



involve primitive emotional and subjective issues at the jury level, and gaining a strategic advantage in litigation requires knowledge of where the "land mines" are in this murky domain of jury psychology. Fortunately, over twenty-five years of research using mock jurors and real jurors (e.g., post-trial juror interviews) can be summoned to generate a substantial body of knowledge on how jurors construe claims in these cases, and how the litigator should position a case, whether beginning discovery, approaching mediation, or standing in front of a jury.

The breadth of scientific content domains tapped by the environmental case from the academic perspective can be staggering, ranging from toxicology, physiology, pathology, immunology, molecular biology and chemistry to more environmental issues connected with exposure, including geology, hydrology, meteorology, and so on. Factoring in assessment methods, measurement scales, and permissible exposure levels from the EPA, OSHA, NIOSH and other regulatory agencies leads to a potentially bewildering morass of issues for the lay juror to assimilate. Overlaid on these more objective issues are the lifestyles and habits of the plaintiffs, and the perceptions and conclusions connected with these variables among the members of the jury panel.

In order to organize the present inquiry, we will adopt the traditional medical model of "agent-vector-host," considering first the issues of toxicity (agent) and exposure (vector), and concluding with a consideration of the host – in this instance, the plaintiff himself. The emphasis on this treatise

is placed on how the juror's own perceptual tendencies ("baggage") organize, deflect and distort information in determining damages – that is, the process of deciding what happened to the plaintiff and what he actually deserves, if anything.

Toxicity and Exposure – The Agent and the Vector

In the mid-eighties, many litigators clung to the belief that a great number of chemicals could be shown at trial to ultimately be innocuous. Chemicals that were claimed to be hazardous in toxic torts could be found in household cleaners, or ubiquitous products of various types; alternatively, they were naturally occurring in the environment or could even be found in minute quantities in the foods that we eat. Arguments stemming from considerations such as these ("It's already in everyone's environment with no ill effects") were thought to be effective in persuading jurors that the substances in question were not in fact toxic or harmful. After extensive dismal failures in arguing toxicity by defense counsel, it eventually became apparent that, for the most part, jurors believed that "everything is toxic."

Publicity originally occurring with cigarettes, then subsequently products such as margarine, sugar substitutes, and eventually many others, created the widespread belief among jurors that it takes years or even decades to empirically demonstrate carcinogenicity and other health hazards. The prevailing belief became crystallized that, if something is even mildly suspected to be toxic, long term studies will ultimately bear out the conclusion

that it in fact is. Time after time, in mock trials and real trials, defenses aimed at mitigating perceptions of toxicity failed, substance after substance, case after case, and venue after venue.



Statistical analysis of the responses to arguments in mock trial research and real trials showed that, when defense jurors existed, they were differentiated from plaintiff jurors not in beliefs concerning toxicity, since virtually all of the jurors found the chemicals in question to be toxic. Rather, plaintiff versus defense jurors were differentiated in their beliefs concerning exposure.

Accordingly, in the overwhelming majority of environmental cases, the real battleground in the toxic tort is exposure, not toxicity. Most experienced toxic tort litigators now approach a case knowing that exposure is the coin of the realm in securing a verdict. However, jurors' perceptions of exposure, when subjected to scrutiny, can be seen to be a function of numerous other factors involved in the case.

Attribution Theory

Once perceptions of exposure were identified as the fulcrum of the verdict decision, the next question became, "How do you induce strategically helpful beliefs pertaining to exposure?" In many cases – let's say a benzene worker with cancer who worked at a refinery for 15 years, some 9 years before the case goes to trial – how does a juror form beliefs regarding the likely exposure when data on this issue is not available? Or more importantly for the litigator, how do you induce the belief that exposure was low (for the defendant) or high (for the plaintiff) when there is no significant evidence in either direction?

In psychology research, an entire body of work emerged in the 1980's supporting what can be termed "attribution theory" – the principle that jurors look for patterns of observed associations in making attributions, or inferences, about causes. Thus, for example, if everyone who walks by a painting in a museum likes the painting, there is something about that painting that is special. On the other hand, however, if only one person likes the painting, then there is something about that individual that is special, not the painting.

So for the benzene worker, jurors will want to know, "How many other similarly situated people in the refinery got cancer"? Assume for a moment that the plaintiff was a smoker and the type of cancer involved is not one that is exclusively associated with benzene exposure. Jurors will want to know,



Did non-smokers in the same work environment get that type of cancer? Do smokers not in that environment get that type of cancer? According to attribution theory, showing the former pattern, of course, helps the plaintiff, while showing the second pattern inures to the benefit of the defendant.

