopinka et al, *supra* note 5 at 627-34, paras 12.51-12.69. See also Béliveau-Vauclair, *supra* note 6 at 487-88, para 1057: “[...] admissibility of scientific evidence evolves with time and new discoveries...”

⁶⁸ *Trochym*, *supra* note 54 at para 24 (Deschamps J.).

⁶⁹ See also *J-LJ*, [2000] 2 SCR 600 at para 35.

tool in order to determine common traits or characteristics of sexual deviants. This is what made the science in that case “novel”. Hypnosis is not new science, nor is its use in forensic investigation new.⁷⁰

Of course, the determination of what constitutes established or new evidence could potentially, at least in some cases, be more complex than it seems (and this could be the subject of another article).⁷¹ On this point, Deschamps J. wrote in *Trochym*:

31 Not all scientific evidence, or evidence that results from the use of a scientific technique, must be screened before being introduced into evidence. In some cases, the science in question is so well established that judges can rely on the fact that the admissibility of evidence based on it has been clearly recognized by the courts in the past. Other cases may not be so clear. Like the legal community, the scientific community continues to challenge and improve upon its existing base of knowledge. As a result, the admissibility of scientific evidence is not frozen in time.⁷²

In any event, because the majority of the Court in *Trochym* was of the view that post-hypnosis can be categorized as “novel science”, it was subjected to “special scrutiny” during the *voir dire*, as was stated in *Mohan*:

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

⁷⁰ *Trochym*, *supra* note 54 at paras 133.

⁷¹ It is possible that judges may be asked in the future to better define the parameters of what constitute or do not constitute established novel sciences or techniques. In our contemporary society, great value is placed on innovation. Techniques and processes are modified and/or transformed at a very rapid pace. When we thought that scientific theories were certain and established, we learned that a scientist made a revolutionary discovery. The classical story in the change of paradigm from Newton's theory of gravitation to Einstein's theory of general relativity is often used as an example of this phenomenon in scientific practice. After seeing the apple falling from the tree, Newton inferred (inducted) that there is a gravitational force such that objects attract each other. This hypothesis was tested via many experiments and we even concluded that on Earth, an object will fall according to an acceleration rate of 9.81 m/s². Newton's hypothesis was tested and confirmed, but we could not have said that it was *true*, otherwise it would have been impossible for Einstein to refute Newton's hypothesis via his theory of general relativity (if it is a true description of reality, then it cannot become false, reality being what it *is*). Assuming that objects deform space, general relativity predicted that light from distant stars would follow a curvilinear trajectory when passing by the Sun. This was verified in 1919 by Eddington during an eclipse, and thus Newtonian gravitation was rejected in favour of Einstein general relativity.

⁷² *Trochym*, *supra* note 54 at para 31.

fact will be unable to come to a satisfactory conclusion without the assistance of the expert.⁷³

As a result of subsequent cases, ‘special scrutiny’ now means that judges will not only examine the skills of the experts, but also consider a list of factors to evaluate the soundness and reliability of the novel science.

- (1) whether the theory or technique can be and has been tested: Scientific methodology today is based on generating hypotheses and testing them to see if they can be falsified; indeed, this methodology is what distinguishes science from other fields of human inquiry.
- (2) whether the theory or technique has been subjected to peer review and publication: [S]ubmission to the scrutiny of the scientific community is a component of “good science,” in part because it increases the likelihood that substantive flaws in methodology will be detected.
- (3) the known or potential rate of error or the existence of standards; and, whether the theory or technique used has been generally accepted: A “reliability assessment does not require, although it does permit, explicit identification of a relevant scientific community and an express determination of a particular degree of acceptance within that community.”⁷⁴

It was in 2000, in its *J-LJ* decision, that the Supreme Court of Canada decided that this list of factors, which originated from the US Supreme Court decision *Daubert*, would be applicable in Canadian law.⁷⁵ From then on, it was settled in law that methodological issues were part of the admissibility test for expert testimony based on novel science. Therefore, it also appears appropriate to interpret this situation from the point of view of the pragmatist theory of truth since the expert’s opinion is seen as reliable because it results from a scientific inquiry process.

In this last section, we will describe the evolution of case law pertaining to factors established by courts through time to determine the soundness and reliability of scientific evidence. The aim is to show that these factors have evolved and it is possible that the evolution occurred as methodological knowledge itself evolved in science. Our implicit

⁷³ Mohan, *supra* note 49 at 25.

⁷⁴ *Daubert v Merrell Dow Pharmaceuticals Inc.*, 509 US 579 (1993) [*Daubert*].

