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JuriSense offers mock trial CLE courses throughout California and other states, upon request. Tammy prepares selected participants to present the case to a representative jury, which is debriefed after deliberations. Visit www.**Juri**Sense.com to register, subscribe to RSS feeds and read online articles.

Dissection of a Defense Verdict in a Benzene Lymphoma Trial[1]

Tammy R. Metzger, J.D., M.A.

The benzene lymphoma conference jurors wanted[2] Plaintiff, Edgar Williams, to win, they believed the solvents caused his cancer, that the defendants *knew* it could, and that the label should have included more information.[3] Although they did not think the products were "defective," 8 of the jurors voted that there was a defect for failure to warn. They also answered "yes" to the design defect questions for all three products – including the substantial factor tests for causation – "because we have common sense.[4]" But they suddenly changed their interpretation of "substantial factor" the fourth time they were asked about it on the verdict form, without directly discussing it with each other in deliberations.

The foreperson, Damen, successfully argued to the other jurors that the solvents were *not* a substantial factor in causing Plaintiff's cancer because the *employer* was mostly at fault. In the debriefing, 8 of the 12 jurors said they would award nothing to the plaintiff.

This is a plaintiff's nightmare! What happened? You can answer this question by counting how many times the jurors said "guilty," "OSHA," "employer," "millions," "Edgar," "gloves" and "ventilation" during their deliberations.[5]

The jurors focused on the employer and the plaintiff, perceiving them as having the most control over the outcome. We are conditioned to believe that the main character of a story determines the outcome. When attorneys focused the jurors' attention on the defendants' actions the plaintiff's ratings improved. After the conference, jurors were asked what they thought the case was about. Defense jurors spoke of the employer and the plaintiff while plaintiff's jurors discussed the defendants.

[1] Harris Martin 2008 Trial of a Benzene Case Conference, NYC, post-conference analysis.
[2] Based on Perception Analyzer data and deliberation comments.
[3] Based on post- conference interviews and how jurors answered questions 9 and 10 on the verdict form.
[4] Damen, the foreperson, said this on page 25 line 16 of the deliberation transcript.
[5] The deliberations powerfully demonstrate the critical concepts which I explain in my *10 Tips for Trial Attorneys* and *Plaintiff's Jury Selection in a Benzene Leukemia Case* conference papers, which can be downloaded at www.**Juri**Sense.com.

Fact Pattern Summary

Plaintiff, Edgar Williams, worked as a printing press cleaner for the Los Angeles News for 35 years until he was diagnosed with Large B-cell lymphoma (NHL) in 2006. To clean the press, Edgar used a bucket, rags and about 125 gallons of solvent per week. There was never a cancer hazard warning on the 55-gallon drum labels nor the MSDSs. Occasionally Plaintiff experienced chapped hands, nausea and dizziness but he did not inform his employer. The L.A. News never provided Plaintiff gloves or respirators to use while working.

Plaintiff sued the solvent manufacturers, Chextron and Solv-Central in strict liability, for design defect and warning defect, claiming that their solvents were defective because they were contaminated with benzene that caused his NHL and that the drum labels and MSDSs were defective because they did not warn of the cancer hazard. Defendants contend their solvents are safe because they at all times complied with OSHA regulations, the benzene content was minimal and that benzene exposure does not cause NHL.

Plaintiff does not allege negligence and his strict liability claims are not based on negligence or failure to follow OSHA regulations. Under California law, to establish these claims Plaintiff must prove that Defendants' products were a substantial factor in causing harm; i.e., more than a remote or trivial factor in causing the harm. To establish the warning defect claim, Plaintiff must also show that Defendants had knowledge of the risk of lymphoma or that the risk was scientifically knowable. To establish the design defect claim, Plaintiff must only establish causation and the burden is on the defendants to show that the benefits of their product outweighed the risks.

After the conference, we asked jurors "If asked to describe in a few sentences what this case was about, what would you say?" Damen said *I thought the case was personally about a guy trying to get money from a company for a mishap that happened at his job involving their chemicals*. Other defense jurors also first spoke of the plaintiff or the employer. Karl, a more plaintiff-oriented juror said *this was a case involving negligence of all three parties being the chemical manufacturer, the employer LA News, and Mr. Williams.*

There would have been a different outcome if Damen and Ivy were stricken from the jury. Damen controlled the deliberations and focused the discussions on employer fault, while Ivy stressed personal responsibility and shouted at jurors who supported the plaintiff. In a real trial we would strike these 2 jurors, resulting in a very different outcome. Based on her answers to the jury questionnaire, I rated Ivy a "**D-**" on a scale from "A" to "F." I considered her to be the most dangerous juror for the plaintiff because of her strong defense views towards lawsuits and her harsh tone regarding mental anguish. I predicted that she would *aggressively argue with others* and *add tension to the deliberations*, which hurts plaintiffs, who need consensus.

