



# COLLECTIVE WISDOM

EXPERT WITNESSES:  
THOUGHTS AND STRATEGIES

JULES EPSTEIN

## Expert Witnesses: Thoughts and Strategies

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**Experts.** One might say that lawyers “can’t live with them and can’t live without them.” Experts are often key (or deemed key) to an effective trial strategy; experts can be the key to a correct adjudication or the cause of a miscarriage of justice; and they can bedevil advocates by either their deft maneuvering or clumsy and inartful presentation. **There is so much to know.**

- Know the numbers.** Experts proliferate. A 2013 study of more than 4,000 cases from several jurisdictions found that forensic evidence was collected in 47% of criminal cases and concluded that “forensic evidence played a consistent and robust role in case-processing decisions across the jurisdictions included in the study.”<sup>1</sup> There is no reason to think this prevalence has diminished. And the prominence of expert testimony in civil litigation is beyond question. Studies show expert participation is between 63% and 86% of such cases, depending on the year and the jurisdiction surveyed.
- Know the law.** There are a number of fundamental precepts involved in presenting and confronting expert testimony. The first (and not the subject of this article) is mastery of the law of experts, a topic that goes beyond *Daubert*, *Frye*, and the expert witness evidence rules to include discovery, ethics, and issues of privileged communication.
- Know your responsibilities.** Beyond but also as part of assessing whether the case will benefit from expert testimony, counsel must gain some subject matter knowledge. Sadly, the world of lawyers is populated in large part by people with no scientific or technical knowledge and often with little exposure to or awareness of the limits of a particular discipline’s methodology or validity. Read a book, go to a seminar, or hire a graduate student for a tutorial.
- Know about biases.** It is not enough (and indeed does not scratch the surface) to know that a witness tends to or always testifies for one side or how much they are being paid. Biases come into play at many levels—the allegiance bias that colors judgment merely by knowing what side/party hired the expert; the biasing effect of information “fed” to the expert, information often irrelevant to the analysis **but** capable of distorting perception, choice of investigative paths, and judgment; and the biases of race and gender and class and how they may contribute to unreliable assessment.
- Know the expert.** The curriculum vitae is the starting place, never the end. Experts are

<sup>1</sup> J. L. Peterson et al., *Effect of Forensic Evidence on Criminal Justice Case Processing*, 58 JOURNAL OF FORENSIC SCIENCES, S78, S89 (2013).

people, too—they have criminal records; acts of deception/dishonesty that may permit character attacks on their credibility; a disciplinary record or a loss or lack of licensure; prior testimony, writings, or talks that may contradict their stance in your case; and an abundance of personal or business problems that may have distracted from their attention to your case.

A deep dive into expert publications and credentials is essential. It may appear impressive that the witness is a member or even diplomate of certain organizations, until you research and determine how easy it is to join such a group or attain that status. And don't be cowed by high scores on proficiency tests—the periodic examination of an expert's skills—until you know how stringent or easy that test is.

- **Know science.** Unless you keep up with developments in science—problems of fraud in research articles, the reproducibility crisis where contentions or “findings” in one highly publicized article are shown to not be reproducible when other researchers try the same methodology, new studies showing flaws in or limits of previously deemed reliable techniques—you can't be prepared to assess the claims in your case.

Knowing the science also means knowing how other disciplines view your expert's field and whether they have called its underpinnings into question.

- **Know their language.** Lawyers must learn the lexicon of experts for two reasons: to grasp

what the expert can and can't tell us, and to discern what terms need translating for juror (and judge) comprehension. The ultimate task is to rid experts of their terminology and make them audience-friendly teachers and guides.

- **Know the audience.** Is your expert's specialty one that jurors in your community are skeptical of or warmly embrace? Voir dire must be utilized to both test for these perceptions and begin to tell the expert's story and prime the audience for acceptance and trust. And for at least some areas of expert testimony, recognize that jurors value experts more when they substantiate lay witnesses accounts and observations—an expert on whether a person has a disability is more believable when their testimony confirms what those who live and work with that individual see and experience.
- **Know how to entice and marvel.** There is a second way to know the audience, and that is to design the expert presentation to make the jurors feel as if they learned something new, something they will want to share with others and embrace. Expose them to the wonders of the cosmos, large or small.

All this and more are necessary but not sufficient aspects of expert witness preparation and presentation. But at the end of the day, experts are part of the trial narrative—one of credibility or incredulity. To this end, the following collection looks at the advocacy aspects of presenting and challenging expert testimony.

—*Jules Epstein*



## Elizabeth Boals

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### EXPERT TESTIMONY: SETTING NARRATIVES

Successful trials begin and end with a coherent case theory demonstrated and reinforced by clear narratives.

A clear narrative does more than merely provide the connective tissue between facts in a story. It provides the framework for drafting opening statements, closing arguments, and each witness examination including those of expert witnesses. Often, we think of experts as different from, or outside of, the central story of the case. A necessary evil of sorts—the doctor sitting, back straight, in a dark suit, explaining how the spreadsheet projected on the courtroom screen indicates that profits for last year increased for each product line. However, viewing an expert witness as merely a tool to explain the facts presented by other witnesses ignores the expert’s critical function of contributing to the persuasive narrative of the case.<sup>1</sup>

“A ‘narrative’ is a person’s mental image or understanding of a set of events. Narrative



theory, also known as ‘decision theory,’ posits that human beings do not evaluate facts in isolation, but rather tend to make sense of new information by fitting each new fact into a pre-existing picture.”<sup>2</sup> At the core of narrative theory is the basic premise that people dislike uncertainty and interpret new information in such a way as to minimize that uncertainty. Narrative theory helps us to understand how people are likely to think and decide, which allows us to strategize and frame the storyline of our cases to maximize impact.

