EXPERT TESTIMONY IN PENNSYLVANIA

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> "An expert witness is like a flea collar," said Flash Magruder. "When your case is a dog, you need something that will chase the fleas away, something that will keep your case from scratching and biting itself in front of the jury."[1]

Recent legislative efforts to enact a Uniform Code of Evidence have created heightened interest, awareness, and controversy regarding the Pennsylvania law. Pennsylvania's law concerning expert testimony differs dramatically from the approach used by the Federal Rules of Evidence. These differences can pose pitfalls to the new practitioner as well as others primarily familiar with the federal approach usually taught in law school.

In my opinion, the Pennsylvania rules better succeed in providing a jury with the information necessary to decide cases justly and appropriately. The Pennsylvania rules more effectively avoid a "battle of experts" by requiring the moving party to clearly offer and explicate the factual basis of opinion testimony. If properly understood and applied, the Pennsylvania rules, including the use of the hypothetical question, are not archaic forms but rather are essential tools assisting the proper fact-finding role of the jury. Despite some decisions liberalizing the bases for expert opinion evidence, Pennsylvania law rejects the federal approach to expert testimony.

This article will explore Pennsylvania law on expert testimony and compare it to the Federal Rules of Evidence. The article will explain Pennsylvania law for the practitioner and describe Pennsylvania's more utilitarian approach to justice in fact-finding. I will explain the benefits of current law and advocate that no further extensions toward the federal approach should be approved, whether the law of evidence remains under judicial common law control or becomes codified legislatively.

I. Expert Testimony: The Personal Opinion of a Qualified Individual in a Field Outside Normal Understanding

Expert testimony is the personal, professional opinion of a properly qualified individual, applying specialized knowledge to the evidence presented at trial on a subject beyond the common understanding of a jury. Virtually every civil case on which I preside includes expert testimony on either factual issues of liability, or medical issues of diagnosis or causation. Thus, in every case, I explain expert testimony to the jury as follows:

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1. James W. McElhaney, McElhaney's Trial Notebook 469 (3d ed. 1994).

> As a general rule, a witness may only testify about what he or she saw or heard him or herself. Normally, a witness may not give an opinion or draw conclusions. The exception to this rule is the so-called "expert witness." Such a witness is one, who, by training, education, or experience has acquired a special level of skill or knowledge in some art, science, profession, or calling. Because of this special skill or knowledge, an expert is permitted *to give explanations and draw inferences not within the range of ordinary knowledge, intelligence, and experience*, and to give an opinion and state reasons for that opinion.[2]

In Pennsylvania, the subject of expert testimony must be beyond the understanding of the average juror.[3] "When a witness is offered as an expert, the first question the trial court should ask is whether the subject on which the witness will express an opinion is so distinctively related to some science, profession, business or occupation as to be beyond the ken of the average layman."[4] This concept has been firmly embedded in Pennsylvania jurisprudence since the nineteenth century. In 1891, the Pennsylvania Supreme Court said: "whenever the circumstances can be fully and adequately described to the jury, and are such that their bearing on the issue can be estimated by all men, without special knowledge or training, opinions of witnesses, expert or other, are not admissible."[5]

This fundamental restrictive understanding of the proper use for expert opinion in Pennsylvania differs significantly from the federal rules. There is no comparable requirement under the federal rules which permit expert testimony whenever it "will assist the trier of fact to understand the evidence or to determine a fact in issue."[6]

Expert opinion evidence is considered low quality evidence, and is disfavored. In 1966, Justice Musmanno, in his characteristic style, explained the reasoning behind these concepts. In *Collins v. Zediker*,[7] the supreme court overruled a trial court decision which permitted an expert to give an opinion about the speed of a pedestrian's pace. Justice Musmanno wrote:

> Jurors are humans and are impressed by scientific talk even though, upon profound reflection, they could realize that in the particular field under discussion they are as much at home as the scientist. The jury should be insulated, to the extent that it is possible, from

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2. PENNSYLVANIA SUGGESTED STANDARD CIVIL JURY INSTRUCTIONS, Instruction 5.30 (Pa. Sup. Ct. Comm. for Proposed Standard Jury Instructions 1981); PENNSYLVANIA SUGGESTED STANDARD CRIMINAL JURY INSTRUCTIONS, Instruction 4.10(A) (Pa. Sup. Ct. Comm. for Proposed Standard Jury Instructions 1991).

3. MCCORMICK ON EVIDENCE § 13 (John W. Strong et al. eds., 4th ed. 1992).

4. Dambacher v. Mallis, 485 A.2d 408, 415 (Pa. Super. Ct. 1984), *appeal dismissed*, 500 A.2d 428 (Pa. 1985).

5. Graham v. Pennsylvania Co., 21 A. 151, 153 (Pa. 1891) ("Expert testimony is inadmissible when the matter can be described to the jury and the condition evaluated by them without the assistance of one claiming to possess special knowledge upon the subject."); Burton v. Horn & Hardart, 88 A.2d 873, 875 (Pa. 1952).

6. FED. R. EVID. 702.

7. 218 A.2d 776 (Pa. 1966).

> undue persuasion from the witness stand based upon externals removed from the intrinsic problem to be solved. . . . Allowing expert testimony in the circumstances here related on the speed of walking was as much error as if the Judge had allowed expert testimony on the speed with which the average person consumes a hamburger sandwich, wraps spaghetti around his fork or drinks a glass of California wine (Dooner v. Delaware & Hudson Canal Co., 30 A. 269, 271-72 (Pa. 1894)). The Jury still have some duties to perform. Inferences drawn from the ordinary affairs of life ought not be drawn for them, and turned over under oath from the witness stand.[8]

Issues of credibility are always considered questions of fact, and being the exclusive province of the jury they may never be usurped by expert testimony. Credibility determinations by the jury are fundamental to the Pennsylvania concept of the right of trial by jury.[9]

To enable the jury to evaluate the opinion a proper factual basis must be in evidence.

> It is clear . . . that expert opinion testimony is proper if the facts upon which it is based are of record. This requirement for the admissibility of opinion testimony is crucial. The purpose of expert testimony is to assist the fact-finder in understanding issues which are complex, or go beyond common knowledge. An expert's function is to assist the jury in understanding the problem so that the jury can make the ultimate determination. If a jury disbelieves the facts upon which the opinion is based, the jury, undoubtedly, will disregard the expert's opinion. Likewise, if a jury accepts the veracity of the facts which the expert relies upon, it is more likely that the jury will accept the expert's opinion. At the heart of any analysis is the veracity of the facts upon which the conclusion is based. Without the facts, a jury cannot make any determination as to validity of the expert's opinion. To hold otherwise would result in a total and complete usurpation of the jury's function in our system of justice.[10]

Accordingly, the jury must apply ordinary knowledge, intelligence, and experience to find the facts; and from that starting position evaluate the credibility, truthfulness, and accuracy of the opinion evidence. To do so, they must be presented with the facts on which the opinion is based.

II. Qualifications of an Expert Witness: Personal Education, Training, Experience, Skill, or Knowledge Leads to "Reasonable Pretension"

Expert testimony must be the personal opinion of the witness. Only the personal opinion of the witness can be subject to cross-examination and eval-

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8. *Id.* at 778.

9. *See* Commonwealth v. O'Searo, 352 A.2d 30, 32 (Pa. 1976) (trial court properly excluded expert testimony on defendant's intent because credibility within sole province of jury).

10. Commonwealth v. Rounds, 542 A.2d 997, 999 (Pa. 1988); *see also* Kozak v. Struth, 531 A.2d 420, 422 (Pa. 1987) (Pennsylvania's expert rule allows jury to decide ultimate issue after evaluating credibility).

uated by the jury. The witness cannot express another expert's opinion,[11] or review and mimic the medical or scientific literature.[12] Accordingly, the ability of the proposed expert witness to formulate her own opinion must be preliminarily demonstrated by the party offering the testimony. While qualifications require a factual ruling by the court, the colloquy can be conducted in or outside the presence of the jury. Since the jury must eventually evaluate credentials as part of an overall assessment of credibility, this preliminary colloquy is generally conducted in the presence of the jury.[13]

The Pennsylvania standard for qualifying as an expert witness is remarkably lax. If a witness has any reasonable pretension to specialized knowledge on the subject under investigation, she may testify, and the weight to be given to her testimony is for jury determination.[14] Qualifications can consist of any combination of formal education and practical experience.[15] There is no specific formula to determine qualifications nor any requirement of licensure.[16] There is not even a requirement of specialization for testimony in a specialized field of knowledge. Pennsylvania Appellate Courts have frequently approved expert testimony in specialized areas presented by generalists with pretensions (or sometimes simply by pretentious generalists). For example,

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11. *See* Palmer v. Lapp, 572 A.2d 12, 16 (Pa. Super. Ct. 1990) (witness cannot testify to employer's expert appraisal); Cooper v. Burns, 545 A.2d 935, 940-41 (Pa. Super. Ct. 1988) (allowing doctor to testify that another doctor corroborated diagnosis held improper hearsay), *appeal denied*, 563 A.2d 888 (Pa. 1989); Foster v. McKeesport Hosp., 394 A.2d 1031, 1033 (Pa. Super. Ct. 1978) (doctor cannot testify to credibility of another doctor's opinion on causation).