Figure 1. Clockwise, from left: Traci (#15); Oscar (#13); Trina (#12); Gladys (#11); Diana (#2); Ivy (#8) is at the head of the table; Karl (#3); Robert (#10); Ajin a.k.a. Alex (#4); Donnell (#1); Michael (#16); and Damen (#14, the foreperson), is gesturing to Ivy while talking.

I rated Damen a "**D**" because he is a defense-oriented authoritarian and *probably a charismatic leader*.[6] In fact, he strongly sided with the defense before opening statements began.[7] When Damen was selected foreperson and Ivy sat at the head of the table, it became almost certain that there would be a defense verdict, even though every other juror (except Traci, who had no influence) said they favored the plaintiff at the end of closings. This is because people instinctively give more authority to whoever is sitting there.[8] In fact, jurors who sit at the head of the table are more likely to be selected foreperson. Although Damen was the foreperson, he often directed his comments specifically to Ivy, who also controlled much of the deliberations.

The defense won because no one knew how to argue against Damen on employer fault. When asked how they felt about the case, jurors easily talked about gloves and ventilation, which support the defense themes, but only Ajin argued the more complicated point that the defendants had knowledge and control of their product (e.g. they knew that benzene causes cancer and was in the solvents). His comments did not persuade the others because it is difficult to understand and the attorneys did not stress this point during trial.

Going into deliberations, jurors assigned 59% of fault to Defendants and only 37% to the employer. After deliberations, average juror-attributed-fault flipped, with 54% fault attributed to the employer and 32% to the defendants collectively. Plaintiffs must arm favorable jurors to respond to this defense theme of employer fault, which will be an issue in every trial where the exposure occurred at work, because Americans expect employers to provide a safe workplace for their employees.[9] For more on this, email tammy@jurisense.com to request a copy of *Teaching Points for Plaintiffs*.

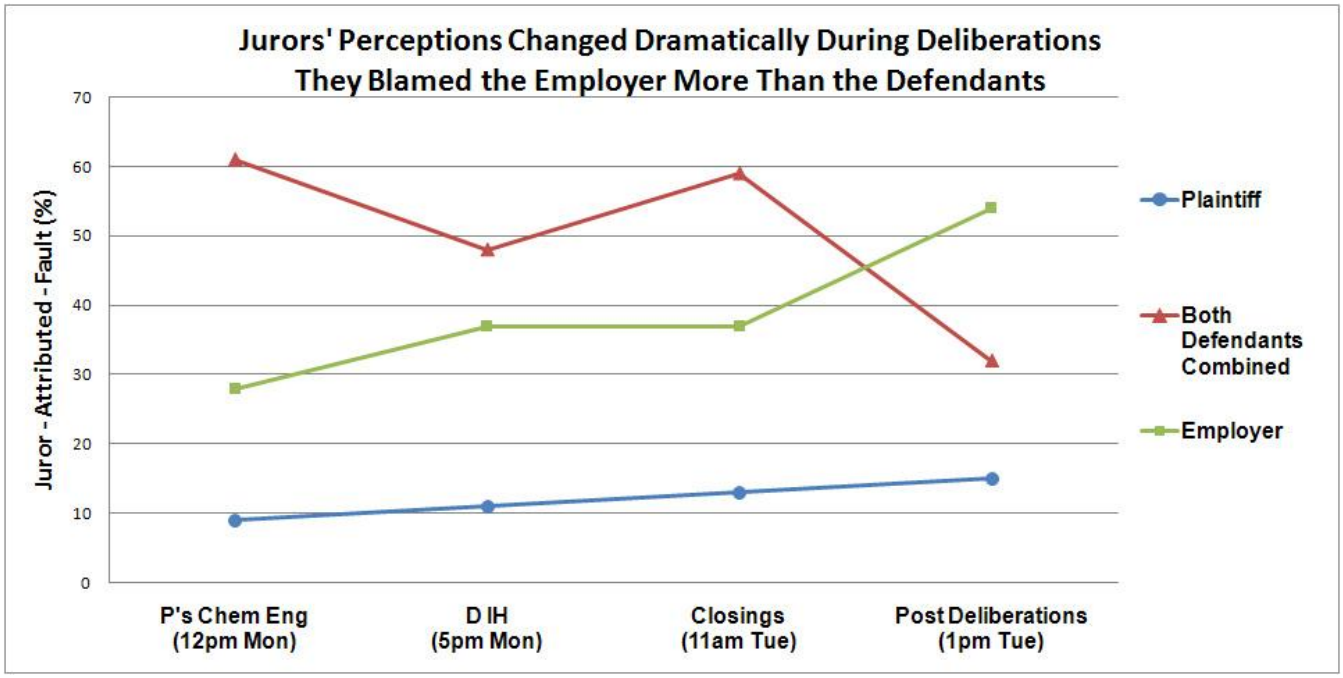

Figure 2. **"X" marks the spot where Plaintiff lost the case.** Average juror attributed fault, which does not quite add up to 100% (98%, 96%, 109% and 101%, respectively) but the data still reflect jurors' attitudes.

