



Science Doesn't Matter: A Blasphemer's View of How to Win a Causation Battle

By Ross P. Laguzza

"This is a long case. We have great scientific experts. When the jury understands how strong our science case is, there'll be no way the plaintiff can prevail."

Sound familiar? It should. This is the prayer offered up by many excellent trial teams around the country when embroiled in complex pharmaceutical, toxic tort, medical malpractice, and other litigation involving scientific evidence. Typically, much time, effort, and money are spent developing a mountain of scientific facts, displays, and expert testimony.

However, looking at study results of how jurors do and do not validate scientific "proof" will do much to deflate the expectations of such a trial plan.

Literally, thousands of real and surrogate jurors have been interviewed to study decision making in product cases. These studies yield a consistent pattern of results; namely, in most cases, that scientific evidence has little bearing on jurors' decisions. Fortunately, this somewhat counterintuitive, frustrating finding is explainable, because it has important implications for how these cases are tried.

Rational mind fallacy

This "more is better" evidence strategy, which typically goes unchallenged throughout the discovery and trial process, focuses on the logical mind of the juror and presumes a linear view of cause and effect. According to this interpretation, once jurors process the scientific information, a barrier prevents anecdotal, experiential, and other forms of verification from being seriously considered.

Of course, no one on the trial team actually articulates this view because no one really believes it. In fact, many lawyers and their clients know jurors can be quite unpredictable in their perception and evaluation of complex litigation. Seasoned litigators know from personal experience that juror reasoning follows its own peculiar logic, which, while perhaps not wholly irrational, certainly does not conform to the logical underpinnings of standard defense theories. Yet most defense trial stories tend to rely heavily on the idea that the mere weight of scientific evidence ultimately will overpower even the least scientifically inclined member of the jury.

In such cases, the defense strategy often becomes fairly one-dimensional itself. Much thought is given to the task of selecting the best scientific experts with the most impressive credentials. The trial lawyers selected often are those who have had formal science training or have an innate ability to talk, act, and think like scientists. Lawyers are transformed into statisticians as they debate the merits of epidemiological data. The primary goal becomes one of putting together the best science defense possible because having a good science case equals having a good jury case.

Assumptions

Understanding the fallacious nature of that premise involves examining three key assumptions—what I call the Rational Mind Fallacy—about how the jury will use the science presented at trial.

(1) *People serving as jurors can learn scientific concepts and understand their implications at trial.*

This assumption, often a matter of faith rather than confidence, is true for most people. Individuals from all walks of life, with all levels of education and varying lifestyles, demonstrate the ability to learn scientific information and concepts. They typically admire scientists and appreciate the need for scientific inquiry in a world replete with challenging problems. They understand at an intellectual level why establishing a cause-and-effect relationship is important in attributing blame in a case involving

allegations of personal and/or property damage from exposure to a product or substance. What makes trying these cases so interesting is that many jurors fail to see why scientific evidence should carry more weight than other types of evidence or, in some cases, why it shouldn't carry less.

(2) *Jurors find scientific evidence intrinsically motivating and valuable.*

Much to the chagrin if not disbelief of many able trial lawyers and their clients, this assumption turns out to be false for most cases involving pharmaceutical products. The reason is not that people who serve on juries are hopelessly incompetent or too dense to comprehend the relevance of such information. It is not that jurors instinctively empathize with the plaintiffs and so ignore the otherwise compelling scientific facts. The reason is far more mundane: Most jurors simply do not require and would prefer not to use scientific information to make decisions about cause and effect.

(3) *Jurors will find it difficult to vote for the plaintiff once they understand compelling scientific evidence.*

Upon hearing that jurors do not value scientific information—at least, as much as the lawyers and experts think they should—many lawyers embark on a campaign to educate jurors, force-feeding them the rudiments of science and the principles of cause and effect. Towers of evidence are constructed by well-credentialed scientists, right in front of the jury's eyes. But, like sandcastles on the beach, they quickly erode, leaving little behind for the effort. As many fine lawyers come to discover, understanding a rule or standard doesn't automatically make it valuable. Jurors don't value scientific information in these cases, and education rarely alters this fact.

Cause and effect

From the juror's perspective, scientific reasoning artificially distills human experience and evaluation to an unfamiliar, dry, one-dimensional view of the world. In everyday life, human beings use an array of techniques, strategies, and shortcuts to make attributions of cause and effect. These processes are used over and over in countless complex and ambiguous situations. When confronted with difficult legal issues, jurors prefer to use the familiar, tried-and-true strategies they use every day. They also believe decisions based on these approaches are fairer, because they are consistent with a perspective by which they live their lives.

This combination of comfort and fairness makes the strategies both compelling and resistant to change. In fact, the more the lawyer tries to undermine the favorite and trusted strategies (e.g., by presenting reams of high-powered science evidence), the more polarized jurors may become. Understanding how jurors reason, how their belief systems operate, and how they reach conclusions is essential to developing a persuasive approach in a complex causation case. Several of the most common strategies are detailed in the following section.