12. *See* Jones v. Constantino, 631 A.2d 1289, 1298 (Pa. Super. Ct. 1993) (allowing doctor to read unpublished paper into evidence held improper hearsay), *appeal denied*, 649 A.2d 673 (Pa. 1994); Primavera v. Celotex Corp., 608 A.2d 515, 521 (Pa. Super. Ct. 1992) (expert should not be permitted to repeat another author's opinion or data without applying own expertise and judgment), *appeal denied*, 622 A.2d 1374 (Pa. 1993); Dierolf v. Slade, 581 A.2d 649, 650 (Pa. Super. Ct. 1990) (trial court properly excluded expert's testimony that merely reacted to unnamed doctor's report); Majdic v. Cincinnati Mach. Co., 537 A.2d 334, 340 (Pa. Super. Ct.) (expert not permitted to read into evidence hearsay that formed basis for opinion), *appeal denied*, 552 A.2d 249 (Pa. 1988).

13. Counsel may believe they will suffer prejudice if a proposed "expert" is ruled unqualified by the judge in the jury's presence. Accordingly, under some circumstances, such as where the qualifications of the expert are seriously called into question by opposing counsel, counsel may request that the colloquy occur outside of the presence of the jury. If initially conducted outside of the presence of the jury, the testimony must be repeated before the jury.

14. Kuisis v. Baldwin-Lima-Hamilton Corp., 319 A.2d 914, 924 (Pa. 1974); Dambacher v. Mallis, 485 A.2d 408, 408 (Pa. Super. Ct. 1984), *appeal dismissed*, 500 A.2d 428 (Pa. 1985).

15. McDaniel v. Merck, Sharp & Dohme, 533 A.2d 436, 446 (Pa. Super. Ct. 1987), *appeal denied*, 551 A.2d 215 (Pa. 1988).

16. Lance v. Luzerne County Mfrs. Ass'n, 77 A.2d 386, 389 (Pa. 1951) (unregistered engineer may testify as expert); *see also* Whistler Sportswear, Inc. v. Rullo, 433 A.2d 40, 44 (Pa. Super. Ct. 1981) (upholding engineer's testimony regarding failure of roof supports despite lack of expertise in roof design); Jones v. Treegoob, 243 A.2d 161 (Pa. Super. Ct. 1968) (witness's education and experience established his credentials as expert witness), *rev'd on other grounds*, 249 A.2d 352 (Pa. 1969).

medical professionals are generally permitted to testify about medical standards.[17]

The "reasonable pretension," however, must be in the subject under investigation. Although this is virtually the only limiting precept to expert opinion, it can be a significant limitation. For example, in *Dambacher v. Mallis*,[18] an experienced automobile mechanic and a service manager were proposed experts for an automobile dealership.[19] Each expert was offered to testify to the effect of mixing radial and non-radial tires on a car. The trial court prohibited the testimony, and the ruling was affirmed by the superior court. While acknowledging that each witness had reasonable pretensions to automotive expertise, and tires specifically, the court found their knowledge did not extend to the subject of the inquiry.[20] Additionally, in *Lesher v. Henning*,[21] an investigating police officer who did not witness a motor vehicle accident was precluded from testifying to causation.[22] In *Dierolf v. Slade*,[23] an orthodontist was precluded from testifying to the cause of a dropped-foot condition.[24] And in *Palmer v. Lapp*,[25] a qualified appraiser of cars and trucks was precluded from offering her opinion on the value of an antique hearse.[26]

Cross-examination on qualifications may include questions relating to bias or personal interest. While technically not related to qualifications, these questions are clearly admissible to assist the jury in evaluating the substantive testimony. Where severe bias is demonstrated, a court is justified in precluding an expert from testifying.[27] Such inquiry can include questions of compensation and prior testimony by the witness for the attorney or law firm involved in the case.[28] The expert can also be asked if they testify exclusively for one side in litigation. There is little Pennsylvania case law limiting these areas of inquiry. In *Mohn v. Hahnemann Medical College & Hospital*,[29] the

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17. *See* Kearns v. Clark, 493 A.2d 1358, 1360-61 (Pa. Super. Ct. 1985) (allowing urologist to testify in gynecology); Taylor v. Spencer Hosp., 292 A.2d 449, 453 (Pa. Super. Ct. 1972) (reversible error to preclude physician and licensed practical nurse from testifying to standard of care for nursing generally).

18. 485 A.2d 408 (Pa. Super. Ct. 1984), *appeal dismissed*, 500 A.2d 428 (Pa. 1985).

19. *Id.* at 416.

20. *Id.* at 417.

21. 449 A.2d 32 (Pa. Super. Ct. 1982).

22. *Id.* at 34.

23. 581 A.2d 649 (Pa. Super. Ct. 1990).

24. *Id.* at 651-52.

25. 572 A.2d 12 (Pa. Super. Ct. 1990).

26. *Id.* at 16.

27. There is no clear Pennsylvania precedent for such a ruling. It is unquestionably within the power of a court to control the sanctity of the testimony presented. Since such testimony could be excluded only if its probative value was outweighed by its prejudicial effect, such a ruling would necessarily require an exceptionally high burden of proof demonstrating bias.

28. Zamsky v. Public Parking Auth., 105 A.2d 335, 336 (Pa. 1954) (citing Commonwealth v. Simmons, 65 A.2d 353, 359 (Pa.), *cert. denied*, 338 U.S. 862 (1949); Grutski v. Kline, 43 A.2d 142, 144 (Pa. 1945)).

29. 515 A.2d 920 (Pa. Super. Ct. 1986), *appeal discontinued*, 527 A.2d 542 (Pa. 1987).

superior court held cross-examination concerning fees paid to the expert may be limited by the trial court to those fees related to the specific case on trial or the law firm involved.[30] Thus, it may be impermissible to inquire generally into the percentage of annual income or total income received from litigation activities, or from one side in litigation. Clearly, one who has significant economic interests connected to one side of litigation has reason for shading opinion testimony, and may even have an ideological frame of reference. While some limits are warranted, if *Mohn* is interpreted broadly, Pennsylvania law has probably exceeded necessity and prevents the jury from hearing useful, factual information.

Evidence on whether an individual has previously been qualified in other courts is irrelevant and should be inadmissible.[31] An individual fully qualified to give an opinion in one area of inquiry may not be qualified to give one on the specific subject under investigation. Given the "reasonable pretension" standard for qualification, only an incredibly weak witness needs to bolster her qualifications by reference to previous court rulings.

The decision on whether an individual is qualified to present expert opinion evidence in the relevant field lies within the sound discretion of the trial court and will generally not be reversed on appeal absent an abuse of discretion.[32]

III. Qualification of the Opinion: Factual Basis Must Be in Evidence

Nowhere does Pennsylvania law differ more significantly from the federal practice than in the treatment of the evidentiary predicate for expert testimony. In Pennsylvania, the jury must be able to evaluate the factual basis on which expert opinion is based.[33] The general rule is that the essential facts relied upon in formulating an opinion must be in evidence; and the opinion can only be grounded in facts, inferences, or conclusions justified from the evidence.[34] In the final charge by the court the jury is told: "In deciding whether or not to accept any expert's opinion, you should consider

30. *Id.* at 922.

31. But see Wicks v. Commonwealth, 590 A.2d 832, 835 (Pa. Commw. Ct. 1991), in which the trial court permitted such testimony. The commonwealth court opinion mentions this testimony without comment. *Id.*

32. Handfinger v. Philadelphia Gas Works, 266 A.2d 769, 773 (Pa. 1970); Commonwealth v. Williams, 410 A.2d 880, 889 (Pa. Super. Ct. 1979).

33. *See* Primavera v. Celotex Corp., 608 A.2d 515, 521 (Pa. Super. Ct. 1992) (expert must testify to basis for ultimate conclusion), *appeal denied*, 622 A.2d 1374 (Pa. 1993).