[6] And as I said in my lunch talk during the conference, it was obvious in *voir dire* that Damen was already successfully maneuvering to lead the jury.

[7] Jurors were repeatedly asked: *At this point, are you leaning toward favoring one side or the other? 0 = Defense 100 = Plaintiff.* At the end of *voir dire* Damen dialed in "38." Halfway through the trial, Damen began dialing in "0."

[8] Also, people who choose to sit in this chair are often leaders.

[9] See the conference paper *10 Tips for Trial Attorneys*, which can also be downloaded at www.**Juri**Sense.com.

Authoritarians, who comprise 10% of our population, are often leaders and typically decide quickly for the defense in low dose cases. Authoritarians tend to see things in black and white and are uncomfortable with complicated shades of gray, so they will not find a defendant liable unless a law or moral standard was clearly violated. These jurors have difficulty finding for the plaintiff when the law does not provide a clear boundary, but uses words like "defect," "generally known or knowable" and "reasonable user."

Authoritarians also have difficulty understanding degrees of risk. Damen did not distinguish the difference between warning how to protect against chapped hands versus protecting against cancer. In his mind, the employer should have provided gloves and adequate ventilation, as directed by the label. Once the employer PMK testified to these facts,[10] Damen made up his mind.

Figure 3 (next page) shows jurors' responses to the question: *At this point, are you leaning toward favoring one side or the other? 0 = Defense 100 = Plaintiff*. Damen's responses plunged to "0," completely favoring the defense, and he maintained this extreme position, blaming the employer, throughout the rest of the trial. He was not impressed with the causation testimony because to him, this case was all about fault.