- **Volatile mixture**

Many jurors believe that human beings represent a complex combination of known and unknown physical and emotional factors, and that the addition of a potentially toxic product or substance to this bubbling cauldron can create unpredictable and volatile reactions. You know jurors are applying this strategy when they argue “everyone is different and reacts differently to different things.” They typically cite anecdotes about themselves, a friend, or a relative who took an ordinary medicine (e.g., aspirin) and had an extraordinary result (e.g., rash, death).

These anecdotes—and the underlying reasoning—are very powerful. Jurors using this “strategy” do not require, and typically ignore the absence of, scientific proof of cause and effect. They don’t need science to explain something they already understand: Some people are predisposed to adverse health events or physical-emotional trauma due to genetic and/or environmental factors. Furthermore, the reasoning continues, these people at some point cross a line between health and disease, after which it is unlikely that therapeutic intervention makes much difference. If jurors believe the plaintiff crossed this line before the allegedly toxic substance was introduced, they tend to deny cause and effect was established, despite the presence of strong scientific evidence to the contrary.

- **Sudden change**

Perceptions about change are heavily influenced by temporal associations formed during the time between exposure to a substance and the onset of some adverse health event. Jurors are impressed by sudden changes in a person’s health and work backward to find an explanatory event, no matter how spurious it may be from a scientific perspective. The association in time is particularly powerful if the plaintiff has no preexisting medical history that includes the new symptoms. Even random events can take on causal properties when examined in this context. The less time elapsed between exposure

and the onset of an adverse event, the more causal power is attributed to the exposure. On the other hand, if the plaintiff has a similar preexisting medical history, even strong cause-and-effect evidence might be discounted or ignored.

- **Personal experience**

This strategy is based in anecdotal experience; the juror relies on what happened during a traumatic personal experience with the same or similar substances in question. Statements like “my neighbor took this drug and died” become short cuts through the scientific and legal evidence. The juror using this strategy is convinced of the capacity of the drug to cause adverse events because such a linkage was already established. Expert testimony falls on deaf ears.

- **Last straw**

Jurors favoring this approach identify vulnerabilities in the plaintiff’s physical and/or emotional constitution and attribute subsequent adverse events to the effects of a harmful substance. This strategy differs from the others (i.e., volatile mixture) in that it effectively explains minute exposure levels as well as evidence that suggests a lack of cause-and-effect relationship between the chemical and the adverse event. Arguments like “the plaintiff was already weak when he was exposed to this chemical and his body just couldn’t take it” are products of this type of reasoning. The last straw strategy doesn’t require the juror to believe the product is dangerous, just that it is potent enough, when added to the “weight” of other factors, to cause or contribute to a harmful reaction.

- **Corporate responsibility**

This strategy differs from all the others because it doesn’t require that any link be proved between the product or substance and the claimed adverse event. The corporate responsibility rationale is employed by all types of jurors and is especially lethal when employed by well-educated jurors. It is typically seen in pharmaceutical product cases but emerges in other cases as well. The basic position is that because companies make a profit from the suffering of others, they have a special duty to take care of patients who don’t get well using their product. This can include a range of patient outcomes, from maintaining to worsening. This reasoning creates a link at the level of moral responsibility that is quite resistant to change.

- **Personal responsibility**

Jurors focus on the plaintiff’s knowledge and choices and attribute blame to the plaintiff for not

doing a better job protecting his or her own safety. For example, "The plaintiff should have taken more care to avoid exposure to toxic fumes on the job" is a typical argument. This approach is very powerful for the person who holds it but tends not to be very persuasive to others following different reasoning strategies. Interestingly, jurors often maintain this strategy even in the face of evidence suggesting a causal link between the product and the adverse reaction.

Common characteristics

The above are simple yet very powerful tools that shape jurors' thoughts about whether or not a product or substance had anything to do with a plaintiff's adverse event. They often are activated as soon as jurors hear a general description of what the case is about. Some predictably favor plaintiffs and others, defendants, under certain circumstances.

For most jurors, scientific evidence offers the least familiar and the least preferred strategy (although some, of course, are comfortable with scientific reasoning). Attacking the approaches jurors use to reach their decisions rarely promotes change.

When jurors talk about finding "causation" during jury research exercises or in post-trial interviews, they almost always have used one or more of the simple shortcut strategies detailed above. Carefully probing the decision process may reveal more about which methods they used.

Creating multiple pathways

As is true in any persuasion exercise, the best approaches are those that meet rather than counter audience expectations. In complex litigation, it is important to gauge in advance which of the shortcut strategies are likely to predominate with particular sets of case facts and, next, to develop a trial story that speaks to as many of them as possible. The goal is not to eschew reliable science facts but rather to provide multiple pathways for jurors to travel in reaching a defense verdict. A persuasive message has appeal at different levels for different people. For the trial team this means embarking on an approach that at first may seem quite risky because it is not anchored in a logical position, for example, the demonstrated safety of the product. Under this multipathway approach, however, science becomes part of the journey rather than an end in itself.

