

ANATOMY OF A TRIAL

Ontario Bar Association

**Examination and Cross-Examination of the Police Accident
Reconstructionist and Expert Engineer**

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I. Overview

Liability may be a highly contested issue for trial. This will lead to a battle of the experts, specifically in motor vehicle cases where accident reconstructionists or engineers will provide their opinions on the mechanics of the accident. It is crucial to understand the two key issues that you need to address during your trial preparation: (1) admissibility and (2) scope of the examination.

The following is a guide on how to address the admissibility of an expert's opinion, specifically accident reconstructionist and engineers, and the purpose and scope of your examination and cross-examination of the experts at trial.

It is essential to prepare well in advance of trial for the two issues for experts. For the first issue, you must identify and notify the opposing party and the court of your intention to challenge the admissibility of an expert's opinions. For the second issue, you must identify the conclusions of the experts and the facts that underlie their opinions. Prior to calling your expert, you must prove the facts that form the basis of the expert's opinion. For cross examination, you need to prove the facts that undermine the opposing expert's opinions.

Preparation is key for trial. Perhaps nowhere is that piece of advice more valuable than when it comes to challenging an expert's qualifications by *voir dire* during trial, and when preparing to examine an expert witness.



II. Admissibility

The first issue to address with an expert opinion is admissibility.

The first issue to address is whether the accident reconstructionist or engineer is an expert and if so, the corresponding scope of their expert opinion. If you have any issues with their qualifications, you will raise it before the expert is called as a witness. The Judge will likely require a *voir dire* to allow the parties to conduct an examination in chief and cross-examination on the expert's qualifications.

You should anticipate the issue of challenging the admissibility of an expert's opinion well in advance of trial. You should warn counsel and the court that you will be challenging the admissibility of their opinion. As such, you should not wait for the issue to arise during the trial. You should also prepare your questions for the *voir dire*. You should also prepare to argue the motion well in advance. When preparing for trial, it is best to have a brief with the basic case law, preferably from the Court of Appeal or higher, on any potential issues that may come up by way of a motion or during the *voir dire*. If you have support back in the office or you have time, it is best to prepare a very brief factum for the Court which sets out the law and the evidence supporting your position on challenging the expert's opinions.

A. Test for Admissibility of Expert Opinion Evidence

The Ontario Court of Appeal in *R. v Shafia* 2016 ONCA 812 (leave to appeal dismissed; *Hamed Mohammad Shafia v. Her Majesty the Queen*, 2017 CanLII 20378 (SCC)) summarized the two part test for the admissibility of expert opinion evidence outlined in the leading Supreme Court of Canada decisions, including *White Burgess Langille Inman v. Abbott and Haliburton Co.*, 2015 SCC 23 (CanLII), [2015] 2 S.C.R. 182 and *R. v. Mohan*, 1994 CanLII 80 (SCC), [1994] 2 S.C.R. 9.

- (1) The party must first establish the threshold requirements of admissibility discussed in *R. v Mohan*:
 - (a) relevance;
 - (b) necessity in assisting the trier of fact;
 - (c) the absence of any exclusionary rule;
 - (d) a properly qualified expert.
- (2) The trial judge must then balance the potential risks and benefits of admitting the evidence to decide whether the potential benefits justify the risks.



B. Qualifications – Admissibility of Expert Accident Reconstruction and Expert Engineer Opinion Evidence

A properly qualified expert (i.e. part 1(d) of the test) is crucial for accident reconstructionist and expert engineers. The qualifications and experience of the expert greatly dictates the scope of the opinion of the reconstructionist/engineer.

The Ontario Court of Appeal in *Taylor v. Sawh*, 2000 CanLII 5652 (ON CA) provided guidance on the application of the two-part test to admit expert accident reconstruction opinion evidence, specifically the qualifications of the expert.

Two Avenues to become an accident reconstructionist

There are generally two avenues to becoming an experienced motor vehicle accident reconstructionist.

1. One way of becoming a reconstructionist is through experience with the police force. Police forces or police-based training schools provide introductory courses in the reconstruction field. Advanced courses in such facilities, combined with practical field experience and self-learning programs, expand the experience base of police reconstructionists. Frequently, police reconstructionists are limited by the courts to giving evidence only on the investigation and documentation phases of the reconstruction. Depending on the experience and training level achieved by the particular officer, he or she may be qualified to give opinion evidence on some forms of dynamic issues based on scientific formulae and the basic principles of motion. For example, a police officer trained as a reconstructionist may be qualified to give evidence with respect to the speed of a vehicle based on the skid mark length on the road and the friction values personally measured by the officer. Unless trained as engineers, police investigators are not qualified to give opinion evidence on vehicle speeds based on crush patterns or in cases where complex dynamic motion has taken place.
2. A second way to become a reconstructionist is by obtaining an engineering degree from a recognized college or university.¹

¹ *Taylor v. Sawh*, 2000 CanLII 5652 (ON CA) at para 21; and M. J. Freiman & M. L. Berenblut, *The Litigator's Guide to Expert Witnesses*, (Aurora, Ont.: Canada Law Book, 1997), in the chapter entitled "Motor Vehicle Accident Reconstruction", David Bender at p. 303



Case Summary – Police Officer Testimony – *Taylor v. Sawh*, 2000 CanLII 5652 (ON CA)

The issue at trial was to determine whether the subject accident occurred on the Plaintiff's side of the road, making the Defendant the liable party, or whether the accident occurred on the Defendant's side of the road, making the Plaintiff the liable party.