34. Rose v. Hoover, 331 A.2d 878, 880 (Pa. Super. Ct. 1974). "It is axiomatic, if facts are in issue, [that] an expert must base his opinion either on evidence adduced by one of the litigants or on facts observed personally." *Id. See also* Commonwealth v. Rounds, 542 A.2d 997, 999 (Pa. 1988) (failure to provide factual basis for expert's opinion usurps jury function); Collins v. Hand, 246 A.2d 398, 404 (Pa. 1968) (requiring factual foundation for expert opinion); Capan v. Divine Providence Hosp., 410 A.2d 1282, 1286-87 (Pa. Super. Ct. 1979) (same); Foster v. McKeesport Hosp., 394 A.2d 1031, 1033 (Pa. Super. Ct. 1978) (same); Yantos v. Workmen's Compensation Appeal Bd., 563 A.2d 232, 235 (Pa. Commw. Ct. 1989) (same).

the evidence as to the training, education, or experience, *as well as the reasons and facts on which the opinion is based*."[35] "In general, the opinion of an expert has value *only when you accept the facts upon which it is based*."[36]

Expert opinion can never constitute proof of the facts necessary to support the opinion. In the leading case, *Collins v. Hand*,[37] Dr. B. Marvin Hand was sued by his patient, who alleged that improper administration of electroshock therapy caused a fractured hip.[38] The defense acknowledged that Julia Collins had sustained a fractured hip as a result of the electroshock therapy, but claimed such fractures were a recognized risk of the procedure, and that no variation from acceptable medical practice was involved.[39] Dr. Van DerMeer, the plaintiff's qualified expert, based his testimony on the medical records in evidence.[40] In his opinion, the fractured hip was caused by too much restraint applied to Ms. Collins' legs during the therapy, in violation of acceptable medical practice. The Pennsylvania Supreme Court found nothing in the medical records to show that any restraints had been applied and reversed the judgment.[41] The court described Dr. Van DerMeer's expert opinion as "mere guess or conjecture," and concluded that to permit such testimony " 'would be to build a presumption on a presumption, which would build a smoke ladder into the skies of irresponsible speculation which, fortunately, the law prohibits.' "[42]

The hypothetical question is designed to present to the jury the factual basis of opinion evidence. Where the hypothetical question asks the expert to assume facts not supported by the evidence in the case, the opinion should be excluded. The Pennsylvania Superior Court was presented with the clearest situation for so ruling in *Capan v. Divine Providence Hospital*.[43] In that medical malpractice case, the plaintiff posed a hypothetical question which asked the expert to assume specific facts about the nursing care received at the hospital. Finding no support in the evidence for the "facts" about the nursing care, the superior court affirmed the trial court's exclusion of the expert's opinion testimony.[44]

Obviously, the foundational predicate for factual testimony can be received in evidence subsequent to the opinion testimony. In the event that this factual basis is not "tied up" by later testimony, a motion to strike the opinion should be granted under Pennsylvania law. No such motion is cognizable in federal court.

35. PENNSYLVANIA SUGGESTED STANDARD CIVIL JURY INSTRUCTIONS, *supra* note 2, Instruction 5.30 (emphasis added); PENNSYLVANIA SUGGESTED STANDARD CRIMINAL JURY INSTRUCTIONS, *supra* note 2, Instruction 4.10(A) (emphasis added).

36. PENNSYLVANIA SUGGESTED STANDARD CIVIL JURY INSTRUCTIONS, *supra* note 2, Instruction 5.31 (emphasis added).

37. 246 A.2d 398 (Pa. 1968).

38. *Id.* at 400.

39. *Id.* at 402.

40. *Id.*

41. *Id.* at 404.

42. *Id.* (quoting Auerbach v. Philadelphia Transp. Co., 221 A.2d 163, 170 (Pa. 1966)).

43. 410 A.2d 1282 (Pa. Super. Ct. 1979).

44. *Id.* at 1288.

In *Hand*, the rejected expert based his opinion on a subject absent from the evidence. In *Capan*, the hypothetical questions contained "facts" not justified from the evidence. Additionally, under Pennsylvania law, opinion testimony cannot be based upon conflicting evidence, or upon a review of all the evidence in the case.

In order to preserve the jury role, Pennsylvania law prohibits an expert opinion based on contradictory facts or on the entire evidence in the case. As early as 1909, in *Gillman v. Media, Middletown, Aston & Chester Electric Railway Co.*,[45] the supreme court said:

> As, however, it is the providence of the jury to determine the facts, an expert cannot be asked his opinion upon the whole evidence in the case where that is conflicting; but a party may state specifically the particular facts he believes to be shown by evidence or such facts as the jury would be warranted in finding from the evidence, and asked the opinion of the expert on such facts, assuming them to be true.

Because of the clarity with which it presents the factual basis of opinion testimony to the jury, the hypothetical question is viewed favorably in Pennsylvania law.[46] Because of its presumed awkwardness, the hypothetical question is looked upon with disfavor under the "modern view" embodied in the Federal Rules of Evidence.

The requirement that the facts on which an opinion is based be in evidence is antithetical to the approach used by the federal rules. Under the federal theory of jurisprudence, opinion testimony by experts can be based upon facts or data made known before the hearing and never presented in evidence. Under some circumstances, the basis for the opinion can be actually inadmissible in evidence.[47] Under these precepts, an expert can be asked in direct examination simply to identify the material reviewed pretrial, and to offer an opinion. This material may include numerous depositions, police or other investigative reports, and business or medical records. These materials may also include conflicting or contradictory versions of events, discrepancies in measurements, hearsay statements of unidentified persons, opinions of purported eyewitnesses or unqualified "experts," or reports of other experts retained for litigation who will never testify. The expert is then asked to state an opinion based on all materials reviewed. The expert may then present opinion testimony without any reference to, or disclosure of, the underlying facts or data on which the opinion is based. At the cross-examining attorney's peril, the expert can be asked on cross-examination to explain the factual basis of the opinion.[48] In response to such perilous cross-examination,

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45. 73 A. 342, 344 (Pa. 1909).

46. See Kozak v. Struth, 531 A.2d 420, 422-23 (Pa. 1987), for a full discussion of the hypothetical question.

47. FED. R. EVID. 703, 705.

48. "Of course the cross-examiner is entitled to go into the bases for the expert's opinion on cross-examination. Rule 705 says so. A cross-examiner is entitled to take all kinds of risks if he wants." MCELHANEY, *supra* note 1, at 479.

the jury may properly be presented with hearsay or otherwise inadmissible evidence. The underlying conceptual framework is antithetical to Pennsylvania practice.

In *Kozak v. Struth*,[49] the Pennsylvania Supreme Court reviewed and analyzed in detail the dramatic differences between federal and Pennsylvania practice and specifically reaffirmed the distinctive character of Pennsylvania jurisprudence.[50] Patrick Kozak dove into the shallow end of the school swimming pool during swimming class, striking his head on the bottom.[51] The defendant's expert witness was asked to offer an opinion "based upon the evidence that [the expert had] heard here in the courtroom, including the testimony of all the witnesses, and the testimony that has been read to the jury previously taken, and based upon [the expert's] knowledge and understanding of the occurrence in question."[52] Over objection, the trial court permitted the expert to testify that the water safety instructor in charge at the pool acted properly. He further testified that the cause of the accident was "poor judgment, or no judgment on the part of the plaintiff."[53]

In argument, the Pennsylvania Supreme Court was urged to adopt the theories of the drafters of the Federal Rules of Evidence and "modernize" Pennsylvania law. The court declined, explaining:

> We are aware that the drafters of the Federal Rules of Evidence have eliminated the necessity of using the hypothetical question by allowing an expert to testify to his opinion without elucidating underlying factual assumptions. . . . This practice is also advocated by the text writers. . . . They believe that the proponent's adversary can protect his client by competent cross-examination exploring facts or data underlying the opinion. Appellee urges us to adopt this theory. We have declined, believing that requiring the proponent of an expert opinion to clarify for the jury the assumptions upon which the opinion is based avoids planting in the juror's mind a general statement likely to remain with him in the jury room when the disputed details are lost. Relying on cross-examination to illuminate the underlying assumptions may further confuse jurors already struggling to follow complex testimony. Additionally, total reliance on cross-examination permits the party propounding the expert's evidence to introduce it generally in a conclusory manner without relation to the record and casts the whole burden of disqualifying it on the opponent. This is contrary to the usual practice of allocating to the proponent of evidence, as the party with the laboring oar, the duty of laying a logically understandable foundation.[54]

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49. 531 A.2d 420 (Pa. 1987).
50. *Id.* at 422-23.
51. *Id.* at 421.
52. *Id.*
53. *Id.* at 422.
54. *Id.* at 423 (citations omitted).