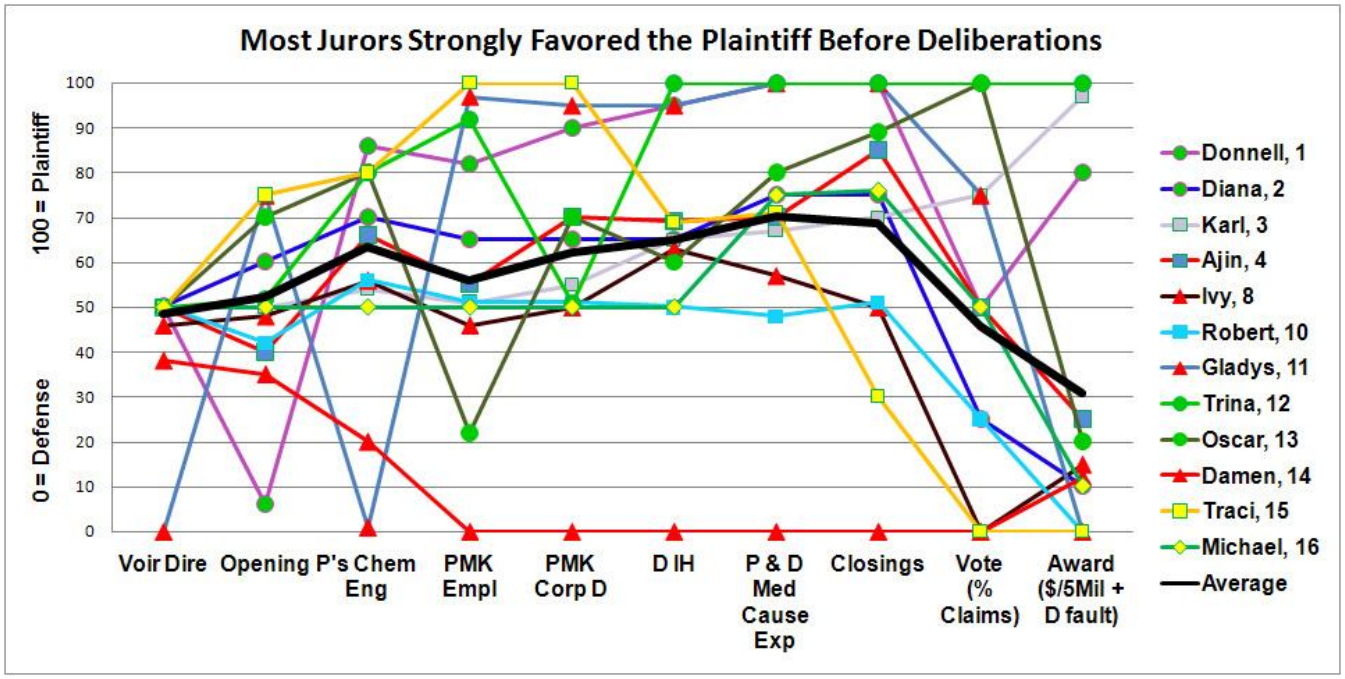

Figure 3. Average juror responses[11] to the question: *At this point, are you leaning toward favoring one side or the other? 0 = Defense 100 = Plaintiff*. Damen, an authoritarian, quickly sided with the defense after hearing the employer PMK testimony. I subjectively calculated ratings after closings based on jurors' votes in deliberations and final verdicts.

Jurors were absolutely confused about what issues they were to decide, the law and the verdict form. In closing, jurors were shown the verdict form and instructed on how to answer the questions. Yet when jurors began deliberations, their first question was [what] *are we deciding*? They did not understand the big picture;

[10] The employer did not provide Plaintiff with gloves and the windows were closed. The label said "Use only in well ventilated area. Avoid prolonged or repeated breathing of vapor or contact with skin or eyes." The MSDS said "contact with the skin causes irritation." Email tammy@jurisense.com to request a copy of the fact pattern.

[11] Gladys probably inverted her answers to this question the first 4 times because she answered exactly the opposite to similar questions asked at the same time. Donnell probably made this same mistake after opening statements, so I removed their answers from the average. All other data in this graph are consistent.

i.e., the issues they were supposed to debate. Instead of reading through the verdict form again to answer this basic question, jurors simply asked each other and when Damen answered (incorrectly), no one challenged him.[12] Furthermore, they later interpreted the verdict form questions through his incorrect lens of employer fault, completely misunderstanding the legal meaning of questions. They also never debated causation, which was the focus of most of the trial.

When Traci asked someone to read the first question, Michael, a bright, attentive juror, read the strict liability essential factual elements from the jury instructions. He apparently thought it was a multiple choice test, where either "a" or "b" was the correct answer.

> Michael: Edgar Williams claims that he was harmed by a product manufactured by Chextron that: (a) was defectively designed; or (b) did not include sufficient warning of potential [*sic*] hazards. I'd say b.[13]

The other jurors quickly corrected him, pointing out they should go through the verdict form. However, they misread and misunderstood those questions too, usually benefiting the defense.

This confusion hurts plaintiffs in toxic tort cases because the law supports their cases more than jurors expect. In deliberations, Damen said *the substantial factor to Edgar Williams' injuries is not the product; it's the fact that his company did not regulate how he used the product.*[14] The jurors were not debating elements in the jury instruction regarding failure to warn, which they had already answered for the plaintiff. The jurors thought substantial factor referred to *fault*, rather than causation. Authoritarians like Damen often make this mistake because they are naturally focused on finding fault and punishing accordingly. But no one corrected him. When asked to define substantial factor in the debriefing, jurors said it was *a major factor*, *over 50%*, just *tipping the scale*,[15] so they also confused it with the preponderance of the evidence standard.

Damen, who was formerly the foreperson in a criminal case, said *guilty* instead of *liable* 8 times before someone[16] (unsuccessfully) tried to clarify their task. He even said *not guilty* during the debriefing because he never understood the distinction. Although the other jurors did not use this term, many see a verdict in the millions as *punishment*, which requires more evidence and/or criminal conduct. As discussed in my conference paper, jurors consider *beyond a reasonable doubt* and *preponderance of the evidence* to be nearly identical standards. Although jurors wanted to compensate the plaintiff, they did not want to punish the defendants.[17]

Jurors assume the defendants technically followed all laws if the employer was within OSHA standards. This makes no sense to people with legal training, but it is how jurors often view these cases. Jurors are confused about the role of OSHA regulations and make a myriad of assumptions which are difficult for attorneys to anticipate and counter. Jurors think OSHA regulates solvents, specifying, reviewing and approving

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[12] Ivy: *Are we deciding whether Chextron and the other company knew that that was – that the benzene was in there, that it could actually cause it or are we just saying that this is the reason he got cancer?* Damen: *… ultimately we're deciding did their product give this guy non-lymphoma* [sic] *cancer?* Ivy: *Okay. Not that they were knowledgeable about it?* Damen: *No.*

[13] Page 3 line 27. This also happens in our focus group research, so it's likely deliberating jurors make this same mistake.

[14] Page 25 lines 18-19 of the transcript.

[15] Deliberation video at 1:06:30, several jurors said "over 50" (percent).

[16] Ajin, a.k.a. Alex, finally responded: *We're saying the product is defective* (page 34 line 28).