The Defendants wanted to admit expert evidence of the Officer/Constable who attended the scene and provided an accident reconstruction report opining that the Plaintiff first hit a snow bank and veered into the Defendant. In other words, they wished to admit his opinion as to the point of impact.

The trial judge applied the test in *R. v Mohan* and held that the Officer could give evidence on his observations at the scene, however he could not give his opinion on the point of impact. The trial judge held properly that the Officer was a qualified expert and no exclusionary rule applied. However, he excluded such evidence on the following grounds. One, the evidence was not necessary as there were two other experts who would testify on the point of impact. Two, the grounds of relevance in that the prejudicial effect outweighs its probative value. Three, on the grounds that the Officer was not an engineer.

The Defendants appealed.

Law – Ontario Court of Appeal

In short, the Ontario Court of Appeal agreed that the trial judge erred in their application of the test/requirements. The Court of Appeal however dismissed the appeal on the grounds that there was no substantial wrong or miscarriage of justice despite the errors.

The Court of Appeal summarized the guidance in *R. v Mohan* on the criterion of "necessity":

Necessity refers to information that is likely to be outside the experience and knowledge of the jury. The opinion of a qualified expert does not become unnecessary simply because there may be other, even other more qualified experts, who will be testifying at the trial. The same understanding of necessity applies in both criminal and civil cases.

The Court of Appeal also summarized the guidance in *R. v Mohan* on the criterion of "relevance", and part two of the test – balance of probative value versus prejudicial effect:

(a) Relevance is a threshold requirement, decided by a Judge as a question of law, where the judge considers whether there is logical relevance of the opinion of the expert to the evidence.

(b) The trial judge then engages in cost benefit analysis of whether the value is worth what it costs (i.e. effect on the trial process). Prejudicial effect outweighs probative value



if it involves an inordinate amount of time which is not commensurate with its value or if it is misleading in the sense that it affects the trier of fact, particular a jury, for example: dressed up scientific language which the jury does not easily understand through a witness with impressive antecedents, may be accepted by a jury as being virtually infallible and having more weight than it deserves. No such concerns were raised with the Officer's evidence; his opinion was relatively straight forward.

Lastly, the court of appeal held that the fact that the Officer was not an engineer is not a basis for excluding his evidence. A person can become an expert motor vehicle accident reconstructionist through either experience in the police force, or obtaining an engineering degree recognized by a college or university.

Holding – Ontario Court of Appeal

As briefly mentioned above, the Court of Appeal dismissed the appeal despite the errors of the trial judge. The court of Appeal held that there was no substantial wrong or miscarriage of justice because of the exclusion of the officer's opinion:

- The Officer provided opinion evidence;
- The Officer described himself as an accident investigator, accident reconstructionist;
- The Officer gave extensive evidence regarding his observations;
- The Jury heard evidence about the point of impact from highly qualified defence expert based on the officer's testimony; and
- The Officer referred to the defence theory as the police theory and actually told the jury that the police report put the impact in the (southbound lane) Defendant's lane.

C. Admissibility of Video Reconstruction Evidence

Accident reconstructionists and engineers often create diagrams and/or videos demonstrating their expert opinion on the mechanics of the accident. *Greer v. Kurtz* is an Ontario Superior Court decision, upheld by the Court of Appeal, which specifically addressed the issue of the admissibility of video reconstruction evidence.²

² *Greer v. Kurtz*, 2008 CanLII 37056 (ON SC); upheld on appeal, 2009 ONCA 865

Factual Background

Two videos were by the Plaintiff: (1) accident reconstruction video based on various experts' evidence, and (2) video demonstrating that if confronted with an oncoming car, the driver should try and avoid the impact.

Criterion/Safeguards for Admitting Video Reconstruction Evidence

First, the court must be satisfied that the witness is an expert. In this case, a *voir dire* was held and the witness was held out to be an expert in reconstruction of automobile accident scenes.

Before allowing video evidence, the court must be satisfied that the opinion evidence is acceptable (i.e. accurate and authentic). The court noted that the expert evidence must be based on verifiable facts and not conjecture. The court listed the following points that must be proven to admit a computer generated videographic animation:

- (1) From the testimony from the accident reconstruction expert that the data points measured at the accident site were accurately recorded.
- (2) From the testimony of the person who entered those data points into the program that they were entered correctly.
- (3) That the algorithms used in the form and motion software validly apply the law of physics and validly render accurate images of the scenes depicted in the exhibit.
- (4) Competent opinion testimony from the accident reconstruction expert that any additional modifications to the exhibit, made after the computer's first renderings, are valid.
- (5) Testimony that the experts are familiar with the demonstrative exhibit.
- (6) A showing that the exhibit will aid the trier of fact in understanding the expert's testimony."