In analyzing the specific facts underlying the expert opinion presented in *Kozak*, the court recognized that the essence of the expert's testimony amounted to nothing more than a rejection of the version of the accident offered by the plaintiff and an independent eyewitness. In overturning that verdict and remanding for a new trial, the court reaffirmed longstanding law, saying:

> For over a century, we have consistently held that an expert's comment on the totality of the evidence, where the evidence is in conflict, improperly impinges on the jury's exclusive providence. In 1885, Mr. Justice Green declared that "[t]he [expert] witness can not be asked to state his opinion upon the whole case, because that necessarily includes the determination of what are the facts, and this can only be done by the jury." *Yardley v. Cuthbertson* [1 A. 765, 773 (Pa. 1885)] Following *Yardley*, a litany of decisions have reiterated the principle that an expert cannot weigh contradictory evidence and place his imprimatur upon a particular version.[55]

Credibility may never be the subject of an expert's testimony, whether explicitly or implicitly offered.

As a trial judge, I insist that the factual basis of expert testimony be in evidence and that the basis of the opinion be revealed prior to cross-examination. Where necessary, I have questioned expert witnesses, after direct testimony, to present to the jury the actual factual basis of the proffered opinion.[56] Not infrequently, although presented on direct examination as a review of "all the evidence," the factual basis is strictly grounded upon one particular version of events. On occasion, as the Pennsylvania Supreme Court found in *Kozak*, I find expert opinion amounts to nothing more than acceptance of one particular piece of factual testimony amidst a mountain of depositions and reports supposedly considered and evaluated.

There is nothing improper in an expert basing an opinion upon the acceptance of a specific factual version of an event.[57] It is, however, a fraud and a deception upon the court and the jury, and a perversion of the right to have the jury determine the facts, especially facts of credibility, to obfuscate the essential basis of such testimony. The Federal Rules of Evidence speed trials to conclusion by not requiring factual testimony preliminary to opinion evidence.[58] As a result, opinion evidence can be presented without the presumed awkwardness of a hypothetical question. In my opinion, this approach inherently places a severe and unnecessary burden upon the essential fact-finding role of the jury. When the underlying factual basis is not in evidence, the opinion cannot be properly evaluated by the jury. While the ostensible

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55. *Id.* at 422-23 (some citations omitted).

56. While I may, *sua sponte*, require that the factual basis of expert testimony be presented to the jury prior to cross-examination, I will not strike testimony presented "in the federal style" absent an objection.

57. The properly formulated hypothetical question clearly defines the version of fact the proponent urges the jury to find.

58. *See* FED. R. EVID. 705 (expert may testify in terms of opinion without first testifying to underlying facts).

basis of the opinion may appear to be all the evidence, including conflicting testimony, in reality it may only be the witness's personal credibility decision. If the opinion can be presented in a conclusory manner, opposing counsel may reasonably and rationally choose to avoid offering the expert the opportunity of buttressing the opinion by presenting his version of the "facts". In fact, under these procedures, counsel routinely rely on their own rebuttal experts to counter expert testimony, at much less risk.[59] When thus presented, the courtroom battle cannot be a fight to convince the jury of one version of the facts. The battle in the courtroom must necessarily evolve into a battle of experts, their "science" or profession, their credentials, and their courtroom manner. Under the federal system, the jury might never see the "facts". The "facts" may be grounded in "evidence" untested by cross-examination, never presented under oath, and affirmatively inadmissible because of unreliablity. Such licentiousness invites non-reality based opinion testimony.

In one case tried before me, the plaintiff presented a computer-generated animation of an automobile accident. Photographs had been taken of the scene of the accident showing the resting position of the vehicles, and the location of rest, away from the vehicles, of the decedent's body. At the insistence of the court, pursuant to the requirement that the factual basis of expert opinion testimony be in evidence, plaintiff presented detailed evidence of the manner in which the animation had been constructed. The process began with the application of "photogrammetry." An investigator went to the accident scene and, using a laser-based device, measured distances on the street. The measurements were fed into a computer and used to draw a scaled diagram of the photographs taken at the scene shortly after the accident. The computer then "adjusted" the photographs, based on the actual measurements, to remove the distortions of perspective from the original photographs. The computer then took the "non-distorted" photographs and related them to a scaled map, thereby creating measured, scaled pictures from the photographs.

One of the issues in the case involved the question of whether skid marks, which were clearly visible on the original photographs, came from a vehicle involved in the accident or had been on the street before and did not relate to the accident. The measurement of the length of the skid mark taken by the laser measuring device differed from the direct measurement of the skid mark taken by the investigating police officer shortly after the accident. The skid mark, as measured and reproduced through photogrammetry, was significantly shorter. In the diagram contained in the police report, the skid

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59. While we know that no trial lawyer is *ever* lazy or intentionally takes the easier approach, it is demonstrably safer and easier to rebut expert testimony with "better qualified" experts than to prepare to carefully examine a skilled expert professional witness as to the basis of the offered opinion without giving the expert opportunities to "bury" the questioner and her client. Cross-examination of an expert can open many doors. Hearsay, lay opinion, or prejudicial material can properly be presented to the jury by an expert while explaining the basis of the opinion. *See* FED. R. EVID. 703 (expert may base opinion on facts not admissible in evidence).

mark traversed a crack which went across the entire street. Likewise, the initial photographs clearly demonstrated that the skid mark extended several feet on both sides of the crack. On the scaled, "non-distorted" picture, prepared through photogrammetry, the skid mark ended at the crack. This discrepancy was explained by the expert witness. He testified that the laser measuring device required a physical object on the street from which to measure. Accordingly, the skid mark could only be measured from the closest physical object—the crack—and had not been measured beyond.

The accident reconstruction expert, who testified on the basis of the photogrammetrically produced results, was offering what I call "non-reality based expert opinion." If this expert opinion had been permitted without the underlying factual basis in evidence, the jury could never have learned that the length of the skid mark, "scientifically" depicted without distortion by computer photogrammetry, utilizing laser measurements, was demonstrably inaccurate.

Under Pennsylvania law, juries must decide cases on reality based testimony. Pennsylvania retains the essential purity of the jury role. The expert opinion must be grounded in evidence presented and the basis must be explained by the proponent. The opinion must be a personal opinion of the properly qualified expert, for only a personal opinion can be tested by cross-examination.

IV. Manner of Presenting the Factual Basis: Direct Knowledge, Hypothetical Question, Records or Testimony in Evidence

If you have come this far, you have grasped the basic premises of Pennsylvania law on expert opinion. Experts may only testify in a specialized field outside of the range of common knowledge and experience, must present their own, individually derived opinions, must base their opinions on facts in evidence, and may not give opinions as to credibility. There are several permissible bases for a witness to base expert opinion. The most straightforward is direct knowledge,[60] such as that of a treating or examining physician.[61] Direct knowledge can also be obtained from a physical examination or investigation, such as an examination of an allegedly defective product in a products liability case or the investigation of a burnt building by an arson investigator. A qualified expert can also be directly involved in the incident under investigation, such as an operator of a train involved in an accident

60. Rose v. Hoover, 331 A.2d 878, 880 (Pa. Super. Ct. 1974).

61. Hussey v. May Dep't Stores, 357 A.2d 635, 635-39 (Pa. Super. Ct. 1976). The treating physician is sometimes erroneously considered a "fact" witness. If the "facts" contain anything beyond the realm of ordinary experience, expertise is required, and the witness is offering expert opinion. If the medical training of the treating physician must be established before the testimony can be accepted, it is clearly expert opinion. Indeed, if the offered testimony is within the realm of ordinary experience, no opinion testimony is permissible. *But see* Havasy v. Resnick, 609 A.2d 1326, 1333 (Pa. Super. Ct. 1992) (upholding testimony of defendant physician as fact witness regarding opinion rationally based on witness's perception and helpful to clear understanding of testimony), *appeal dismissed*, 641 A.2d 580 (Pa. 1994).

who could testify to operating procedures and stopping distances. Other examples of an expert involved in events are defendant accountants, lawyers, or doctors in malpractice actions. Such defendants may always offer their own expert opinions.[62]

An expert can also base testimony upon a hypothetical question. A hypothetical question is a question in which the witness is asked to offer an opinion based upon the assumed truth of a set of facts.[63] The expert must be asked to assume all facts essential to the opinion, but the expert may base the opinion upon only one of the conflicting versions of events.[64] The hypothetical question is looked upon most favorably in Pennsylvania. In *Kozak v. Struth*,[65] the Pennsylvania Supreme Court said: "In attempting to control the examination of experts, Pennsylvania courts have long used and recognized the hypothetical question as an aid in insuring that the role of the expert is kept properly separate from that of the jury."[66]

The party framing the hypothetical question is forced to clearly delineate the facts on which the opinion is based. Although a hypothetical question need not present all the facts the jury would be permitted to find from the evidence, it may not include contradictory facts or be based upon "all the evidence" presented.[67] When an expert opinion is based upon one of the conflicting versions of the "facts" presented in evidence, counsel must make this clear. If, in reality, there is no expert analysis being added to these "facts", adding a scientific imprimatur from credentialed opinion becomes impossible to camouflage and the testimony is inadmissible.