Carrying this line of reasoning to its logical conclusion leads to the well-known principle that, if clusters of the same disease can be shown in vicinity of the toxic substance, the case will be very difficult to defend – and, the "tighter" the cluster, the greater the difficulty. In fact, when strong clusters of a disease exist in an exposed population, such cases almost never make it to trial, since the chances for a defense verdict are virtually nil. More generally however, the toxic tort is the quintessential example of the adage that, if you want to win as a defendant, you have to have a better story than the plaintiff: You need a more compelling and absorbing account of why and how the plaintiff got the disease than the plaintiff's theory propounds.

In point of fact, the statistical evidence, as noted previously, is that plaintiff versus defense jurors are differentiated in their beliefs of exposure, not toxicity, but unequivocal hard data on exposure is often not available in the trial. When there is strong hydrogeological or meteorological data pointing to the conclusion that prevailing groundwater or air flow points away from the location of the plaintiff, or other hard scientific evidence showing negligible exposure, so much the better for the defendant. But the reality of toxic tort litigation is that claims are typically made pertaining to situations in which this type of information is frequently not known, or to situations occurring in the distant past, involving environments that are otherwise not able to be measured or assessed because the alleged exposure occurred many years ago.

In short, plaintiff jurors make inferences about exposure leading them to conclude that exposure was substantial, whereas defense jurors make inferences leading to the belief that exposure was insubstantial, and yet, in many cases, jurors are lacking conclusive unequivocal data one way or the other. So how are jurors deciding these types of cases?

Alternative Causation

As stated previously, the side with the better story wins. In other words, the quality of the alternative causation arguments determines whether jurors conclude that the chemical in question caused the disease, as propounded by the plaintiff, versus the factors implicated in the alternative causation story stated by the defendant. The degree to which the alternative causation argument is compelling will then regulate the inferred level of exposure in jurors' minds when hard data on exposure is lacking. So, for example, the juror who believes that the benzene worker got cancer from smoking will conclude that the plaintiff was exposed to less benzene, while the juror who concludes that the cancer was from benzene will infer that there was greater exposure.

Psychologically, many of the determinants of which side the juror falls on in this decision are the characteristics of the juror himself: For example, based on numerous research findings, smoking jurors tend to sympathize with smoking plaintiffs, so the smoking juror is more likely to attribute the cancer to the benzene, whereas the non-smoking juror is more likely to find smoking as the cause of the cancer (smokers tend to discount smoking as a cause of illness in plaintiffs using the same type of rationalizations that they use to justify their own

smoking, i.e., "smoking is not all that important.")

Of other course, pre-existing numerous characteristics of jurors regulate how perceptions of the plaintiff are formed: Jurors' own health experiences, hygiene habits, fear of disease, and several other factors will be considered in more detail later in conjunction with our discussion of how jurors perceive the "host" (the plaintiff himself). However, it suffices at this point to keep in mind that there is more to determining which side has the better story than the nature of the story itself: the personality and cognitive styles of the jurors, together with their experiences and "baggage," regulate how alternative stories are perceived and evaluated, as does the quality of the case put on by the litigator.

To summarize at this point, jurors make up their minds about toxic cases based on perceived exposure, and not on perceived toxicity. The strength of an alternative causation story is the second major determinant of verdict orientation and typically predominates when exposure data is ambiguous or controvertible. However, the cumulative impacts of each of these two variables are in turn regulated by the pre-existing characteristics of the juror, which we will discuss in more detail, and by what we call at this point "the quality of the case" – that is, the witnesses themselves.

Witnesses – The Quality of the Case

The ongoing debate concerning whether jurors

make up their minds during opening statements versus some other point in trial is a controversy that refuses to die because the answer depends on so many factors. In more analytical complex cases such as patent cases, jurors tend to make up their minds later, whereas in more emotional cases they are more likely to make up their minds after openings, and indeed, the toxic tort represents a more emotional type of case. But the experienced litigator knows that even in the toxic case, the witnesses have to "cash the checks" that he "writes" in opening, and the quality of the witnesses also arms jurors with the ammunition that they need to hold out for their sides and convince others in deliberation.

Two mistakes that even experienced litigators tend to make in toxic cases have a direct impact on the outcomes: 1) They tend to over-emphasize the importance of experts; and 2) they tend to underemphasize the importance of fact or percipient witnesses. Our observations over twenty-five years of studying toxic cases are that jurors often discount the experts, except in relatively infrequent situations with truly exceptional experts who can "capture the room."

Typically, well-credentialed witnesses on both sides are seen in the final analysis as a "wash" who "cancel each other out." Jurors become impatient with, and ultimately feel betrayed by, academicians who, in the final analysis, are shown to not really know the answers to critical medical questions (since many such answers do not exist) or who provide directly contradictory answers to such questions from opposing sides, where the experts from each side have truly impressive credentials.