⁷⁵ *R v J-LJ*, *supra* note 69 at para 33.

goal is to show the importance for counsel and judges to educate themselves on methodology. Developing a critical outlook on research and its various methods may prove, in time, to become an essential skill to find *truth*, or to get as close as possible to *truth* when resolving disputes.

—*Evolution of case law on scientific methods*

In a case discussing the admissibility of expert testimony on the systolic blood pressure deception test (described as a crude precursor to the polygraph) in 1923, a US District Court judge ruled in *Frye v United States*⁷⁶ that expert testimony must be based on scientific methods that are sufficiently established and accepted. The court opined:

Just when a scientific principle or discovery crosses the line between the experimental and demonstrable stages is difficult to define. Somewhere in this twilight zone the evidential force of the principle must be recognized, and while courts will go a long way in admitting expert testimony deduced from a well-recognized scientific principle or discovery, the thing from which the deduction is made must be sufficiently established to have gained general acceptance in the particular field in which it belongs.⁷⁷ (Our emphasis)

The *Frye* test raised controversy in the United States for several decades. The most severe critique was to the effect that it did not specify what proportion of experts constitute general acceptance and, therefore, “the most rigorous fields with the healthiest scientific discourse might fail the *Frye* test with the greatest frequency.”⁷⁸ As a result of this controversy, variations and alternatives to the *Frye* test have been suggested by American judges.⁷⁹ For example, in *Downing*,⁸⁰ it was decided that the “degree of acceptance of a scientific technique within a scientific community [was] not a threshold

⁷⁶ Paul Mark Sandler & James K Archibald, *Model Witness Examinations*, 2d ed (USA: American Bar Association, 2003) at 117 [*Sandler*]; *Frye v United State*, 293 F 1013 (DC Cir 1923) [*Frye*].

⁷⁷ *Ibid* at 1014.

⁷⁸ Cited in *Trochym*, *supra* note 54 at para 140 (Bastarache J. dissenting). DL Faigman et al., *Modern Scientific Evidence: The Law and Science of Expert Testimony*, vol 1 (Egan: Thomson/West, 2005) at 9.

⁷⁹ P Giannelli, “The Admissibility of Novel Scientific Evidence: *Frye v. United States*, a Half Century Later” (1980), 80 *Columbia L Rev* 1197 at 1198; M McCormick, “Scientific Evidence: Defining a New Approach to Admissibility” (1982), 67 *Iowa L Rev* 879; John W Strong, *McCormick on Evidence*, 4th ed (St. Paul: West Publishing, 1992) at 867-77.

⁸⁰ *United States v Downing*, 753 F.2d 1224 at 1235 (3rd Cir 1985).

for admissibility...”⁸¹ and that “the lack of consensus of opinion in a particular community is not determinative of its validity, reliability or accuracy”.⁸² This test was adopted by the Supreme Court of Canada in *R v Mohan*.⁸³

At issue in *Mohan* was the admissibility of an expert opinion given by Dr. Hill, a psychiatrist. This expert had built a classification grouping types of sexual offenders. Counsel for the accused sought to introduce this evidence in order for Dr. Hill to testify, *inter alia*, that the accused, Dr. Mohan, did not have the characteristics attributable to any of the groups in which most sex offenders fall.⁸⁴ In this case, the accused was a practicing pediatrician charged with four counts of sexual assault on four female patients, aged 13 to 16. These assaults occurred during the course of medical examinations conducted in his office. At the conclusion of a *voir dire*, this expert evidence was found inadmissible. The trial judge noted that Dr. Hill admitted that he was not aware of any scientific study or literature related to the psychiatric make-up of doctors who sexually abuse their patients. Therefore, in rejecting his testimony, the trial judge applied the general acceptance (*Frye*) test.

The Supreme Court of Canada agreed the evidence was inadmissible. Sopinka J. wrote the reasons for the Court’s decision and made two important points. First, he labelled the psychiatrist’s classification of sexual offenders as new scientific evidence. Second, he adopted the reliability test, and therefore rejected the general acceptance test, and he built on *R v Béland*⁸⁵ to determine methodological issues pertaining to admissibility of novel science:

⁸¹ Sopinka et al, *supra* note 5 at 811, para 12.99.

⁸² *Ibid.*

⁸³ *Mohan*, *supra* note 49 at 25.

⁸⁴ *Mohan*, *supra* note 49 at 15-16.