A hypothetical question does not require a boring recitation of details. An expert can be asked to assume that the testimony of a party or a witness as presented at trial,[68] or the entries contained in medical records,[69] are relia-

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62. *See* Neal *ex rel.* Neal v. Lu, 530 A.2d 103, 106-09 (Pa. Super. Ct. 1987) (upholding expert testimony of defendant surgeon); *cf. Havasy*, 609 A.2d at 1333 (upholding testimony of defendant physician as fact witness regarding opinion rationally based on witness's perception and helpful to clear understanding of testimony). *But see* Jistarri v. Nappi, 549 A.2d 210, 218 (Pa. Super. Ct. 1988) (defendant medical expert may not be required to give expert testimony concerning conduct of other defendants).

63. While the factual basis for the hypothetical question must be in evidence, Lamoreaux v. Workmen's Compensation Appeal Bd., 497 A.2d 1388, 1390 (Pa. Commw. Ct. 1985), the scientific principles, statistical analysis, technical literature, and governmental studies which constitute the expert's knowledge base need not be. *See* Ruzzi v. Butler Petroleum Co., 588 A.2d 1, 6 (Pa. 1991) (permitting use of governmental studies as basis for opinion without being in evidence or explained in detail); Walheim v. Kirkpatrick, 451 A.2d 1033, 1034 (Pa. Super. Ct. 1982) (permitting expert to refer to published works during testimony).

64. Battistone v. Benedetti, 122 A.2d 536, 539 (Pa. 1956).

65. 531 A.2d 420 (Pa. 1987).

66. *Id.* at 422.

67. Hayes Creek Country Club, Inc. v. Central Penn Quarry Stripping & Constr. Co., 181 A.2d 301, 307-08 (Pa. 1962).

68. This does not require the expert to be present during the trial. The expert can know the trial testimony through the pretrial review of deposition. Counsel must be certain, however, that the factual predicate for the opinion is presented in evidence. *See* Kelly v. Martino, 99 A.2d 901, 902-04 (Pa. 1953) (upholding expert testimony based on plaintiff's pre-trial account of accident that trial testimony did not contradict).

ble and accurate. Often, where the records are utilized by both parties, such as in a medical malpractice action, the experts have been implicitly asked to assume the accuracy of the medical records.[70]

An expert may also base an opinion upon testimony presented at trial.[71] It is irrelevant when the expert became familiar with the facts as testified to at trial. An expert may review depositions in the expectation that trial testimony will be consistent with previous sworn testiomony. If a party's testimony is consistent, in essential details, with the facts given in deposition, the expert can be asked to assume the truth of the facts testified to at trial and offer an opinion.[72]

V. Manner of Presenting the Factual Basis: The *Thomas* Limited Exception

In the 1971 criminal case of *Commonwealth v. Thomas*,[73] the Pennsylvania Supreme Court created a "limited exception" to the requirement that all factual material relied upon must be in evidence.[74] This limited exception, reminiscent of the federal approach,[75] has been misunderstood in trial practice.

In *Thomas*, the defendant was charged with murder and presented an insanity defense.[76] During the trial, the commonwealth offered psychiatric testimony based upon the testifying psychiatrist's competency interview with the defendant, and upon the psychiatrist's analysis of psychological tests and reports prepared by a court psychologist.[77] After conviction, the defense argued on appeal that it was error to permit such expert testimony because it was based, in part, upon psychological testing which had not been offered in evidence.[78] The supreme court sustained the conviction, commenting that

> several jurisdictions influenced by the teaching of highly regarded legal commentators have . . . permitted medical witnesses to express

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69. *In re* Preteroti, 556 A.2d 540, 541-42 (Pa. Commw. Ct. 1989). Hypothetical questions posed by counsel afraid to leave out minutia can be eliminated by the trial judge limiting the hypothetical question to facts reasonably in dispute and requiring counsel to agree, pretrial, on which facts are not reasonably in dispute. Thus, the hypothetical question can retain its essential nature, cogently presenting to the factfinder the bases of expert opinion, while becoming an effective tool to expedite trial.

70. *See, e.g.*, Corl v. Corl, 292 A.2d 541, 542 (Pa. 1972) (upholding defense expert's testimony based on records not in evidence because plaintiff's experts testified earlier to opinions based on same records).

71. Ruzzi v. Butler Petroleum Co., 588 A.2d 1, 6 (Pa. 1991); Tobash v. Jones, 213 A.2d 588, 590-91 (Pa. 1965).

72. Milan v. Commonwealth Dep't of Transp., 620 A.2d 721, 727 (Pa. Commw. Ct.), *appeal denied*, 633 A.2d 154 (Pa. 1993).

73. 282 A.2d 693 (Pa. 1971).

74. *Id.* at 698-99.

75. *See* Fed. R. Evid. 703 (facts upon which expert bases opinion need not be admissible in evidence).

76. *Thomas*, 282 A.2d at 695-96.

77. *Id.* at 696-97.

78. *Id.* at 698.

> opinion testimony on medical matters based, in part, upon reports of others which are not in evidence, but which the expert customarily relies upon in the practice of his profession.
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> . . . .
>
> It appears to us that the foregoing limited exception is wise and salutary, hence we adopt it as the law in Pennsylvania.[79]

The reasoning behind this limited exception was explicated by the Pennsylvania Supreme Court seven years later in *Commonwealth v. Daniels*.[80] Referring to the scientific bases of opinion evidence, which are not required to be presented to the jury, the supreme court quoted a Fifth Circuit decision with approval:

> [T]he opinion[s] of expert witnesses must invariably rest, at least in part, upon sources that can never be proven in court. An expert's opinion is derived not only from records and data, but from education and a lifetime of experience. Thus, when the expert witness has consulted numerous sources, and uses that information, together with his own professional knowledge and experience, to arrive at his opinion, that opinion is regarded as evidence in its own right and not as hearsay in disguise.[81]

In caring for patients, doctors routinely rely on laboratory results, diagnostic testing, and specialized interpretation. General practitioners routinely make treatment decisions based on consultations with specialists, and specialists regularly rely on laboratory results, x-rays, CAT scans, or MRI results interpreted by professional laboratories or other physicians. Believing in the scientific reliability of medical technological systems is an integral part of medicine, and is contained in virtually every medical decision. Modern medical practice operates upon the reliability of information of which the treating physician may have no direct knowledge. As the responsible physician relies, in faith, upon the accuracy of the scientific-medical technocracy, it is unrealistic to prohibit medical testimony offered on the same basis.[82]

In the 1976 case of *Jumper v. Jumper*[83] the Pennsylvania Superior Court first applied the limited exception in a civil action. The facts of that divorce case were remarkably similar to the facts of *Thomas*.[84] In *Jumper*, a psychiatrist testified about the wife's mental status based upon a single interview and

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79. *Id.* at 698-99 (citations omitted).

80. 390 A.2d 172 (Pa. 1978).

81. *Id.* at 176 (quoting United States v. Williams, 447 F.2d 1285, 1290 (5th Cir. 1971) (en banc), *cert. denied*, 405 U.S. 954 (1972)).

82. A comparable reliability exception to matters which are otherwise hearsay is contained in the Uniform Business Records as Evidence Act, Pub. L. No. 586, No. 142 § 2 (1978) (codified as amended at 42 Pa. Cons. Stat. § 6108 (1990 & Supp. 1995)). The Pennsylvania Legislature implicitly recognized that the business world turned on the accuracy of its business records, and that therefore admitting business records as evidence would not present a reliability problem. Since the computer now turns the business world, this logic has been extended to permit the admission into evidence of computer-generated reports and records.

83. 362 A.2d 411, 414 (Pa. Super. Ct. 1976).