What jurors look for in deciding which side has the better story are the people on the ground, in the trenches – what they saw, what they understood, what they felt, what they smelled. Where the rubber meets the road in this scenario is the plaintiff in his own treating physician's office at the time of the alleged exposure. The handwritten notes of the treating physician typically carry more weight than the testimony of all of the experts combined. The doctor who sees the patient is at the psychological "eye of the storm" in these cases; the more explicit the physician's notes, and the more that such notes implicate potential toxic exposure, the greater the likelihood that the plaintiff's account of the case will be accepted.

On the other hand, if there were no complaints to a doctor, or if doctor's notes at the time or later do not implicate the alleged toxic substance, the door is open for the defendant's alternative causation story to take hold. (However, these requirements may be less relevant for illnesses with no symptoms and long incubation periods, such as mesothelioma as a consequence of asbestos exposure. Asbestos cases carry unique characteristics linked to verdict outcomes for defendants, such as the problem of identification where there are multiple companies that were involved with the manufacturing, distribution and use of the product several decades in the past).

Even more compelling than the treating physicians, however, are the plaintiff themselves. When injuries are minor, jurors are ruthless in their evaluations of individual plaintiffs, and dig into their private personal and medical histories with a voracious and voyeuristic intensity. Poor health habits, lifestyle

variables (smoking, drinking, promiscuity, drug use) and pre-existing physical and mental conditions are given heavy weight by jurors in these situations. In many cases, jurors are even prejudiced by ethnic or racial differences to the point that, after a review of many cases in our database, we are led to the conclusion that jurors have to "like" – have an affinity for – plaintiffs in toxic cases in order to award damages if the injuries are controvertible. Thus, the appearance and conduct of plaintiffs as witnesses can be absolutely pivotal in environmental and toxic cases, and with plaintiffs who are socioeconomically disadvantaged, racism can rear its ugly head in the jury box.

One caveat on the issue of experts warrants special consideration, however. It is certainly not intended to leave the impression that experts are generally useless. Of course, even if jurors tend to consider the experts a "wash," it is obviously important to have good ones to at least keep on a level playing field against the opposition. However, one particular type of expert has been found in our research to be especially interesting to jurors.

All jurors carry some form of "health fear," or what psychiatrists call hypochondriasis (assessment of this tendency is one of the key aspects of juror profiling in toxic cases, as we will discuss below). Experts in toxicology who can provide lucid and descriptive accounts of how the kidneys, liver, immune system, and even the skin systematically dispose of and break down foreign substances in the body are very well-liked and given keen attention by jurors, principally because jurors love to learn about these aspects of physiology – it makes them feel better about their own health vulnerabilities. This "open door" in

jury psychology can and should be capitalized by defendants in choosing a toxicology expert who can "teach" the jury about the body's fascinating and marvelous ability to defend itself. When exposure evidence shows negligible amounts of a substance in the environment, defense testimony of this type can add considerable strength to a defense position in a toxic case.

In the present way of thinking for contemporary jurors, there has never been a time in our experience when traditional western medicine has been met with so much skepticism. Use of alternative medicine in this society continues to peak year after year, with people from all walks of life turning to acupuncture, herbal remedies, yoga and meditation, nutritional therapies, and various "lifestyle cures," eschewing the traditional approaches involving "Western" pharmaceutical products and typical doctor's regimens. In terms of juror psychology, there has never been a time when jurors are so apt to second guess standard medical wisdom in favor of their own intuition and subjective impressions.

The tactical implications for the modern toxic tort litigator are that a case strategy should never rely on the experts for a verdict (although good experts are still necessary to counterbalance the opposition). Jurors are more likely than one might suspect to conclude that their own intuition is as good as, or better, than the experts – particularly when well-credentialed authorities on a subject are offering contradictory conclusions from opposing sides. Instead, a winning strategy for a defendant will concentrate on creating a believable alternative causation story through the use of other witnesses and concrete evidence that is consistent with, and

Preparing for Battle

The toxic case in many respects is like any other – you win by out-preparing the other side -- by getting a reality check at the jury level using pre-trial research to test the case and determine where the "land mines" are for both sides; by proficiently training your witnesses and making sure they will "cash the checks" that you write in opening; by having a solid, friendly and credible demeanor in front of the jury; and through ample use of lucid, creative graphics to drive home your points visually.

Preparing for trial in a competent manner also involves having a plan for jury selection, including the use of a Supplemental Juror Questionnaire (if allowed by the court) or at least a powerful voir dire, together with a reliable knowledge of favorable and unfavorable juror profile characteristics so that it is known in advance what the prospective juror's responses to the Questionnaire (and/or voir dire queries) actually mean in terms of that juror's ultimate propensity to find for the plaintiff versus the defendant. Many trial counsel will strike jurors because they "don't like" them or keep them because they "like" them, but the real question is, which answer is that particular juror going to fight for in response to the verdict form interrogatories?