<sup>1</sup> This piece is a modified and condensed version of Chapter 2.3.1 of *EXPERT TESTIMONY: A GUIDE FOR EXPERT WITNESSES AND THE LAWYERS WHO EXAMINE THEM* (National Institute for Trial Advocacy, 4th ed. 2019) co-authored by Steven Lubet and Elizabeth Boals.

<sup>2</sup> *Id.* at pp. 12–13.

As people receive information throughout a trial, they unintentionally reach into their own minds to retrieve experiences as a way of ordering or reconciling the new information they are receiving. In so doing, people attempt to “harmonize” new information with their past experiences or with the narratives that have already been provided in the case. That is why it is critical to set the desired narrative of the case early and reinforce it often, including during the examination of experts. Thus, as the trial progresses and new facts are provided, jurors interpret each new fact as consistent with that narrative. Coherent and consistent narrative constructions even lead people to reject or ignore information that is inconsistent with established narratives. Consequently, the effective expert witness will be the one who presents information that can be harmonized with the clear narrative set for the case.

For example, imagine that an accident reconstructionist is testifying about the speed that the defendant was traveling at the time when he first applied his brakes before striking the plaintiff’s car. The scene of the accident was not preserved properly by the police so there are issues with a potentially tainted scene, making it difficult to know precisely what the exact conditions of the pavement were at the time of the accident. Nonetheless, by using generally accepted physics principles and accident reconstruction techniques, the expert was able to make a reliable estimate of the speed that the defendant’s car was traveling at the time when he first applied the brakes. Consider these two

different ways to present information through expert testimony on this issue:

- Q.** Did you encounter any difficulties in estimating the defendant’s speed when he first applied the brakes?
- A:** Yes, I did. The police left the scene unattended for 12 hours between the time of the accident and the time the photographs were taken and skid marks were measured. During those 12 hours, cars were permitted to pass through the intersection at issue. With every car that passed through the intersection, the scene became less like it was when the accident occurred. That made my job difficult, because I could not be certain that I was using the exact pavement conditions in my calculations.

What is the picture created by the expert?

The expert just set up a narrative of a “tainted scene.” This means the jury will interpret later evidence in the context of a tainted scene. The examination continues:

- Q:** Were you able to overcome the difficulties and arrive at an accurate estimate of the defendant’s speed?
- A:** Yes, I was able to come to a reliable estimate using a variety of well-established techniques. Of course, no scene is perfect, but researchers in my field have developed methods for dealing with these sorts of problems. I was able to recreate the accident, including the location of the cars

and the defendant's speed at the time he began to brake. I am confident my estimate is accurate.

The initial narrative describes a tainted scene strongly indicating the unreliability of the estimate. Certainly, the witness explained that she was able to overcome the issues the tainted scene created, but the general impression remains one of an imprecise result based on faulty data.

Now consider the same testimony from the beginning but ordered and described differently:

**Q:** What techniques did you use to determine the speed that the defendant's car was traveling when he first applied the brakes?

**A:** I used a well-established technique developed by multiple researchers in my field. This technique involves a formula that considers the pertinent factors present at the time of the braking. Virtually no accident scene is perfect, so using a method like this one is important because it takes into consideration variations in road conditions.

Instead of beginning with a "tainted scene" narrative, this approach is a "reliable technique" narrative. The examination continues:

**Q:** Did you encounter any difficulties in estimating the defendant's speed at the time he first applied his brakes?

**A:** There were no difficulties applying the factors in this situation. It is certainly true that the fact that the police did not

secure the scene before photographs and measurements were taken is not ideal. The techniques I used are specifically designed to allow some variation for road conditions when calculating speed. The technique is designed for just this situation, so I was able to get an accurate speed calculation. I am confident in my result.

The "tainted scene" narrative in the first example serves to undercut the validity of the reconstruction technique even though the expert assures the audience that the technique she used overcame the issues. The initial narrative set by the first questions influences the interpretation of the later information regarding the imperfect scene. In contrast, the second example containing and starting with the "reliable technique" narrative minimized the impact of the imperfect scene.

Setting a desired narrative is a relatively simple thing to do, but not doing it can be difficult to overcome. It is important to remember that expert testimony is an integral part of the story of the case and can serve as a powerful contributor to setting and reinforcing narratives. Use experts for more than merely explaining facts provided by other witnesses. Instead, use them as storytellers that set the framework for the interpretation of new information throughout trial.

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### HOW TO BE AN EXPERT ON YOUR EXPERTS

Out of the endless techniques on presentation and preparation of expert witness testimony, two important methods come to mind. The first is to be as knowledgeable about the experts in the case as you can, including reviewing any prior testimony. The next is to use the opposing side's experts to your advantage.

It is wise to obtain transcripts of any expert witnesses' prior testimony, but it is especially crucial when preparing to cross-examine an expert witness who you do not know as well as your own. You never know when you may find a golden nugget of information, such as statements that contradict what you expect them to say on the stand in your current case. One of my most memorable experiences of working with experts was when I cross-examined an opposing expert known as the "weed doctor" in a driving under the influence of marijuana case. This witness had his doctorate's degree and was deemed an expert on the use of marijuana and its effects on the body. He testified for the defense about the few studies that suggest someone is not more dangerous behind the wheel when under the influence of marijuana. He even went as far as to say that



driving while high made some people better drivers.