⁸⁵ In 1987, the majority of the Supreme Court rejected the 1923 *Frye* test, based on “general acceptance” in *R v Béland*, [1987] 2 SCR 398 and replaced it with a flexible standard based on an examination of the reliability and helpfulness of expert evidence: “It is argued, however, by the Crown that polygraph evidence should not be admitted because it is ‘not reliable to an acceptable standard’(...) It is, in effect, a plea for the acceptance in Canada of the *Frye* test initially applied in the United States (...), which has since been considerably eroded by the courts of that country. The ‘general acceptance’ test in *Frye* has now given way in the United States to the ‘reasonable reliability’ test.”

The trial judge should consider the opinion of the expert and whether the expert is merely expressing a personal opinion or whether the behavioural profile which the expert is putting forward is in common use as a reliable indicator of membership in a distinctive group. Put another way: Has the scientific community developed a standard profile for the offender who commits this type of crime? An affirmative finding on this basis will satisfy the criteria of relevance and necessity.⁸⁶

Based on the application of this test, he agreed with the findings of the trial judge “that a person who committed sexual assaults on young women could not be said to belong to a group possessing behavioural characteristics that are sufficiently distinctive to be of assistance in identifying the perpetrator of the offences charged.”⁸⁷

There was a problem with *Mohan*, for the analysis was very brief and limited to the facts of the case. The result of this brevity was that no general criteria were laid down to evaluate the reliability of the new science or technique in this judgment. Recall that Sopinka J. wrote that *novel scientific theory or technique is subjected to special scrutiny*. However, it was not clear what “special scrutiny” meant precisely after *Mohan*. In the meantime, and building on *Downing*, the U.S. Supreme Court laid down in 1993 the list of factors to evaluate the soundness and reliability of science in *Daubert*,⁸⁸ the same list that the Supreme Court of Canada accepted in *J-LJ*.⁸⁹

Thereafter, in 1999, the US Supreme Court broadened the application of *Daubert* in *Kumho Tire Co. v Carmichael*⁹⁰ to include in addition to expert testimony based on “scientific” knowledge, testimony based on “technical” and “other specialized” knowledge, and therefore included knowledge generated through exact sciences, human and social sciences, techniques or professions.⁹¹ Since then, “all expert testimony must be

⁸⁶ *Mohan*, *supra* note 49 at 37.

⁸⁷ *Mohan*, *supra* note 49 at 37.

⁸⁸ *Daubert*, *supra* note 74.

⁸⁹ *R v J-LJ*, *supra* note 69 at para 33. See also *Trochym*, *supra* note 54; *Morelli*, *supra* note 57.

⁹⁰ *Kumho Tire v Carmichael*, 526 US 137 (1999) accessed online at <<http://www.law.cornell.edu/supct/pdf/97-1709P.ZO>> [*Kumho Tire*].

⁹¹ *Daubert*, *supra* note 74 at 589-590.

the product of reliable principles based on sufficient facts.”⁹² It is also noteworthy that the US case law on expert opinion does not appear to distinguish between novel and established scientific evidence.

Perhaps it is these developments that influenced Deschamps J.’s opinion in *Trochym* to the effect that all scientific evidence should be probed, at least as a matter of principle, unless it “is *so well established* that judges can rely on the fact that the admissibility of evidence based on it has been *clearly recognized* by the court in the past.”⁹³ If this view is accurate, her opinion should then be understood in light of US Supreme Court Justice Breyer delivering the opinion of the Court in *Kumho Tire Co.* In this case, Breyer J. made it clear that a trial court *may* consider one or more of the specific factors stated in *Daubert*. The *Daubert* test on reliability is “flexible” for its “list of specific factors neither necessarily nor exclusively applies to all experts or in every case. Finally, *Daubert* also specifies that the gatekeeping inquiry of the judge must be ‘tied to the facts’ of a particular case.”⁹⁴ This was also the view of Sopinka et al., who wrote that the Supreme Court has not attempted “to fashion a universal test to screen the admissibility of novel scientific evidence or techniques.”⁹⁵

Therefore, considering cases and literature, there is some room in Canadian law of evidence to determine, on a case by case basis, which methodological factors should be taken into account (to inquire into the validity of new scientific evidence in a specific field) to determine whether expert testimony should be admitted or excluded. This is particularly important in law for there are a variety of fields in which expert opinions are

⁹² Sandler, *supra* note 76 at 118.