[17] Jurors answered "7" when asked: *At this point, how strong is your desire or feeling that the Plaintiff should be compensated in this case? 0 = Very Weak 10 = Very Strong.* They answered "4" when asked: *At this point, how strongly or weakly do you feel that the defendants should be punished? 0 = Very Weak 10 = Very Strong.*

particular labels and MSDSs;[18] however, OSHA does not do any of this.[19] Even if you explain the limited scope of OSHA vis-à-vis other laws, jurors have difficulty grasping that level of complexity. Although jurors are very good fact finders, they consistently misunderstand and oversimplify the law.[20]

Damen repeatedly asserted that since the defendants followed OSHA regulations, they had not technically broken any laws and cannot be "guilty." He also argued that OSHA "approved" the labels. Again, no one questioned this mistaken assertion; in fact, many jurors repeated this statement. This also happens frequently in our research deliberations; jurors say that manufacturers only have to follow OSHA regulations.

Many jurors trust OSHA to protect them because they are familiar with this agency through their workplaces and have been aware of these laws throughout their working lives. Since it is most accessible in their minds, they refer to it first when trying to understand the law. This makes OSHA regulations seem more credible than other laws, especially since the wording is specific to workplaces, with clear numeric standards. Thus, it is more persuasive than the subjective products liability laws. Many jurors, authoritarians in particular, are most comfortable with clear boundaries of legal and illegal actions, and are frustrated by the complexity of products liability laws. OSHA regulations provide an easy standard on which to base their decision. [21]

OSHA regulations basically negate or supersede other laws in jurors' minds and it is difficult for attorneys to overcome this bias. An example of the jurors' blind faith in OSHA:[22]

IVY:	There's a difference between what's morally correct right now and what's legally. He's saying what's on this stuff [label] right now, and that's legally.
DAMEN:	And that's what I was –
UNKNOWN:	Legally, no.
DAMEN:	And they were under legal guidelines, so –
DIANA:	So it would have been nice if they did, but they didn't have to [warn of cancer].
DAMEN:	**We would love to know if your product is going to kill us. But if you don't have to tell us, I don't expect you to tell us.** And so –
GLADYS:	Next question.

[18] Damen said "NIOSH, the people who would shut you down if you don't warn for something harmful, always approved this company [chemical manufacturer]." (page 9 lines 8-9). Damen also said "And you -- the biggest point to me is -- the fact is, you're going to have to use solvents sometime in life. OSHA and these people guidelined what you need to put on there [the label] and how to use it." (page 11 lines 13-15.) Michael said "The plaintiff's [*sic*] argument, the lawyer made a good point that we should consider it [solvent] was safe. It was within [OSHA's] guidelines." (page 15 lines 15-16.) Diana said "They're covered legally, and OSHA approved on what they were putting out." (page 31 lines 1-2). **No one disagreed with these or any of Damen's numerous assertions that OSHA ensures the safety of Defendants' solvents.** After the conference, jurors were asked: W*hat did you think generally about the defense case? Strongest and weakest facts/arguments?* Robert answered *I think that the fact that it made its product to meet or better OSHA's guidelines and stated the need for protective clothing on the barrel cleared them of liability.* Michael answered similarly: *the strongest argument from the defendants was that they followed all safety guidelines put in place by OSHA. They really did not need to defend the affects of benzene. Their weakest argument was their stance on not having to put a sign on their chemicals.*

[19] OSHA mostly governs the workplace exposure limits to protect most employees, and does not guarantee that every worker will be safe if the *employer* follows the regulations.

[20] Jurors do not learn to think like a lawyer simply by watching a trial or reading through the verdict form.

[21] The facts in these toxic tort cases are confusing enough; the law shouldn't be. Attorneys shouldn't be burdened with convincing jurors that products liability laws should be applied. It is already the law.

[22] Page 24, lines 13 to 22.

And these New York City jurors actually moved on with this interpretation of the law. In fact, many jurors nodded in agreement, even though they all had copies of the verdict form and jury instructions, which had been explained in closing arguments. The OSHA bias induces an extraordinary miscarriage of justice.

The defense attorneys empowered the jurors to return a defense verdict. Ted Ray[23] gave a phenomenal closing. With a conversational demeanor, he connected with the jurors so personably that one juror actually answered him back.[24] Once he gained the jurors' trust, Ted said *we have a legitimate disagreement and we turn to you to make a decision*. This unspoken respect is more effective than telling jurors what to do, which people naturally resist. When he said *it seems simple, but jury service isn't simple*, that sometimes making the *right* decision can feel like the *wrong* one, he empowered the jury to decide for the defense -- while feeling good about it.