I had done some digging on this witness prior to trial and was able to obtain at least 10 transcripts of his previous testimony at preliminary hearings all over California using a statewide prosecutor's database. Apparently, he had previously worked for an organization that did not support the use of marijuana and driving. In the transcripts, he discussed how marijuana could cause someone to drive unsafely and even gave examples of unsafe driving due to marijuana influence. I highlighted every sentence from these transcripts that contradicted what was provided in his scientific report for the current case.

The other golden nugget I found was the doctor's own published reports, which provided findings that marijuana was frequently found in the system of fatal or injured drivers during car crashes (only second to alcohol). His report also indicated that marijuana does impair skills and behaviors related to safe driving and that even minute levels of marijuana ingestion may increase the likelihood of traffic crashes.

When we were at trial, I could tell the defense had not done its homework on this expert because I was able to impeach the doctor many times regarding his inconsistent statements. Surprisingly, the doctor was not hard to impeach once he realized I had him pinned down with the transcripts and his reports. Now, don't get me wrong, the jury likely had a hard time keeping up with all the fast-paced impeachment dance moves I was executing, but I had the end goal in sight: closing argument explanation and interpretation.

During closing argument, I created several simple slides that placed the marijuana doctor's contradictory statements side-by-side so the jury could see that his opinion could not be trusted. He would flip-flop for whoever was paying him. I also highlighted his statements that were in line with my own expert's statements (the statements he made prior to this trial). Those statements indicated that driving under the influence of marijuana makes you a less safe driver. Luckily, my expert witness had studies to show the effects of marijuana on the brain and the systemic changes that cause someone to respond differently than a sober person to obstacles on the road. Because I took



the time to learn this opposing expert's background, specifically his prior testimony on the subject at issue, I was able to show the jury that this "weed doctor" was not credible.

The other technique that has proven to be useful in trials is using the other side's experts against them. There is often a feeling of dread when opposing counsel tells you that they are calling in an expert, especially in a case where you may not have expected one. In my eyes, those trials are the most fun! The case that took me by surprise, but also took the cake for entertainment purposes, was a boating under the influence (BUI) case where the defense claimed that his client was in a state of nutritional ketosis that caused her body to produce alcohol, which then provided a false positive reading on the breathalyzer tests. The defendant had admitted to drinking several beers earlier that day and the readings on the tests were a little over .08%, the legal limit in California.



This claim of the body making its own alcohol intrigued me, so I went down the rabbit hole of researching a ketogenic diet as a defense. Many of us have heard about the keto diet and the requirement of avoiding carbohydrates and certain other food groups. During my research, I learned that ingesting carbohydrates can immediately take you out of a nutritional ketosis state where you are burning your own fat stores, and the defendant had consumed beer. I did not need scientific research to tell me that beer contains carbohydrates.

Initially, I fought to keep out any medical experts on ketosis during the trial; however, the judge was inclined to allow it in. I combed the hundreds of pages of medical records for the defendant and found a beautiful piece of evidence: the defendant never told her nurses during her diet check-ins that she had consumed beer the day of this incident (or any time during her diet time frame). This worked in my favor because when I asked the nurses about how someone might fall out of ketosis, the first thing they said was by ingesting carbohydrates. I asked if someone was to consume several beers, would that knock them out of ketosis? The answer was yes. It got sweeter when I asked how long it would take someone to get back into ketosis and the answer was a couple of days. The nurses indicated that the only way to know if someone was currently in a state of ketosis was to do a blood test and none were ever taken at her visits. Not only did the defendant destroy her ketosis defense, but she also showed that she was a liar by not reporting when she had consumed beer multiple times during her diet that

went against her doctor's recommendations. Plus, there was no way to tell if she was in a ketosis state because no blood tests were ever conducted.

The end result was a guilty verdict. The amount of research and preparation to educate myself on ketosis, how the body reacts, what impact ketosis has on breathalyzer machines, the difference between nutritional ketosis and diabetic ketoacidosis, and how I could present this information in a way that was easy for the jury to understand took many months. I knew that if I could find a way to use the opposing experts to my advantage, that the jury would see through the smoke and mirrors.

Working with experts can be time consuming and tedious. Certain specialty witnesses will require attorneys to spend countless hours researching their background, the opinions they provided, and educating themselves on the topic that the expert will be discussing. The key to prevailing with these types of witnesses is to be an expert on your experts. Of course, you want to research the expert's topic until you know it very well, but no matter how much research you do, you will never know as much as they do about the margin of error on a scientific test or the innerworkings of hydraulics on a boom lift. However, you can still gain the upper hand if you learn as much as you can about their background, including their prior statements, and use opposing experts to your benefit.