84. Commonwealth v. Thomas, 282 A.2d 693 (Pa. 1971). See *supra* notes 73-79 and accompanying text for a discussion of *Thomas*.

the reports of psychologists who did not testify. The superior court permitted this partial reliance on reports not in evidence.[85]

The *Thomas* limited exception was next applied in a civil context in the 1983 case of *Christy v. Darr*.[86] A neurosurgeon was permitted to testify from the reports of other physicians concerning the plaintiff's hearing and visual abilities. The neurosurgeon testified that both abililties had to be considered to apply the knowledge of his own medical specialty, neurosurgery, to determine whether the plaintiff needed brain surgery.[87]

During the 1980s, the Pennsylvania Superior Court decided several cases that tested the limits of the *Thomas* exception. The court expanded the use of external factual materials not in evidence in expert testimony concerning damages. In *Steinhauer v. Wilson*,[88] the homeowner of a defectively built house sought damages under a construction warranty.[89] Plaintiff's expert witness was a professional construction project estimator and coordinator. Based on his own estimates, the expert offered his opinion of the cost of repairing the house. During his testimony, he conceded that after personally determining what work was needed, he consulted with contractors to determine the prices they would charge. The information he obtained through these conversations was never offered in evidence. However, the expert testified that this was the standard method by which estimators determined the total cost of construction. He further stated he was testifying based upon his own opinion. The superior court approved the testimony.[90]

Likewise, in *Douglas v. Liccardi Construction Co.*,[91] an expert in construction testified to his opinion, relying in part upon prices contained in an insurance guide generally used throughout the industry.[92] Although this superior court opinion cites *Steinhauer* as authority for permitting this testimony,[93] the same result could have been reached without reference to the *Thomas* exception.[94] The use of such material is independently permissible

85. *Jumper*, 362 A.2d at 414.

86. 467 A.2d 1362 (Pa. Commw. Ct. 1983).

87. *Id.* at 1365.

88. 485 A.2d 477 (Pa. Super. Ct. 1984).

89. *Id.* at 478-79.

90. *Id.* at 479.

91. 562 A.2d 913 (Pa. Super. Ct. 1989).

92. *Id.* at 917.

93. *Id.* (citing Steinhauer v. Wilson, 485 A.2d 477 (Pa. Super. Ct. 1984)).

94. Likewise, in Bolus v. United Penn Bank, 525 A.2d 1215, 1227 (Pa. Super. Ct. 1987), *appeal denied*, 541 A.2d 1138 (Pa. 1988), the court did not need to employ the *Thomas* exception. That court permitted an expert to testify concerning lost profits (suffered by a borrower in a breach-of-contract action) based upon the borrower's business records which were admitted into evidence. *Id.* at 1225-26. After overruling the bank's objection to the admission of the borrower's records as not factually grounded in the record, the court went on, in dicta, to follow "the guidance of the federal rules of evidence" and concluded that the expert testimony could have been admitted even if the records were not in evidence and an objection had been preserved. *Id.* at 1227.

under cases which permit an expert to rely upon generally accepted scientific principles, governmental studies, or scientific compilations or data.[95]

In *Kearns ex rel. Kearns v. DeHaas*,[96] the superior court extended the exception to damages testimony presented by a vocational expert. The expert relied on evaluations contained in medical, psychological, and psychiatric reports not in evidence to determine the minor plaintiff's future employment prospects.[97] The court approved the expert's testimony.[98]

In only one negligence case was hearsay not contained in medical reports accepted as supporting expert testimony on liability. In the case, *Maravich v. Aetna Life & Casualty Co.*,[99] Aetna defended a fire damage claim arguing that the insured had intentionally set the fire.[100] A deputy fire marshall testified to his personal observations at the scene of the fire and offered the opinion that the fire had been deliberately set, using gasoline as an accelerant.[101] He testified that a valve controlling the flow of gas to the furnace and hot water heater was in the off position. In further support of his opinion that the fire had been intentionally set, he expressed the opinion that the valve had been closed by the person who set the fire in order to prevent an explosion upon ignition. The deputy fire marshall testified that by talking to the firefighters he confirmed this opinion by establishing that none of the personnel fighting the fire had touched the valve.[102] The superior court ruled that it was reasonable for the deputy fire marshall to rely on information supplied by firefighters under his supervision and that his opinion was admissible. The deputy fire marshall, a government employee, had a statutory duty to investigate the cause and origin of the fire.[103] This investigation necessarily depends upon a reconstruction of the scene as it existed before the fire. To rule out false conclusions, an investigator may have to rely on the reports of the first firefighters to arrive at a fire scene.

It is, however, hard to imagine that the superior court would have permitted a privately retained arson investigator to testify based, even in part, upon comparable inadmissible hearsay. Without any reference to the *Thomas* exception, the superior court in *Lesher v. Henning*[104] ruled that it

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95. *See* Lilley v. Johns-Manville Corp., 596 A.2d 203, 211 (Pa. Super. Ct. 1991) (upholding physician's testimony concerning increased risk of cancer from asbestosis), *appeal denied*, 606 A.2d 254 (Pa. 1992); Walasavage v. Marinelli, 483 A.2d 509, 515-16 (Pa. Super. Ct. 1984) (permitting expert's testimony on damages based upon economic concepts of yearly income growth rates); Jones v. Montefiore Hosp., 418 A.2d 1361, 1367-68 (Pa. Super. Ct. 1980) (permitting physician to testify on causation based upon cancer growth rates), *vacated on other grounds*, 431 A.2d 920 (Pa. 1981); Schwegel v. Goldberg, 228 A.2d 405, 408 (Pa. Super. Ct. 1967) (permitting physician to testify on statistical chance of seizure development).

96. 546 A.2d 1226 (Pa. Super. Ct. 1988), *appeal denied*, 559 A.2d 527 (Pa. 1989).

97. *Id.* at 1230-31.

98. *Id.* at 1231.

99. 504 A.2d 896 (Pa. Super. Ct. 1986).

100. *Id.* at 898.

101. *Id.* at 899-900.

102. *Id.* at 900.

103. PA. STAT. ANN. tit. 35, § 1182 (1993).

104. 449 A.2d 32 (Pa. Super. Ct. 1982).

was improper to permit a properly qualified investigating police officer to testify to the cause of an automobile accident based on what eyewitnesses told him during his investigation.[105]

Predating the *Thomas* line of cases, the Pennsylvania Eminent Domain Code authorized a qualified evaluation expert to rely upon facts, data, or written reports of other experts while testifying. The code provides:

> (1) A qualified valuation expert may, on direct or cross-examination, state any or all facts and data which he considered in arriving at his opinion, whether or not he has personal knowledge thereof, and his statement of such facts and data and the sources of his information shall be subject to impeachment and rebuttal.
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> . . . .
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> (5) A qualified valuation expert may testify that he has relied upon the written report of another expert . . . .[106]

Before its decision in *Thomas*, the Pennsylvania Supreme Court relied on this statutory authority to permit evaluation experts to testify on the basis of material not in evidence. In *In re Urban Redevelopment Authority*,[107] the evaluation expert presented by the Urban Redevelopment Authority of Pittsburgh relied upon a written appraisal report of an engineering firm.[108] In approving this testimony under the Eminent Domain Code, the court explained the unique situation posed by condemnation cases:

> The use by a testifying valuation expert of facts and figures derived from others and of which he himself does not have personal knowledge occurs frequently and is not a new development. To require direct personal knowledge by the expert witness of every element going to make up an appraisal figure would be to require the impossible. That there may thus be some hearsay evidence comprised within opinion evidence is undeniable. The components of an expert's opinion, however, go to weight, not admissibility.[109]

This statutory authorization approach in eminent domain matters has been repeatedly affirmed.[110]

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105. *Id.* at 344.

106. PA. STAT. ANN. tit. 26, § 1-705 (Supp. 1993) (enacted 1964). Interestingly, the *Thomas* court did not refer to the condemnation act or cases interpreting it.

107. 272 A.2d 163 (Pa. 1970).

108. *Id.* at 166.