Lastly, the court must be satisfied that the evidence will be helpful to the court, meaning that the jury cannot easily draw the necessary inferences without the evidence. In other words, such evidence will be allowed if it will assist the trier of fact in arriving a just and proper decision.

Holding

The court did not allow the second video demonstrating that a party should avoid an oncoming car to be admitted into evidence because it was based on conjecture and was of no assistance to the court.



The court admitted the accident reconstruction video. All six safeguards listed above were met because the video was based on photos taken at the time of the accident, studies were done on vehicles of a certain weight and speed, photos demonstrating the position of the vehicles after the impact, the expert evidence of another witness on the speed of the vehicles; and the place of impact and final resting place was accurately reflected in the video.



III. Scope and Purpose of Examination – Accident Reconstructionist and Engineer

Now that you know the expert evidence will be admitted and you have determined the scope of the expert's opinions, you must conduct an examination or cross-examination of the expert. Recall that for both chief and cross-examination, the expert must stay within the scope of their expertise. Always keep this in mind when examining an expert witness.

A major point of the examination or cross-examination is about the weight of the expert's opinion. You are asking questions to support or challenge facts and opinions of the expert, which allows the trier of fact to make a determination on the weight to the expert's opinions and whether they should accept and rely on the expert's opinions for their findings.

The following are general tips for conducting your examination. The goal of the examination is case specific. It is very fact specific where you are trying to increase the validity and weight of the facts and opinions that support your client's theory of the case and undermine and de-value the facts and opinions that are against your theory or in favour of the theory of the opposing party.

A. Examination in Chief

Prior to examining your expert reconstructionist or engineer, you must prove the underlying facts in which the expert relies upon for their opinion. Recall that your expert's opinion cannot be based on conjecture. Identify these key facts and illicit them through your other witnesses and documentary evidence. The result is prior to your expert testifying, the facts underlying your expert's opinion will be supported by the oral and documentary evidence.

Once the underlying facts are proven, you call your expert as a witness. After you address your expert's qualifications and request that they be deemed an expert for the trier of fact, you then conduct your examination of your expert.

Your examination should consist of the following. Recall that your questions must be open ended for examinations in chief. The focus of examination in chief is on the witness, not the lawyer.

1. Ask questions that allow your expert to address and explain the facts that support their opinion.
2. Ask questions that allow your expert to address and explain the reason why the facts that oppose their opinion do not change their opinion or undermine their opinion. You already know that these facts will be raised by opposing counsel during cross-examination, so you should address them in examination in chief so that the trier of fact is not surprised by the facts and their effect, or lack of effect, on the expert's opinion.



3. Ask questions that allow your expert to explain their opinion in detail and in a manner that is easily understood by the trier of fact. Recall that your expert's opinion must assist the trier of fact in making a decision/ruling.
4. Ask questions that allow your expert to explain why their opinion differs from that of the opposing party's expert. Allow your expert to explain the inaccuracies, deficiencies, credibility of the opposing party's expert opinions.

B. Cross Examination

Presumably, you will have your own expert and your theory of the case will be the opposite or different from that of the opposing party.

As noted above, the first issue to address is the expert's qualifications. If you have any issues, you will raise it before the expert is called as a witness. If the expert's opinions are admissible, then you will conduct your cross-examination.

The purpose of cross-examining the opposing party's accident reconstructionist or engineer is to undermine their opinions and reinforce/support your expert's opinions.

Your examination should consist of the following. Recall that your questions are generally leading / closed ended questions. The focus of cross-examination is on the lawyer, not the witness. You are in control, so ensure that the witness, particularly experts, address your question. You achieve this by asking narrow and pointed leading questions. Remember to only ask questions you know the answer to.

1. Put facts and evidence to the expert that they either ignored or downplayed in their report. These are the "bad facts" for the opposing side, "good facts" for your theory. These were likely already addressed in examination in chief, however this is your opportunity to put pressure on the expert and control the order of questions that favour your theory of the case and undermine their opinion.
2. Whilst or after putting those facts to the expert, challenge or undermine their opinion. Question and challenge why they reached their opinion in light of the facts that support your theory of the case, and presumably the opposite or different conclusion of the expert.
3. Similarly, ask questions that support your expert's opinions. You may even put your expert's findings to the expert. Use your judgment as to whether you should put these questions before the expert. You need to be careful not to support the opposing party's position by giving the expert another opportunity to undermine your expert's opinions;



recall that they presumably addressed your expert's opinions during their examination in chief.

4. Question and challenge why they reached their opinion in light of the facts that support your theory of the case. Presumably their findings are the opposite or different from the conclusions of your expert.