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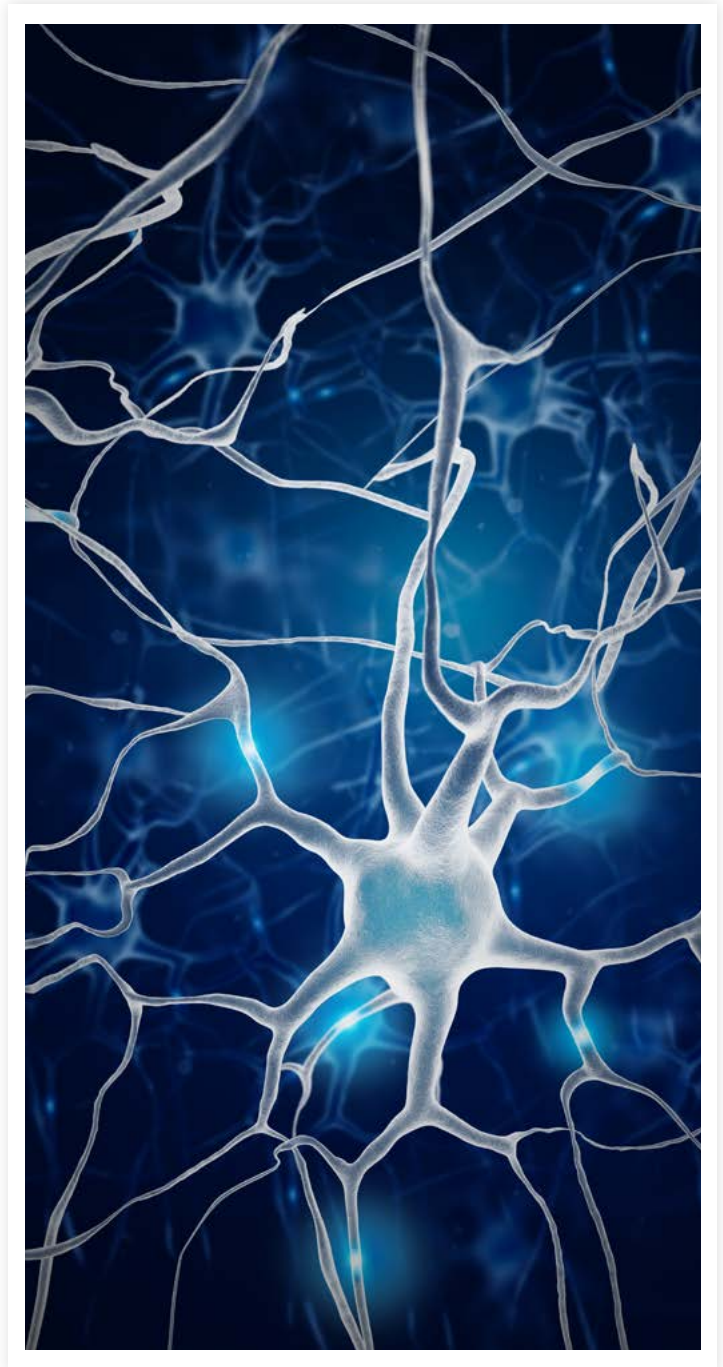
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### THE NEUROSCIENCE OF THE TEACHING EXPERT

Federal Rule of Evidence 702 (including the proposed amendment to part d) suggests that the principal grounds on which lawyers should wage the battle of expert witnesses are the qualifications of the expert, the reliability of the scientific methods and principles underpinning the field, the sufficiency of the facts on which the opinion rests, and the reliability of the expert's application of those facts to the science.

In turn, we often neglect to execute the foundational prescription of Rule 702 and its state counterparts: that opinions from a qualified expert are relevant only where “the expert’s . . . specialized knowledge *will help the trier of fact* to understand the evidence or *to determine a fact in issue*” [emphasis added]. By disregarding this aspect of Rule 702, we surrender the greatest sway our expert can exert on the minds of the jurors.

As lawyers in the business of convincing jurors, we should be drawing upon the discipline that singularly offers the most reliable advice on what strategies in fact will persuade: neuroscience. An understanding of how the brain processes



information and reaches decisions suggests that for three reasons, our expert will wield the most influence if they teach the jurors' how to reach the opinion on their own.

First, as associate professor of cognitive neuroscience Tali Sharot concludes in her must-read book *The Influential Mind: What the Brain Reveals About Our Power to Change Others*, equipping jurors with the tools to independently arrive at the opinion ignites the power of agency:

[T]o influence actions, you need to give people a sense of control. Eliminate the sense of agency, you get anger, frustration, and resistance. Expand people's sense of influence over their world and you increase their motivation and compliance.<sup>1</sup>

By arming the jurors with knowledge that enables them to reach the opinion on their own volition, the expert supplies the agency that will motivate the jurors to accept, and then vigorously defend, that opinion.

Second, neuroscience teaches that once jurors believe they have autonomously arrived at the conclusion, their brains will entertain only additional data that supports that assessment. Professor Lisa Feldman Barrett, author of *How Emotions are Made: The Secret Life of the Brain*, explains that the brain is a black box

that must make sense of information about the outside world that is conveyed through flashes and signals constantly coursing across its 80 billion neurons. The brain reaches a prediction by entertaining inputs consistent with past experience and “has a network to shut out information that might sidetrack your predictions.”<sup>2</sup> The neurological basis for the wider principle of confirmation bias, the brain—having reached an initial belief—will consider it a waste of the body's finite glucose supply to expend energy reconsidering the opinion.<sup>3</sup>

Finally, by investing time during direct examination to have your expert teach the jury how to reach the desired conclusion on its own, you weaponize the expert's opinion through the aura of the Halo Effect. In his seminal work *Thinking Fast and Slow*, Daniel Kahneman—a professor of psychology who won the Nobel Memorial Prize in economics for his research on decision-making that demonstrated the human mind is structured to make errors of judgment and choice—found that the first impression of someone causes us to “to like (or dislike) everything about a person—including things you have not observed.”<sup>4</sup> Having been instructed in the underlying science in a patient, understandable, caring, and interesting way, the jurors will place the halo atop the head of their new professor, unquestioningly receptive to any

<sup>1</sup> Tali Sharot, *THE INFLUENTIAL MIND: WHAT THE BRAIN REVEALS ABOUT OUR POWER TO CHANGE OTHERS* (Henry Holt and Co. 2017), p. 87.