Ted did not rehash the evidence, which some jurors resent. Instead, he repeatedly asked *what is the product?*, thereby reframing jurors' focus to a single product -- away from benzene, the labels, a lengthy exposure period and the legal issues. Ted emphasized the distinction between benzene and mineral spirits, saying NIOSH and other agencies agree mineral spirits "don't cause cancer.[25]" He also persuasively explained that there is just a small amount of benzene in mineral spirits and that "this room contains benzene." This makes jurors want to believe that the small amount of benzene in mineral spirits is safe because they feel they are exposed to a similar amount. It would have been interesting to watch these jurors debate causation, but they assumed it without discussion (I will discuss this in the next section).

Another memorable defense presentation was Ricky Raven's[26] *voir dire*. He helped establish Damen as the foreperson in the other jurors' minds by following up on Damen's quote *see one, do one, teach one*, his philosophy on how employees best learn safety in the workplace. (This also focused attention on employer fault at the onset of trial.) On its own, Damen's statement was not especially powerful, but it became more authoritative when Ricky, who has a commanding courtroom presence, referred to it. In effect, Ricky transferred some of his power and credibility to Damen.

This was a non-Hodgkin's lymphoma case and causation should have been an issue. Why did the jurors assume causation[27]? (This is a defendant's nightmare! What happened?) Dr. Melvyn Kopstein,[28] a chemical engineer, convinced jurors that Plaintiff was exposed to benzene in the solvents and Bernard Goldstein, M.D.,[29] a medical toxicologist, convinced them that it caused Plaintiff's cancer.

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[23] Theodore P. Ray, ExxonMobil Corp., Irving, Texas.

[24] Ted told me that this also happened to him during an actual trial.

[25] Technically, this is just argument and couldn't be a fact in evidence because scientists will not actually say that mineral spirits are *safe* or *don't cause cancer* because these mixtures have not been sufficiently studied to reasonably draw that conclusion. In fact, the closest the International Agency for Research on Cancer (IARC) gets to labeling a chemical *safe* is *probably not carcinogenic to humans*; mineral spirits is not in that category (only 1 chemical, caprolactam, is in Group 4). IARC Monographs on the Evaluation of Carcinogenic Risks to Humans volume 47 (1989) concludes that "petroleum solvents [including mineral spirits] are **not classifiable as to their carcinogenicity in humans** (Group 3)."

[26] Ricky A. Raven, Thompson & Knight, LLP, Houston.

[27] Jurors did not specifically say this, but implied this assumption when they blamed Plaintiff for causing his own cancer by not wearing gloves. Also, they answered "yes" to question 2, *Was Chextron Solvent 250's design a substantial factor in causing harm to Edgar Williams?,* as well as "yes" to questions 4 and 7, similar substantial factor questions for the other solvents. Only Michael questioned causation, after deliberations, during the debriefing. He said "there was no decisive studies and no solid proof that, you know, that benzene caused this man's lymphoma." (page 39 lines 16-17).

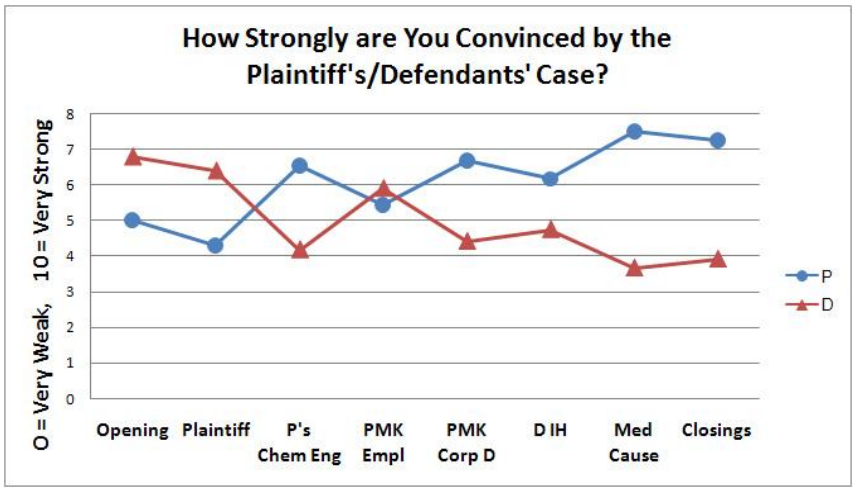

Figure 4. Jurors sided with Plaintiff after his first expert witness testified.

As I discussed in my conference paper, jurors start making up their minds who to believe after the defense completes its first cross-examination of a key witness, who testifies to a major issue. After the first expert witness testified, jurors found the plaintiff's case more convincing. Figure 4 shows that the plaintiff's ratings briefly dipped after the employer PMK testified. This is because the employer did not provide the gloves and the witness was neither apologetic nor sympathetic.