"The drug made me do it."

An example of the multiple pathway approach was used recently in a case where a plaintiff claimed that taking a particular medicine caused a second

person to become violent and severely and permanently injure the plaintiff. One obvious strategy would have been to (1) educate the jury about drug and body chemistry; (2) prove the drug is safe and effective; and (3) prove the drug did not cause the alleged violent behavior. Here, the medicine would have been the centerpiece of the defense story.

Pretrial testing indicated, however, that this strategy was not completely effective in neutralizing the plaintiff's case. People continued to suspect the drug was unsafe and perhaps had pushed the plaintiff's assailant over the edge ("the last straw"). Jurors preferred using the common-sense strategies described above over the heavy dose of science the defense story had prescribed.

After evaluation, the defense story was redesigned to address the strategies, especially "point of no return" and "the last straw," that best fit the facts in this case. In a "point of no return" story, defense counsel spent most of the time *not* talking about the drug but reviewing the assailant's violent history, starting with early childhood and including interviews with childhood friends and neighbors. In this story, the plaintiff was the centerpiece; as the tale of his life unfolded in front of the jury, it became quite clear that he had crossed the point of no return before ever taking any of the medicine. Jurors also were given an alternative last straw—the death of plaintiff's father that had occurred one month before the violent incident.

The revised defense message was familiar, simple, and persuasive because it was consistent with the strategies people use every day to sort out our complex world. Science was still a part of the case, which featured renowned experts and science-based arguments. The difference was that the information no longer was the main course but instead an intriguing side dish the jurors could sample if they chose.

The real jury found for the defendant; when interviewed, even the strongest among them admitted to suspicions that the drug was unsafe. They were convinced, however, that this person would have acted violently with or without the medicine. That was the basis for their verdict: The medicine was not a factor in the subsequent actions.

Particularly interesting is that even after the verdict, the trial team still wanted to believe the jury had been persuaded by the science. Sometimes there would be no reason to upset this fantasy; however, with similar cases pending, it seemed important that they learned the right lesson from the victory.

Creating multiple messages about how to think about causation in a given case increases the chances

that individual jurors will support the case during deliberations. By taking advantage of simple strategies, the defense story can become more accessible and operate on more than one level, ensuring that the evidence includes rather than excludes jurors from the process.

Science as common sense

What, then, is the proper emphasis for the scientific evidence in such a trial? Where should it be positioned in the new defense story?

It is essential, first, to stop thinking about the scientific evidence as if it stands in isolation from everything else. The science part of the case can be seamlessly integrated into the common-sense approaches that appeal to jurors, and one of the best ways to do that is to reduce it to just another question. After the jury has the answer from clear, scientific information, it can decide whether the product or substance really had anything to do with plaintiff's complaints.

In a case in which a plaintiff sues a chemical manufacturer for health problems allegedly caused by exposure following an accidental release, the defense can address the causation issue in a number of ways. Below is an abbreviated sample sequence of questions, with the related common-sense strategy in parentheses.

- (1) Did the plaintiff ever suffer from these types of problems before the exposure? (Sudden change: The goal is to show the jurors there was no sudden change, thus, no causation.)
- (2) Was the plaintiff engaged in other activities, completely unrelated to this exposure, that in combination could explain her problems? (Volatile mixture)
- (3) Did the plaintiff act responsibly during the

exposure and try to minimize its effects? (Personal responsibility)

(4) Do people similarly exposed have more complaints than people who haven't ever used the device? (Epidemiology)

(5) Was the company following safe procedures when the accident occurred, or was it simply careless? (Corporate responsibility)

In this five-question sequence, the word *epidemiology* isn't directly mentioned at all. Instead, the jury is invited to reflect on the usefulness of the inquiry suggested by the fourth question, and to consider the issues raised by the other questions that fit their common approaches to causation.

By reducing a complex field of study and its attendant complex terminology and concepts to a simple, common-sense inquiry, counsel can motivate the jury to want to learn more. If they learn a little science along the way, nobody is harmed. More important, the defense story did not inadvertently create barriers between the jurors and key defense messages. The other good thing about this approach is that epidemiology isn't the only hook on the hat rack. If jurors decide question (4) produced ambiguous or confusing answers, the defense has provided alternative pathways on which its message can travel. It is within this multiple-message approach that science evidence can best be understood and used by jurors deciding the fate of product manufacturers.

A skeptic might consider these ideas and conclude, "No kidding—it all boils down to making things simple." The skeptic would be only half right. Simplicity is a natural consequence of first making things *familiar*. This is the trial team's true challenge. ■

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