<sup>2</sup> Lisa Feldman Barrett, *HOW EMOTIONS ARE MADE: THE SECRET LIFE OF THE BRAIN* (MARINER BOOKS, 2017), p. 114.

<sup>3</sup> See also Sharot at 17 (“When you provide someone with new data, they quickly accept evidence that confirms their preconceived notions . . . and assess counterevidence with a critical eye.”).

and all further teachings—including the opinion.

To take full advantage of the trilogy of neuroscientific tools of persuasion, direct examination of our expert should include a thoughtfully crafted teaching chapter that precedes the expert’s disclosure and application of the relevant underlying facts.

There is a simple litmus test of whether our instruction has succeeded: When we finally ask our expert for their opinion, the brains of the jurors should be whispering the answer before the witness responds.



<sup>4</sup> Daniel Kahneman, THINKING FAST AND SLOW (Farrar, Straus and Giroux, 2011), p. 82.

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## THE PRICE OF OBSTINACY IN EXPERT SELECTION

The use of expert witnesses in litigation has become so prevalent it is now routine. Often cases *require* the use of an expert to prove a *prima facie* case. For instance, without the use of a medical expert in a civil personal injury action, a plaintiff cannot prove past or future medical damages.

Other cases may not require the use of an expert, but it is still prudent to retain one. For example, in a criminal matter, a defendant may want to retain an expert who can testify to the unreliability of eyewitness identification.

However, occasionally, after having painstakingly considered the appropriate expert to retain, and after having expended considerable expense on that witness, an attorney may learn that the expert they retained is not appropriate for the case at all. This may occur for a number of reasons. Sticking with such an expert is like trying to put a round peg in a square hole: it will not fit. It is a mistake. Cut bait, learn from your mistake, and seek out the right expert for your case so you may succeed.

To demonstrate, let's discuss two separate scenarios where the attorney's conviction could have doomed them and their client.

The first case involves a claim for "lost career earnings." The plaintiff had been injured in accident and claimed she could no longer pursue her "dream" career of joining the U.S. Navy and becoming a pilot. After motion practice, this claim was allowed to proceed to trial.

In support of the claim, the plaintiff wisely retained an alleged "naval" expert who proposed to opine "to reasonable degree of medical certainty as to the eligibility and likelihood of the plaintiff in pursuing a career in the Navy as an Officer and Pilot and that the plaintiff met or likely would have met all eligibility requirements for Officer and Pilot in the Navy and likely would have been selected and had a successful career."

While this attorney was smart to retain an expert in the field, the expert herself was not qualified by her background or experience. She was not a doctor, former naval pilot, former naval recruiter, nor had any experience in these matters. She had been a former naval officer and now operated a company where she assisted veterans to obtain



jobs. But that was the extent of her experience. A motion to preclude based on her lack of expertise was made and granted by the court. A motion to renew and reargue the decision to preclude was denied. The issue is now on appeal.

The trial of this action has not yet occurred, and the plaintiff's attorney still has the option of obtaining a qualified expert to opine on these issues. But instead, he is taking the issue to appellate level intent on demonstrating he was correct. The more sensible approach should be to find a replacement expert: one who can, in fact, testify to what is needed.

The second example involves a medical malpractice action. The plaintiff in this matter purposely failed to exchange a 3101(d) Notice of Expert.<sup>1</sup> The rationale behind this decision was that they were intending to produce the plaintiff's treating physician during trial. A peculiar exception in this jurisdiction is that it allows a treating physician to testify to their observations and need for future treatment and causation, without an expert exchange.<sup>2</sup> However, the jurisdiction does not allow a treating physician to testify to violations of standard of care.<sup>3</sup> Further, the treating physician in this scenario did not specialize in the same area as the defendant doctor.



Instead of litigating the case correctly by obtaining the appropriate expert, the attorney protested that he was correct. This did not end well for the case, as the treating doctor was precluded from opining on the standard of care.

The moral of the above is that at times we attorneys, like most people, misjudge certain situations. But when we have a chance to correct them, we should not allow our natural litigious tendencies to get in the way.

<sup>1</sup> In New York, an expert must be served properly pursuant to Civil Practice Law and Rule 3101(d).

<sup>2</sup> *Duman v. Scharf*, 186 A.D.3d 672 (2nd Dept. 2020); *Kowalsky v. County of Suffolk*, 139 A.D.3d 903 (2nd Dept. 2016); *Hammer v. City of New York*, 106 A.D.3d 504 (1st Dept. 2013); *Jing Xue Jiang v. Dollar Rent a Car, Inc.*, 91 A.D.3d 603 (2nd Dept. 2012).

<sup>3</sup> *Norton v. Nguyen*, 49 A.D.3d 927, 853 N.Y.S.2d 671 (2008).



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### USING THE PARETO PRINCIPLE WITH EXPERT WITNESSES

I was thinking the other day about how the Pareto principle could be applied to presenting expert witnesses.

An economist named Vilfredo Pareto discovered this principle in the early 1900s. He observed the wealth of citizens of Milan and figured out that 80% of the wealth within the city was concentrated in 20% of the population. He applied this principle in a variety of situations and observed this same phenomenon across different modalities. He came to the conclusion that most things in life are not evenly distributed. He posited that 80% of the problems experienced by any process come from 20% of the process. Put another way, 20% of whatever you do produces 80% of your results.