The actor portrayed a truly unlikeable witness and jurors' moment-to-moment ratings fell to 35, against the plaintiff. The jurors went back to favoring the plaintiff once the trial focused more on Defendants' actions and less on the employer's.

Figure 4 also illustrates the importance of sequencing. Just as opening statements should begin with a story of what the opposing side did to cause the bad outcome, so should the first witness. Plaintiff wins when jurors think the case is about the defendants and their choices; i.e., that they had control over the outcome. Since the plaintiff testified first, jurors focused on what he did wrong. If evidence had been presented that foreshadowed Plaintiff's cancer -- if jurors visualized an impending, unavoidable disaster -- *before* the plaintiff testified, then they would have blamed the defendants more.

It is a common mistake to use an emotional appeal too soon. Jurors reacted negatively when Paul Sizemore[30] did this early in opening. Today's jurors are cynical after decades of tort reform rhetoric. It is also not a strong beginning because the story is being framed around the plaintiff, not the defendants. So even though jurors moment-to-moment ratings of Paul's opening were very high, the story had been framed around the plaintiff. Refer to *Teaching Points for Plaintiffs* for more information on sequencing.

Jurors believed Dr. Goldstein because he is a likeable, credible, prepared witness. When he confidently said "most definitely benzene can cause non-Hodgkin's lymphoma," Plaintiff's moment-to-moment ratings went from 70 to 78, the highest during the entire conference for any presentation.

Nearly all the jurors accepted Dr. Goldstein's explanation of causation. Tom Schwartz[31] did his direct examination, an exemplary demonstration of how to prove to jurors that benzene causes non-Hodgkin's lymphoma. Jurors were so impressed with Dr. Goldstein's testimony that I made a note to myself that when

[28] Melvyn Kopstein, Ph.D., Rockville, MD.
[29] Bernard D. Goldstein, M.D., professor of environmental and occupational health at the University of Pittsburgh Graduate School of Public Health.
[30] Paul Sizemore, Girardi & Keese, Los Angeles.
[31] Tom Schwartz, Holloran, White & Schwartz, St. Louis.

ratings dropped, it was not necessarily because something helped the defense, but simply that jurors had to lower their rating in order to dial up when another point impressed them.

Dr. Goldstein and Tom had a nice rapport and they interacted seamlessly, back and forth. The exchange was fast-paced, yet it was easy to follow because Tom asked questions in plain English and Dr. Goldstein answered clearly. Tom's questions flowed naturally and were sequenced in a way jurors would probably ask, if they could. Sometimes Tom challenged Dr. Goldstein and used a skeptical tone of voice, asking a tougher question that jurors might also be wondering about. He never let Dr. Goldstein talk for more than a couple of minutes, which helped maintain everyone's interest. Tom stood by the jurors so Dr. Goldstein could easily look at them when he answered. Their interaction engaged the jurors during the entire direct examination. It was dramatic, believable, understandable and memorable.

Plaintiff's ratings went up when Dr. Goldstein said that he would testify about causation, specifically, that benzene caused Plaintiff's non-Hodgkin's lymphoma. Jurors appreciate a quick overview of what to expect and how it fits into decisions they must make. It is much easier to retain knowledge when it is related to other information and its importance is clear. Jurors are often overwhelmed and frustrated by the evidence presented at trial, so they give up trying to understand it all. Attorneys can keep jurors interested in their case by explaining how the testimony will help jurors answer questions on the verdict form

Ratings markedly improved when Dr. Goldstein explained the healthy worker effect[32] and how leukemias and lymphomas are all related to each other. He masterfully introduced complicated testimony in simple terms, went persuasively and confidently into his technical explanation (which most jurors did not understand), then told them in plain English what he just said. After he explained the Steinmaus[33] meta-analysis, he said *to be brief* (cues jurors to listen carefully), then he succinctly restated his points. Ratings increased dramatically from 63 to 74. Jurors may believe an expert is credible, but they will not know *what* to believe if it is not stated simply.

Dr. Goldstein maintained his credibility on cross because he never appeared angry, defensive, flustered or arrogant. He calmly yet firmly stood his ground without dodging questions. It was difficult for the defense to effectively attack him because Tom and Dr. Goldstein had established such a good rapport, that jurors liked the doctor and believed him.