We previously alluded to a construct known as "hypochondriasis" which is a psychiatric term for "health fear" (i.e., the propensity to become a hypochondriac). Individuals vary greatly on the extent to which they believe that small amounts of toxic substances can harm you. This dimension can

be assessed using queries that tap jurors' lifestyle habits and preferences in everyday behavior. Do you insist on bottled water for drinking, or would you drink water out of the tap? Do you read ingredients labels for chemical additives? Do you buy "organic" produce?

Numerous other exemplar questions can be used to gauge this personality characteristic.

Assessing this tendency, however, is far easier using a questionnaire than in open court *voir dire*, where the interrogator or the juror may feel awkward and inhibited. The use of a Supplemental Juror Questionnaire not only minimizes the potential for embarrassment, but it also affords much greater precision in performing the task at hand – namely, predicting the prospective juror's verdict preference.

In particular, statistical analysis of Juror Questionnaire results has revealed that plaintiff jurors not only score higher on "hypochondriasis" measurements, but they also have a different way of filling out response scales: Specifically, in situations where response scales have multiple choices (e.g., "Definitely-Probably-Unsure-Probably Not-Definitely Not") plaintiff jurors are more likely to use the extreme ends of the scale ("Definitely" or "Definitely Not") whereas defense jurors tend to utilize more attenuated, less extreme responses ("Probably," "Probably Not," or "Unsure").

The importance of pre-existing juror characteristics in the toxic case is difficult to over-estimate. After all, in response to the same claims and responses by both sides involving the same fact scenario, a given group of people will provide divergent verdict

preferences even though they all heard and saw the same thing. What is it that causes one sub-group to vote one way and the other in an opposite manner?

Surprisingly, the one item that statistically distinguishes one group from the other in case after case is a question that we often see missing in jury selection strategy: How would you rate your current health? ("Excellent," "Very Good," "Good," "Fair," or "Poor"). The fact that this item "cuts" so consistently and reliably across toxic tort cases is



proof in and of itself that the credibility of a case is contingent on the particular the set of eyes and ears that perceive it (plaintiff jurors rate their health as worse than defense jurors). These, and several other pre-existing individual juror characteristics, regulate the perception of the plaintiff himself – the "host" – and how his predicament came into being.

As stated previously, jurors give more weight to fact or percipient witnesses than experts, and the overriding interest in fact or percipient witnesses is nowhere stronger than with the plaintiff himself: Jurors are incessantly voyeuristic about the plaintiff's personal life and want to nose into all of his personal details, lifestyle habits, addictive behaviors, legitimate (prescriptions) and not-so-legitimate (non-prescription) drug use, vices, and any other weaknesses. Post trial interviews indicate that jurors remember these details more consistently than any other portion of the fact scenario.

Such details concerning the plaintiff's life and habits, of course, often provide fertile grounds for alternative causation theories. We have seen cases won by the defense simply on the basis of well-known side effects for common prescription drugs as a persuasive account for the symptoms attributed to the allegedly toxic exposure claimed in the plaintiff's theory. However, the fact that these details are the ones most readily recalled in posttrial jury interviews supports the notion that this is where the "cognitive map" begins when jurors problem-solve the toxic case: They start with the perception of the "host," that is, the plaintiff himself. These perceptions are in turn a function of the juror's own psychological make-up. Alternative causation arguments, and the issue of exposure, are determined in the jurors' minds to be consistent with what they believe about the plaintiff, and what they believe about the plaintiff ultimately originates in the jurors' own personality, temperament, and cognitive styles.

In the final analysis, what appears on the surface to be the ultimate determinant of the verdict outcome – perceived exposure – can, on closer scrutiny, be seen to be a function of several other variables, namely, the quality of the alternative explanations, or the "story" by each side. Digging still deeper, we find that how that story is perceived is in turn regulated by a steaming cauldron of primitive psychological variables within the juror that determine how the plaintiff himself is perceived. The good news, however, is that these psychological variables can be known, measured, understood, and ultimately, the manner in which they operate in a trial can be predicted – if the litigator is willing to do the research.

In many respects, then, the toxic tort case shares the characteristics of other forms of litigation in that you win by "firing on all cylinders" – identifying



a compelling story; organizing witnesses and graphics to support it; and understanding the juror characteristics that are needed for maximal acceptance of your case. However, the toxic or environmental case additionally requires an appreciation for how jurors have changed over the last two decades in terms of their beliefs connected with toxicity of ubiquitous substances, the state of knowledge in modern medicine, and their subjective and emotional predispositions that ultimately drive their verdict preferences.

About the Author



Dr. Speckart received his Ph.D. in Psychology from UCLA in 1984 with a specialization in personality measurement. He has been active in the jury consulting field since 1983, and has conducted over 600 mock trials and focus groups in pre-trial research for numerous types of litigation. Dr. Speckart has worked with litigators in over 150 jury selections, beginning with Dalkon Shields cases in 1983,

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