⁹³ *Trochym*, *supra* note 54 at para 31; Justice Deschamps’ view on the admissibility of expert evidence was clearly (and rightly) influenced by public inquiries on wrongful convictions. The very first paragraph of her reasons start with the following statement: In recent years, a number of public inquiries have highlighted the importance of safeguarding the criminal justice system — and protecting the accused who are tried under it — from the possibility of wrongful conviction. As this Court has previously noted, “[t]he names of Marshall, Milgaard, Morin, Sophonow and Parsons signal prudence and caution in a murder case” : *United States v Burns*, [2001] 1 SCR 283, 2001 SCC 7 at para. 1”.

⁹⁴ *Daubert*, *supra* note 74 at 591 (quoting *United States v Downing*, 753 F.2d 1224 at 1242 (3rd Cir 1985)). In *Kumho Tire*, *supra* note 90 at 1-2 of the conclusions in the PDF version.

⁹⁵ Sopinka et al, *supra* note 5 at 804, para 12.81. Sopinka J. (as he then was) wrote the reasons for the court in *Mohan*.

sought to explain different types of phenomenon. As McCormick (an American scholar in evidence) wrote in 1982, the “effect of the departure from *Frye* has been a liberalization in the admission of scientific evidence.”⁹⁶

If this conclusion is also true in Canada, it not only makes sense to use different methods to evaluate reliability of expert evidence, but it is also important that judges understand and master methodological principles used by experts working in different fields of knowledge, notably because the main goals of exact sciences (or social and human sciences) can differ greatly. As different methodologies are used in different disciplines to reach different goals, expert testimony must be evaluated according to the field of expertise on which it relies. Thereby, the admissibility of an historian’s expertise must, for instance, be analyzed in light of the methodology one finds in history rather than in physics. As a consequence, if judges are to make determinations with respect to the admissibility of experts such as sociologists, historians (oral or written history), or anthropologists, they will likely need some training on the various methods used by these scholars to ensure the validity of their research.

CONCLUSION

To sum up, we have shown that *truth* can be understood in various ways within our judicial system. First, we saw that an appeal to witness testimony minimally presupposes the understanding of truth as a correspondence between a fact and a proposition. Then, we saw that the rules justifying admissible hearsay suggest that there are some propositions which are only accepted when they can be incorporated in a wider set of beliefs. On that account, hearsay is better understood in terms of the coherence theory of truth rather than the correspondence theory. Finally, we saw that an appeal to an expert testimony suggests that truth can be realized in another way. Indeed, it is assumed that an expert’s opinion is reliable since it results from a rigorous inquiry process. As such, an expert’s opinion provides the court with a good reason to believe in some *fact*,

⁹⁶ Mark McCormick, "Scientific Evidence: Defining a New Approach to Admissibility" (1982), 67 Iowa L Rev 879 at 904.

given that this knowledge results from a thorough inquiry process. In theoretical terms, this case law can be interpreted from the point of view of the pragmatist theory of truth.

Building knowledge on truth theories used in the law of evidence is of great importance to structure legal reasoning. Given that truth theories are mutually exclusive, reasons for decisions may appear at times to be weak, unfair or partial. For instance, when judges are asked to take cultural evidence into account in a dispute, they may find it difficult to determine which facts should count in order to draw permissible inferences to make a specific decision. This may occur because a fair amount of information presented as evidence finds its roots in *beliefs* rather than *facts*. From the perspective of a judge, these beliefs may not be part of their own sets of beliefs, which makes it more difficult to integrate into a cogent legal argument. For example, when Aboriginal Elders come to court to tell oral histories in aboriginal cases, and these contradict anthropological or historical research conducted by experts in these fields, how will judges resolve this issue as to which side of the story is more likely to be true than not? In criminal law, judges are sometimes asked to determine if the accused could have had the intention to commit a crime given their cultural background. Another situation which may create some discomfort is when facts contradict a judge's set of beliefs. Accepting facts to be true may offend the representations of a judge considering what he or she finds reasonable to believe. For example, in refugee law, board members often find it challenging to determine whether they should prefer hearsay (in the form of documentary evidence) over claimants' testimonies. All these situations involve some conflict between *facts* and *beliefs* on the one hand and, on the other, the application of rules and principles of evidence regarding the admission and assessment of hearsay, expert opinion and testimony of a witness who has personal knowledge of the factual background relevant to the dispute.

For future research, the analysis of cases involving cultural evidence and examination of them through the lenses of truth theories may prove to be useful to solve some of the difficulties judges are facing. It may also be useful to define a unified theoretical framework that can explain and justify the rationale behind the law of evidence and our adjudication system. This will not only provide us with a good start for

the analysis of legal inferences, but it will also clarify how we can solve the ambiguities regarding the notion of truth in law.