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[32] Studies done on workers, instead of the general population, underreport disease prevalence because many sick people are not working. This results in workplaces having a lower incidence of disease, so an "average" prevalence rate in a particular workplace actually indicates a higher rate of disease. Furthermore, Dr. Goldstein testified that higher exposed workers have statistically significant increased non-Hodgkin's lymphoma rates than non-exposed workers; this conclusion is based on data in Dr. Wong's published research, which was funded by the American Petroleum Institute and concluded that petroleum workers do not suffer an increased risk of NHL. A complete criticism of the meta-analysis by Wong and Raabe is available in a letter to the editor of the Journal of Occupational and Environmental Medicine. Goldstein, B.D. and Shalat, S., Letter to the Editor: "Non-Hodgkin's Lymphoma and Exposure to Benzene in Petroleum Workers," *Journal of Occupational and Environmental Medicine* 42 (12): 1133-1134 (2000). Wong's response is also in this issue, at pp 1134-1136.

[33] "Meta-analysis of benzene exposure and non-Hodgkin lymphoma: biases could mask an important association," Steinmaus, C; Smith, A H; Jones, R M; Smith, M T, Occupational and Environmental Medicine, Volume 65(6) June 2008, pp 371-378. This article concludes "The finding of elevated relative risks in studies of both benzene exposure and refinery work provides further evidence that benzene exposure causes NHL. In addition, the finding of increased relative risks after removing studies that included unexposed or lesser exposed workers in exposed cohorts, and increased relative risk estimates after adjusting for the healthy worker effect, suggest that effects of benzene on NHL might be missed in occupational studies if these biases are not accounted for."

The cross-examination started strong when Kyle Carpenter[34] said "the single term I didn't hear was mineral spirits, which has 1,000 times less benzene than gasoline;" ratings dropped from 50 to 43 (favoring the defense). After showing a graphic with many government logos, including IARC, NTP, OSHA, NIOSH and EPA, Kyle said "none say mineral spirits causes cancer." Defense-oriented juror ratings went from 47 to 40, but plaintiff's jurors were not impressed, probably because they accepted Dr. Goldstein's opinion that benzene causes NHL and they were not interested in reconsidering causation. Those who kept an open mind may simply have discounted this fact because Dr. Goldstein already discredited the research the agencies relied upon.

Ratings dropped slightly (favoring the defense) when Kyle said there were no excess lymphomas for printers, but jumped up to 55 (favoring the plaintiff) when Dr. Goldstein countered that there is a subset of printers who get lymphoma, specifically the ones who clean the presses, and that he believes Plaintiff got non-Hodgkin's lymphoma from Defendants' products. Dr. Goldstein's ratings soared into the 60s several times when he argued with Kyle, saying "you're misstating the paper" and "wait a minute" (while laughing), then he proceeded to explain how that part of the paper was also misrepresented. The cross was ineffective because the jurors had already decided that they could trust Dr. Goldstein, that benzene causes non-Hodgkin's lymphoma, and they gave bonus points to the doctor for entertaining them.

The warning label itself probably persuaded jurors that the products caused Plaintiff's non-Hodgkin's lymphoma. Even though the label did not have a "cancer" or "benzene" warning, the fire symbol and "DANGER!" wording scare people on an unconscious level. As I said during my lunch talk, some jurors are self-aware enough to notice this,[35] but most are not. Either way, it is persuasive. Also, the jurors did not distinguish varying levels of risk, i.e., that a warning that the product could cause skin irritation was sufficient to also warn of cancer. Jurors simply categorized the products as dangerous -- and they concluded this was *common sense*.

This type of black and white thinking is a hallmark of the unconscious. Most people in today's health-conscious society[36] make this same subconscious judgment, that any chemical with a warning label is dangerous to their health. And knowing that a plaintiff, who worked with such a chemical for decades, got cancer makes it seem likely that the chemical caused the cancer. It is not rationally analyzed, but seems intuitively obvious.

The jurors believed that the defendants' products caused the plaintiff's non-Hodgkin's lymphoma because the label proved it to their unconscious minds and Dr. Goldstein proved it to their conscious minds.

I want to thank our presenters for demonstrating their substantial talent for us all. I learned a lot and I look forward to incorporating this knowledge into our next benzene trial. I hope you enjoyed reading my reflections on the mock trial. I would appreciate hearing your thoughts on the conference, this paper and any suggestions you may have. Also, email me at tammy@jurisense.com if you would like a color copy of this paper, the follow-up paper entitled *Teaching Points for Plaintiffs* or other conference documents. [37]

[34] Kyle Carpenter, Woolf, McClane, Bright, Allen & Carpenter, Knoxville, TN.

[35] Technically, it influences them on a subconscious level since it is available to their conscious minds. But it probably remains in the unconscious for most people.

[36] If plaintiffs make this time distinction clear, jurors are less likely to assume the employer should have known of the danger and will place less blame on the employer for not protecting its employee. Older jurors and people who can think abstractly will have an easier time understanding this.

[37] The deliberation transcript I reference in this paper is slightly different from the one mailed with the DVD. We modified it to identify jurors by name and corrected some of the language.