Dr. Joseph M. Juran verified the Pareto principle. He looked at Pareto’s work and noticed that his observation held true in a variety of situations. Dr. Juran determined that roughly 80% of the effort was distributed to 20% of the problem areas. He also noted that these numbers were not fixed in stone—sometimes it was 90/10, 70/30—but one thing remained constant across the board: You



could rely on the fact that the distribution between effort and results would be very lopsided. Dr. Juran referred to this as the “trivial few and the vital many”—also known as the Pareto principle which has become one of the most well-recognized tools used today to help in problem-solving efforts. How might we use this principle to maximize the persuasive power of our expert witness’s testimony?



The beauty of the Pareto principle is that it gives you a way to prioritize what to have your expert talk about. You should fold it into your case analysis, using it to focus the majority of your preparation and presentation on the portion of that expert's testimony that matters.

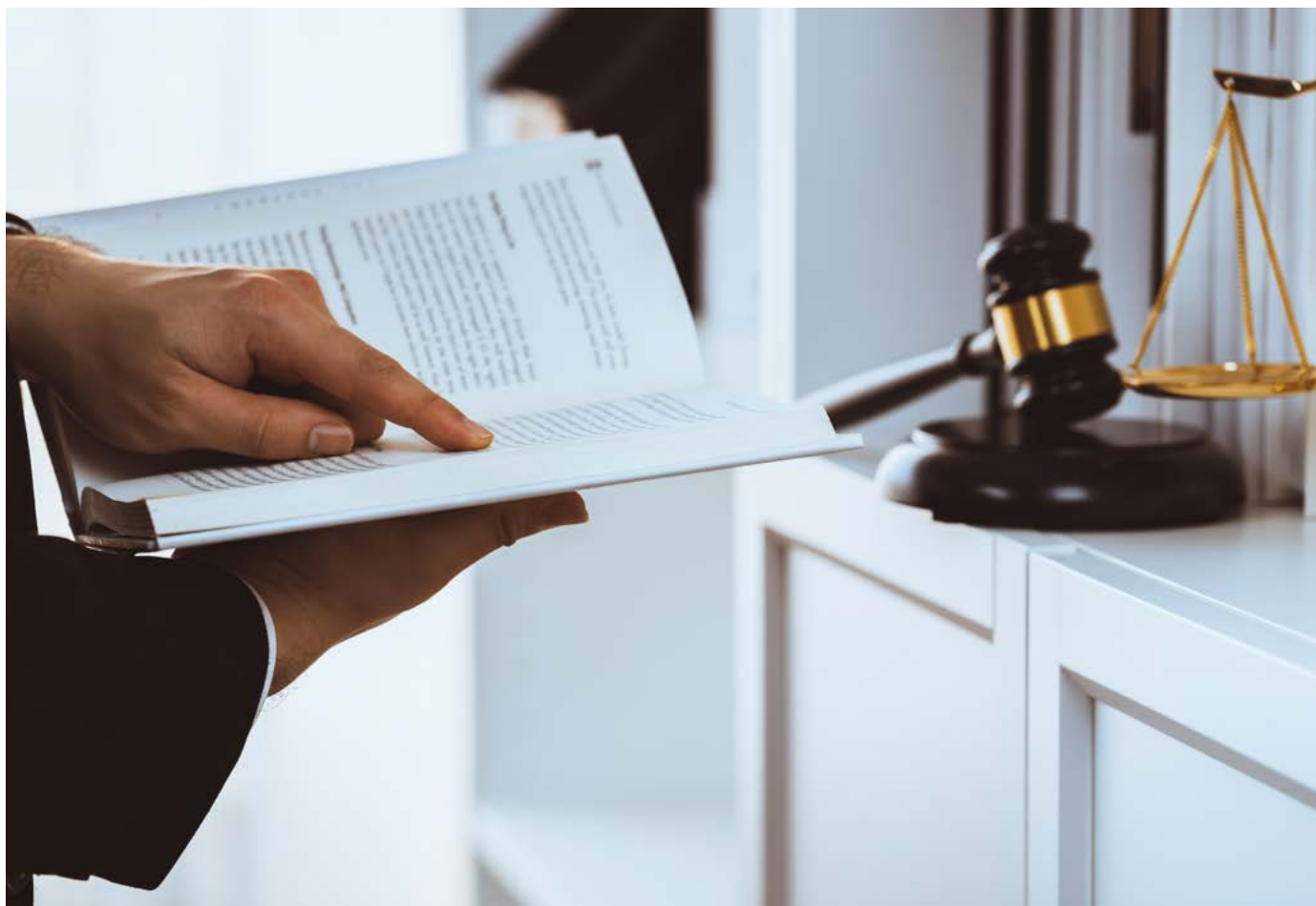
Expert witnesses are both like, and unlike, fact witnesses. Many will have had previous experience testifying in court, but not all of them. They are well educated for the most part, but education does not always equate to likability. Credibility can normally be established, unless they are “professional hacks,” but likability can be a challenge. Once the initial report of the expert has been provided, it is time to begin trial preparation.

This involves working with the expert to identify appropriate areas for direct examination and potential areas for expected cross-examination and assessing the ability of the expert to communicate effectively. Time is almost always a consideration during this preparation phase, and counsel must take the time—and make the expert take the time—to properly prepare. You can use the fact that many experts enjoy educating others on their areas of expertise to their advantage in gaining adequate preparation time. Time spent with an expert in a particular field will influence the structure of direct examination, the choice of appropriate demonstrative aids, and possible demonstrations at trial. All of these have the potential to greatly increase the credibility of the expert and the jury's interest level during their testimony.