109. *Id.*

110. *See, e.g.*, Redevelopment Auth. v. YWCA, 403 A.2d 1343, 1345-46 (Pa. Commw. Ct. 1979) (upholding valuation opinion based on facts not in evidence under PA. STAT. ANN. tit. 26, § 1-705). Additionally, the rules of evidence may be relaxed in a non-jury trial because the judge is presumed to be able to properly evaluate evidence. *See* Commonwealth v. Irwin, 639 A.2d 52, 54-55 (Pa. Super. Ct.) (presuming judge can ignore prejudicial evidence), *appeal denied*, 655 A.2d 793 (Pa. 1994); Commonwealth v. Brown, 486 A.2d 441, 443-44 (Pa. Super. Ct. 1984) (holding judge's question regarding defendant's drug use during jury trial waiver colloquy not prejudicial). This presumption has also been applied to expert testimony. In *In re* Glosser Bros., Inc., 555 A.2d 129 (Pa. Super. Ct. 1989), *appeal discontinued*, 575 A.2d 566, 569 (Pa. 1990), the superior court approved expert testimony based on an out-of-evidence appraisal in a non-jury case:

In another administrative appeal from a governmental decision, *B.P. Oil Co. v. Delaware County Board of Assessment Appeals*,[111] the commonwealth court permitted expert testimony in a tax assessment judgment based on out-of-court information obtained from a borough engineer.[112] Although decided after *Thomas* and several superior court decisions that followed *Thomas*, the commonwealth court relied exclusively upon the *Urban Redevelopment Authority* case without reference to *Thomas*.[113] *Urban Redevelopment Authority*, *B.P. Oil*, and commonwealth court decisions involving governmental property evaluation are grounded in specific statutory authorization and have a history predating *Thomas*. They provide no authority to extend *Thomas* to a general authorization for expert testimony on the basis of matters not in evidence.[114]

Even as the *Thomas* limited exception became an established basis for medical testimony and construction damages, further attempts to extend its reach were viewed with disfavor. Its use was limited and circumscribed when significant cross-examination was precluded.[115] Opinion evidence on the basis of oral reports not in evidence were prohibited. Such testimony was precluded when offered to bolster the credibility of the testifying witness, or when out-of-court hearsay represented the exclusive basis for the opinion.

> Although the trial court has not provided us with any explanation for its admission of the evidence at issue, a review of the trial transcript reveals that the court was of the opinion that in the context of this non-jury trial, it should receive all the available competent evidence on value and then make a determination as to the weight it would accord that evidence in making the ultimate valuation. . . . [W]e approve of this approach in general terms. In a non-jury action involving questions of such complexity where the court has exercised its option not to appoint an appraiser but rather to make its own valuation, we fully understand the court's desire to have at its disposal as much competent evidence, including expert opinion, as possible. We also approve of the trial court's realistic recognition, however, that the weight that should be accorded such evidence should be determined in light of the adversarial atmosphere that prevailed.

Id. at 138. The trial court devalued the expert's opinion by 65% in the final judgment. *See also In re* Right of Way for Legislative Route 1023, 406 A.2d 819, 822 (Pa. Commw. Ct. 1979) (jury valued property at $10,400 although condemnee's expert valued at $52,000); Commonwealth Dep't of Transp. v. WWSW Radio, Inc., 383 A.2d 552, 553 (Pa. Commw. Ct. 1978) (jury split experts' valuations of $11,000 and $232,100).

111. 539 A.2d 473 (Pa. Commw. Ct. 1988).

112. *Id.* at 475-76.

113. *Id.* (citing *In re* Urban Redevelopment Auth., 272 A.2d 163 (Pa. 1970) as "*Pittsburgh Outdoor Advertising Corp. Appeal*").

114. But see Gross v. Jackson Township, 476 A.2d 974 (Pa. Super. Ct. 1984), in which the superior court approved the use of public deed records personally researched by an expert offering expert testimony on the extent of the township right-of-way. While technically not in evidence, the deeds were of public record and not challenged by the opposing party. *Id.* at 975-76.

115. *Id.* The restriction against use of the *Thomas* exception when significant cross-examination is precluded may be analogized to concepts of "harmless error." When the underlying information is not seriously challenged, as in Maravich v. Aetna Life & Casualty Co., 504 A.2d 896 (Pa. Super. Ct. 1986), it is permitted. When seriously challenged, cross-examination is deemed unduly restricted. See *supra* notes 99 to 103 and accompanying text for a discussion of *Maravich*.

In *Spotts v. Reidell*,[116] the superior court was confronted with an attempt to expand the *Thomas* exception to include an oral conversation which was used for treatment decision but never reduced to writing.[117] In that 1985 case, the superior court reversed a defense verdict in a malpractice action and remanded for a new trial.[118] The trial court had permitted the defendant doctor to testify to a conversation with a pathologist that occurred before the doctor performed the operation which was the basis of the alleged malpractice.[119] In that conversation, the pathologist allegedly discussed with the treating physician the possibility that a polyp was cancerous.[120] This information was not in the report the pathologist wrote the next day.[121] The superior court concluded that "the particulars of the hearsay statement offered were of critical importance in the context of the issue being tried and the obvious implication resulting from this testimony is that [the doctor-defendant's] operative procedure was justified by reference to the cancerous potential of the polyp."[122] The superior court granted a new trial without the hearsay testimony, because

> the jury had no opportunity to evaluate the credibility, qualifications or demeanor of [the pathologist] since he was not present during the trial, did not testify and was not cross-examined. The right to confront and cross-examine adverse witnesses is a cornerstone of our legal system. . . . Further, this right to cross-examination becomes even more crucial in situations like that before us where the testimony at issue originates from a physician since jurors, as lay persons, are often predisposed to accept the testimony of medical professionals due to its esoteric nature.[123]

The court specifically precluded reliance on *Thomas* and the two criminal cases which followed its holding. The court also noted that neither of the two previous applications to civil cases, *Jumper v. Jumper*[124] and *Christy v. Darr*,[125] had been malpractice cases, and that both of those cases applied the exception to non-party witnesses.[126] The court would not permit hearsay testimony to modify information recorded in the written report.[127]

The Pennsylvania Superior Court further limited the *Thomas* exception in 1988 in *Cooper v. Burns*.[128] There, the plaintiff attempted to rely on *Thomas* to permit her treating physician, an orthopedist, to testify to the

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116. 497 A.2d 630 (Pa. Super. Ct. 1985).
117. *Id.* at 633-36.
118. *Id.* at 637.
119. *Id.* at 633-34.
120. *Id.* at 634.
121. *Id.* at 633-34.
122. *Id.* at 635.
123. *Id.* at 635-36 (citing Commonwealth v. Daniels, 390 A.2d 172 (Pa. 1978); Commonwealth v. Wilson, 369 A.2d 471 (Pa. Super. Ct. 1976)).
124. 362 A.2d 411 (Pa. Super. Ct. 1976).
125. 467 A.2d 1362 (Pa. Commw. Ct. 1983).
126. *Spotts*, 497 A.2d at 636 n.7.
127. *Id.* at 636.
128. 545 A.2d 935 (Pa. Super. Ct. 1988), *appeal denied*, 563 A.2d 888 (Pa. 1989).

opinions and conclusions of two consultants, a psychologist and another orthopedist.[129] The treating physician testified that he relied upon the psychologist's opinion—that the plaintiff was suffering from clinical depression—in his decision to postpone surgery.[130] The superior court found this testimony permissible.[131] However, the court found reversible error in permitting the treating physician-orthopedist to testify that his diagnosis was confirmed by the second orthopedist's consultation report.[132] The superior court concluded that a merely corroborative medical opinion was an inadmissible extension of the *Thomas* exception: "[B]y stating that [the second orthopedist] had confirmed his diagnosis, [the treating physician] was permitted to corroborate his own medical opinion by improper hearsay. [The second orthopedist] was not subject to cross-examination concerning his diagnosis, and the jury was not able to assess his credibility or his qualifications."[133] The *Thomas* exception does not extend to corroborative medical opinions, even if arrived at during treatment and before the start of litigation. Furthermore, the exception may not be used to bolster credibility while shielding supporting opinion from the rigors of cross-examination.[134]

In *Dierolf v. Slade*,[135] the Pennsylvania Superior Court reaffirmed the proposition that the *Thomas* exception did not open the door to the recitation of other hearsay opinions. The plaintiff in *Dierolf* sought to offer expert opinion based exclusively upon a conversation with a colleague and a review of the medical literature.[136] The expert candidly stated that, while speaking to a knowledgeable colleague, he had been "surprised to learn it [the injury in question] is a very common problem and it can be avoided with care."[137] The trial court prohibited this testimony and the superior court affirmed this decision, reasoning that "the doctor was expressing his personal reactions to a report of an unnamed podiatrist, rather than his own opinion."[138]

In summary, Pennsylvania case law permitting experts to testify based on reports on which they "customarily rely" in their profession began with specific statutory approval in condemnation cases and other appeals from agency decisions. Reliance on written medical reports actually used for diagnostic purposes, such as x-rays, laboratory results or diagnostic tests, is per-

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129. *Id.* at 940.

130. *Id.*

131. *Id.* Interestingly, the early appellate decisions centered on psychiatric testimony. Perhaps the courts view psychiatry as a specialized field with expertise in the evaluation of psychological testing.