The problem is one of volume and selection. The expert almost always has more information than the jury truly needs to decide the case. Preparation includes selecting which portions of the witness's expertise should be highlighted and which portions should be touched briefly, if at all. This is a judgement call that is ultimately made by counsel, but is best made with input from the expert witness. Counsel should take time in the preparation phase to emphasize to the expert that they are on the same team, working toward the goal of greater understanding for the jury. By doing so, they loop the expert in to a common goal and once again emphasize the importance of making their testimony understandable to the average listener.

If you use the Pareto principle in your analysis to identify the 20% of the expert's knowledge that matters to your case and focus your preparation, presentation, and arguments on that piece of the expert's testimony, you are well on your way to persuasively presenting what matters—and winning.

Working with the expert witness during the preparation phase will assist you in identifying the communication techniques that best work to showcase this expert. Pay attention to vocabulary. Word choice is important when dealing with experts, and you should be aware of the potential harm that “expertspeak” can have on the jurors' ability to understand the witness. Again, let the Pareto principle serve as your guide to what matters, then spend your time on it.



When preparing the direct examination of the expert:

- Tell the jury why the expert is here.
- Establish foundation for expertise and tender the witness.
- Provide the major opinion.
- Explore the basis for the major opinion.
- Discuss weaknesses and restate major opinion.

Now, take this checklist and apply the Pareto principle, identifying the part of the testimony from which the rest flows—for this particular case. Sometimes it may shift from one section to another. The important point is to identify the 20% around which the rest rotates. If you can do this, the Pareto principle will work to make your presentation memorable, credible, and acceptable to the jury.

Good luck!

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### WHY YOUR EXPERT NEEDS TO MAKE CERTAIN YOU KNOW WHAT EVERY LIVING ELECTRICIAN KNOWS (BUT THE OPPOSING EXPERT DOES NOT)

One of my favorite cases from my decade in private practice before becoming a federal prosecutor yields two lessons in dealing with experts.

First, have your expert do a thorough evaluation of the opposing side's corresponding expert's report. Second, a demonstrative exhibit may help an expert explain difficult technical concepts to a judge and jury in a way that oral testimony cannot.

The case involved the loss of 500,000 laying hens on the Eastern Shore of Maryland. The hens suffered a quick death on a hot summer night after a partial loss of power caused the ventilation fans to fail in the single commercial hen house in which the 500,000 resided. Constant air ventilation is critical to the survival of the hens. Commercial hen houses are relatively long, 100 to 300 feet, and relatively narrow. The hens are packed into cages on platforms with grated floors (through which the hens' manure drops) about three feet above the hen house floor. The combination of the body heat of the hens and the heat and toxic gases given off

by at least several inches of decaying manure on the house floor mean that if fresh and relatively cool outside air is not constantly brought into the hen house and the fetid inside air not circulated out, the hens will quickly die.

My client manufactured an automatic transfer switch designed to turn on a generator and switch power for the fans from line (power from the electric company) to the backup (a diesel generator) in the event of a line power failure. In a subrogation claim by the hen farmer's insurance carrier, the carrier alleged that the transfer switch was defective and, therefore, my client was liable to reimburse the carrier for the value of the hens: \$2.5 million. (Most dead chicken jokes lost their humor, given the amount of damages.) My client assured me the switch was well designed and had an excellent reliability record where properly maintained and tested. For example, in hospitals the power transfer success rate is higher than 99%. In contrast, in agricultural systems, which often abuse the switches, the power transfer success rate can be as low as 15%. In this instance, during discovery the hen farmer's staff admitted they rarely tested the transfer switch and that someone, for unknown reasons, changed the switch's factory settings so that the switch would not sense a partial line power

outage. Also, the transfer switch was installed in a small, unheated, unventilated cinder block shed contaminated with feathers and manure.

While I will attempt not get too wonky on technical details, the ventilation fans were powered by a commercial three-phase line power source from the local utility (in contrast, most residences have a single-phase power source). On the evening in question, only one of the three phases of line power from the utility company was lost. The carrier hired as its expert a tenured, Ph.D. electrical engineering professor from a local university known for the strength of its engineering programs. The professor, in his report and at his deposition, insisted that if line power from one of the three phases of power was lost while the other two phases remained online, no power would remain in the electrical system for the fans and that a properly operating transfer switch should have sensed this outage, turned on the backup generator, and switched the fans to backup power. In fact, the professor was wrong: when only one or two phases of a three-phase power system go out, something called backflow EMF (I will not attempt to explain this) causes some electricity to remain in the system so that the switch (especially after someone changed its factory settings) would not sense the partial power outage. As a colleague of mine aptly put it, the professor made a fundamental error about three-phase power systems that every *living* electrician knows is wrong. My client's in-house engineer and our expert immediately picked up on this mistake in the carrier's expert's report (something well beyond my liberal arts education) and informed

me. At the carrier's expert's deposition, with the help of questions fed to me by our expert and the in-house engineer, I got the carrier's expert to commit to his erroneous conclusion. Soon after the deposition—again, with the assistance of our expert and the in-house engineer—I sent a letter to opposing counsel pointing out this error and the flawed analysis that flowed from it. While the carrier chose not to jettison this engineer for a new expert, the carrier's expert had to recant his initial report and deposition testimony, and prepare a revised report that admitted his error. His trial testimony lost most, if not all, of the credibility that his otherwise impressive CV likely would have assured (one time I was discussing this case in a class that included a law student who was an electrician in a prior career; he got good chuckle about how these “ivory tower guys wouldn't live very long if they ever had to handle live electrical wires”).

As the prior paragraph suggests, the concept of backflow EMF is difficult to explain to someone who is not an electrical engineer or an electrician (and seemingly is not always so clear even to someone who is). Working with our expert and the in-house engineer, we came up with a demonstrative exhibit that that visually illustrated that there was still electricity flowing in a three-phase electrical system, albeit at a reduced current, even after the loss of one or two phases of power. Using a square board with 25 light bulbs in a lab (the courthouse did not have a three-phase power source so we could not do the demonstration live at trial), we videotaped our expert explaining—starting with all three phases operating and then cutting out phases one at a time—what was happening

and why, with the judge and jurors able to see the lights in the lightboard getting dimmer as the current to the lightboard diminished. The lightboard demonstration visually established that the current in the hen house’s electrical system only went to zero once all three phases of line power were lost. The expert also explained how losing one or two of the three electrical phases interacted with both the operation of the transfer switch (both with the original factory settings and after an employee of the farmer changed the settings) and the ventilation fans (reduced current damaged the electrical motors in the fans, causing the motors to fail). I know that my description in this paragraph does not do justice to how effective (and important) the

lightboard was in explaining and supporting our expert’s very technical testimony.

I would be remiss not to share another important lesson to take away from this case, albeit not expert related. Notwithstanding my early comment about dead chicken jokes losing their humor with \$2.5 million at issue, counsel should remember that any joke a judge makes during a proceeding is both clever and humorous and counsel should react accordingly. In both the trial court and on appeal in what is now the Maryland Supreme Court, I was admonished by judges not to use any “fowl” language in my arguments.





## Professor Jules Epstein

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### QUESTIONING EXPERTS: PRETRIAL AND AT TRIAL

There is expert witness discovery examination—and then there is expert witness trial examination.

For the latter, we don't want to guess; for the former, we need to learn. Let me begin with pretrial inquiries and then suggest what I hope will be some useful trial questions.

What are some provocative and potentially beneficial pretrial inquiries? For the expert who is actually a party (defendant), discovery questions might include:

- *Do you have a protocol?* Whatever the answer, there is a benefit. If the witness has no protocol for the process that ended up causing an injury or loss, the game is on. If there is one, the inquiry must turn to what it is, where it came from, why it was used, and its history of success/failure.
- *Knowing what you know now, what if anything do you wish you would have done differently?* Again, any answer is beneficial. If the answer is “nothing,” the potential for exploitation at



trial is great; if the answer is anything else, the door is open to exploring the “whys”—why, in retrospect, is something different called for; why wasn’t this done initially?

- *How do you explain what happened?* This inquiry should need no explanation as to its value.
- *Is it your position that you did nothing wrong?* Again, an essential inquiry that may lock the witness into an admission or into seeming to be adamant, if not arrogant.

For the expert who is opining on someone else’s action or omission or on what did or did not cause an event, some potential pre-trial inquiries might be:

- *What other information would it have been important for you to see/learn?*
- *If you had more resources, what other tests/analyses would you have conducted?*
  - *What would they have added?*
  - *Why weren’t they done?*
  - *Did you ask to do them?*
- *What else could have caused [X event]?*
  - *Why was that cause ruled out by you?*
- *What if [fact X] was true. Would that change your opinion?*
  - *Why or why not?*
- *How do you define “reasonable degree of [discipline] certainty?* This last one is intriguing, as the term “reasonable degree” has no scientific definition or equivalent, and the question may produce an idiosyncratic response at odds with the law.

- *What do you mean by [“consistent with”]?* Terms that seem scientific are often arbitrary or without uniform acceptance.
- *What do you think of [our expert]?*
  - *Do they have the right credentials for this case?*
  - *Do they have the right experience for this case?*
  - *Is there any credential or experience that they have that you don’t?*
    - *If “yes,” what value does that experience or credential bring?*
  - *What part(s) of our expert’s report do you agree with?*
  - *Did reading it make you rethink your approach or your conclusions(s)?*
    - *If “yes,” how so?*
    - *If “no,” why not.*
  - *For any part of our expert’s report that you disagree with, can you explain why?*

When you turn to trial, armed with all you could glean, here are some options to consider for an attack cross-examination.

- *Do you agree that if an expert makes an assumption and that assumption is proved to be wrong, the opinion might have to change?* Whether answered “yes” or “no,” success has been achieved. The “no” paints the expert as rigid and unreasonable; the “yes” paves the way for exploration of the fact(s) the expert assumed to be true.
- *I’m sure you [did test X or interviewed person Y after you learned] . . . .* When the expert failed to pursue leads or conduct tests, an

alternative to a slashing *are you telling this jury you didn't* . . . can be replaced with a gentle cross that makes the questioner seem reasonable, asking the witness respectfully about what a good expert would have done.

- *Do you agree that an expert should be consistent in what they say?* This question, to be deployed when exposing inconsistent statements, is another question where either a “yes” or “no” answer helps.

Another approach is to make the opposing expert your own. This may include a run of questions starting with:

- *Let's see what there is agreement on.*
  - *You agree that X . . .*
  - *You agree that Y . . .*
  - *You agree that Z . . .*

These are just a handful of options. I suspect there are a multitude more, be they case specific or discipline specific. But if one starts with them, they should bear great fruit.