132. *Id.* at 940-41.

133. *Id.* at 941.

134. *Id.* at 940-41.

135. 581 A.2d 649 (Pa. Super. Ct. 1990).

136. *Id.* at 650.

137. *Id.*

138. *Id.* This is another example of the requirement that expert testimony be the personal opinion of a properly qualified individual. Most recently, this principle was reaffirmed by the commonwealth court in DeVita v. Durst, 647 A.2d 636 (Pa. Commw. Ct.), *appeal denied*, 655 A.2d 993 (Pa. 1994).

mitted, and one case extended to damages testimony regarding vocational prospects. In only one case, a fire marshall was permitted to confirm his own opinion with information he collected from firefighters working for him. However, similarly situated police investigators have been precluded from offering comparable testimony based upon eyewitness descriptions. On the other hand, experts evaluating damages in contract and construction claims can base opinions on hearsay.

In every case the factual basis for expert opinion testimony, even if partially based upon medical records created by others who do not testify, *must* be presented to the jury.[139] These non-statutory extensions have never been approved by the Pennsylvania Supreme Court. It remains to be seen whether the supreme court will permit *Thomas* to expand against two fundamental principles of the constitutional right to trial by jury: the essential right of cross-examination and the fact-finder's exclusive role in determining credibility.

VI. The Learned Treatise Non-Exception

Because expert testimony consists of personal opinions, it must be subject to scrutiny through cross-examination. This important principle determines how learned treatises are treated in Pennsylvania, which has an approach diametrically opposed to that of the federal courts. During direct examination, Federal Rule of Evidence 803(18) specifically permits an expert witness to read anything relevant from a reliable learned treatise, published article, or periodical. This reading can be offered as substantive proof of the facts and opinions presented. In contrast, Pennsylvania law absolutely prohibits this approach on direct examination.[140] Learned treatises are always inadmissible hearsay when offered as to the truth of their contents.[141]

In *Majdic v. Cincinnati Machine Co.*,[142] a products liability case, the plaintiff presented the expert testimony of a mechanical engineer who testified that the power press manufactured by the defendant was defective because of the absence of safety guards.[143] Plaintiff then sought to introduce into evidence portions of trade publications on which the expert had relied in forming his opinion.[144] These publications were offered to demonstrate that safety guards could have been installed on the machine when manufactured

139. *See* Primavera v. Celotex Corp., 608 A.2d 518, 521 (Pa. Super. Ct. 1992) (factfinder must be made aware of foundations of expert opinion), *appeal denied*, 622 A.2d 1374 (Pa. 1993).

140. However, such material may be used on cross-examination, not as substantive evidence, but only to challenge the credibility of the expert witness and her opinion. Brannan v. Lankenau Hosp., 385 A.2d 1376, 1383 (Pa. Super. Ct. 1978), *rev'd on other grounds*, 417 A.2d 196 (Pa. 1980).

141. *See* Jones v. Constantino, 631 A.2d 1289, 1297-98 (Pa. Super. Ct. 1993), *appeal denied*, 649 A.2d 673 (Pa. 1994); Majdic v. Cincinnati Mach. Co., 537 A.2d 334, 339-40 (Pa. Super. Ct.), *appeal denied*, 552 A.2d 249 (Pa. 1988).

142. 537 A.2d 334 (Pa. Super. Ct.) (en banc), *appeal denied*, 552 A.2d 249 (Pa. 1988).

143. *Id.* at 339.

144. *Id.*

in 1949. The Pennsylvania Superior Court, *en banc*, was urged to reexamine the longstanding rule which prohibits the direct presentation of learned treatises as substantive proof of their contents.[145] The use of such material as substantive evidence during direct examination can either support the credibility of the expert or provide substantive evidence not subject to cross-examination. Such use of learned treatises runs directly counter to the essence of the Pennsylvania approach to expert opinion. Without detailed explanation, the court reaffirmed the well established law of Pennsylvania: "Learned writings which are offered to prove the truth of the matters therein are hearsay and may not properly be admitted into evidence for consideration of the jury."[146]

Revisiting the issue in 1993 in *Jones v. Constantino*,[147] the Pennsylvania Superior Court was asked to apply the *Thomas* exception as a basis for permitting a medical journal article to be read to the jury.[148] The appellant claimed that learned-treatise-based testimony was admissible "because medical experts are allowed to express opinions based, in part, on medical reports which are not in evidence but are customarily relied on by experts in the practice of the profession."[149] The court declined to adopt the federal rules approach.[150] Instead, the court reaffirmed the basic principles of Pennsylvania law on expert testimony, namely, that the jury must be provided with the underlying factual basis on which the evidence is offered but the underlying scientific basis does not have to be proven.[151] The underlying scientific basis may be taught to the jury as an explanation for the opinion offered, but it is inadmissible to support an opinion or bolster credibility. The court rejected the proposed application of *Thomas*.[152]

That same year, in *Nigro v. Remington Arms Co.*,[153] the Pennsylvania Superior Court remanded the case for a new trial because several pages of an accepted and authoritative text on the manner in which a rifle fired were read to the jury during expert testimony.

Learned treatises are always inadmissible in Pennsylvania to bolster credibility or as substantive proof. The jury has the right and the obligation to evaluate the factual data on which it is asked to decide the case. Opposing counsel always has the right to cross-examine the expert opinion offered against her client.

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145. *Id.* at 340.
146. *Id.* at 339.
147. 631 A.2d 1289 (Pa. Super. Ct. 1993), *appeal denied*, 649 A.2d 673 (Pa. 1994).
148. *Id.* at 1297.
149. *Id.*
150. *Id.*
151. *Id.* at 1297-98.
152. *Id.* at 1297.
153. 637 A.2d 983 (Pa. Super. Ct. 1993), *appeal dismissed*, 655 A.2d 505 (Pa. 1995).

CONCLUSION

Common themes emerge from a review of the Pennsylvania law of evidence. The purpose of our court system is to create an environment in which a just resolution of disputes based on reason and fact prevails. In Pennsylvania, it is exclusively the factfinder's function to evaluate credibility. Evaluation of an expert's credibility begins with evaluation of the underlying facts on which the opinion is based. If the underlying facts are deficient, the opinion cannot be a rational basis for a decision. We believe that juries comprised of twelve reasonable and dispassionate citizens, taking time from their own affairs, can understand and evaluate testimony and reach a fair and proper decision—if the courtroom procedures provide them with appropriate and necessary tools. This faith leads to the conclusion that the proper function of courtroom procedures is to provide testimony about facts and to explain interpretive testimony. We rely on the adversary system, particularly the cross-examination of adverse witnesses, to reveal truth.

Expert testimony is the personal, professional opinion of a properly qualified individual applying specialized knowledge, on a subject beyond the common understanding of the jury, to the evidence presented at trial. If the issue is not beyond the common understanding of the jury, we do not allow the judgment of the twelve citizens, selected to be public officials for the purpose of determining credibility, to be influenced by a "scientific" evaluation. If the individual offering the opinion is not properly qualified, the jury is offered useless evidence which has usually been purchased. Unless the testimony is the personal opinion of the witness it cannot be tested by cross-examination. Unless the factual basis of the evidence is presented to the jury, the facts cannot be ascertained and the opinion cannot be evaluated. Pennsylvania law of expert opinion makes every effort to stop the courtroom battle from deteriorating into a battle of experts.

While Pennsylvania law has taken some small steps towards permitting reliance on out-of-court factual material, it clearly retains the essential requirements that the basis of the opinion be clearly revealed to the jury, that a sufficient factual basis for the opinion be presented in direct evidence, and that the credibility of the opinion offered cannot be artificially supported by "learned treatises" or other materials which cannot be tested through cross-examination.

Expert opinion can never be proof of the existence of facts necessary to support the opinion. The requirements that the supporting facts must be presented to the jury, and that permissible uses of hearsay evidence exclude bolstering credibility, preserve the right of a party to have a jury determine the facts. Requiring the proponent to explain the basis of opinion testimony by a hypothetical question that clearly presents the jury with the factual basis on which an opinion is rendered keeps the burden of proof where it belongs—on the proponent. The jury's determination of factual questions, including credibility, and the accuracy of opinion testimony is essential to the right of trial by jury.

Whether Pennsylvania evidence law remains common law, or becomes legislatively codified, the further dilution of these requirements will impede justice and prevent the jury from properly fulfilling its constitutional mandate. It is the responsibility of the trial judge to insist that in every trial containing expert evidence, the expert opinion be presented in a proper manner, a manner which assists the jury in rendering a fair and just verdict based upon the facts they find.