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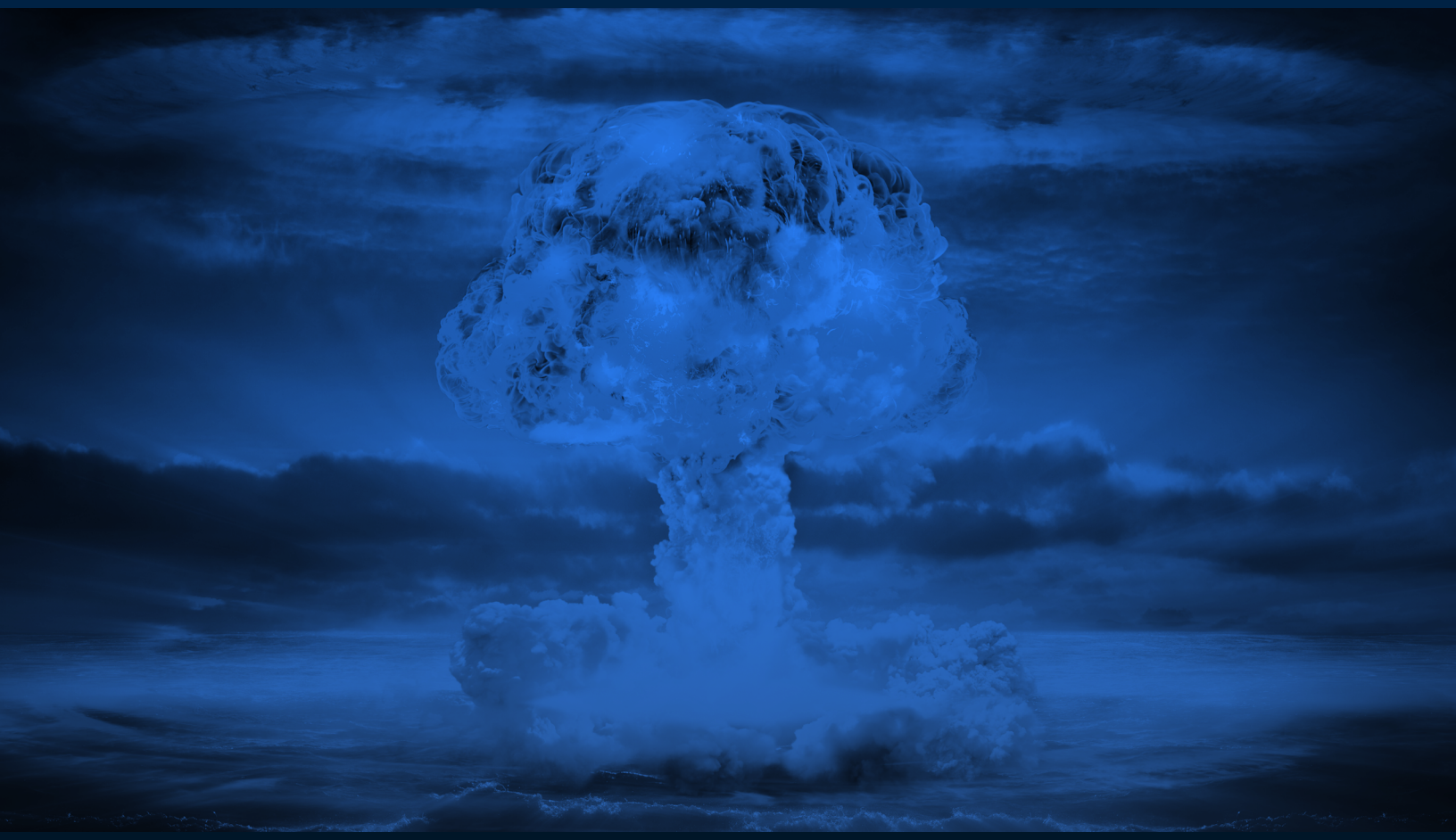
NUCLEAR VERDICTS: WHAT THE $#!& IS GOING ON?

Peter Dubrawski
Moderator
HAIGHT BROWN & BONESTEEL LLP
Los Angeles, California
pdubrawski@hbblaw.com

Bill Kanasky
Senior Vice President of Litigation Psychology
COURTROOM SCIENCES, INC.
Orlando, Florida
bkanasky@courtroomsciences.com

courtroomsciences.com

The Nuclear Verdict:
Old Wine, New Bottles



By George Speckart, Ph.D. and Bill Kanasky, Jr., Ph.D.

What is the "Nuclear Verdict"?

The "nuclear verdict" is a term recently coined to refer to unexpectedly high damage awards that appear to exceed rational parameters in civil cases. However, verdicts with monetary awards that far exceed expectations, and/or that are considered to be inflated, outlandish or even destructive, have been considered to be a problem for at least a generation (thus the phrase "old wine, new bottles"). Despite this history, a recent and somewhat sudden growth in concern among the insurance industry and defense litigators has precipitated a renewed sense of alarm connected with damage awards that appear to be spiraling out of control, with the implication that this trend has taken hold in a more pernicious manner within recent years.

From a perspective spanning the last few decades, it appears that a new generation of lawyers is currently looking at a phenomenon that has been developing over this entire time span, bestowing a new title of "nuclear verdict." In fact, in the 1990's this phenomenon was called "the runaway jury" and even a movie (based on a John Grisham novel) was made with that name.

In this article, we will trace the longitudinal development associated with the historical trends in this phenomenon; provide observations from scientific approaches that may be useful in shifting from speculation to more reliable factual conclusions; and address the much-needed perspective of prediction and control over these awards.

Historical Background

It appears that one key area in which concern for damage awards arose was in connection with the need to quantify the monetary value of a human life for purposes of providing jurors and other decision-makers a numerical basis for awarding dollar amounts in various kinds of wrongful death cases. A rationale entitled "willingness to pay" (WTP) was developed in which it was considered a reasonable approach to use the dollar amount that rescue and medical service providers would be willing to pay to save a life (Landefeld, J. and Seskin, E. "The economic value of life: Linking theory to practice," *American Journal of Public Health*, 1982, vol. 72). These estimates centered on the $1.2 – $8.4 million range, leading damages experts for defendants to argue that no more than this interval should be awarded in a death case.

By 1984, the Agent Orange settlement of $180 million was the largest settlement in history at that time, and a benchmark of sorts had been attained. However, the following events may arguably be seen as giving rise to the initial concerns over the "runaway jury," as it was called in the 90's:

- In 1985, $10 billion was awarded in *Pennzoil v Texaco;*
- In 1994, a jury awarded $5 billion in the *Exxon Valdez* case;
- In 1999, a Los Angeles jury awarded $4.9 billion against GM and in the same year a North Texas jury awarded $296 million in a pipeline explosion that killed a teenage girl;
- In 2000, a Florida jury awarded $144 billion against the tobacco companies; and
- By 2001, the American Tort Reform Association began writing about "Judicial hellholes" to account for the apparently increasing number of astronomical verdicts.

These developments were associated with contiguous articles documenting various facets of the "damages inflation" phenomenon. In one of them, we identified the *stealth juror* in a *National Law Journal* article as one of the factors in the "runaway jury" as it was called at that time (Speckart, G. "To down a stealth juror, strike first," *National Law Journal*, 1996, vol 19). Another article, more comprehensive as to causative factors, appeared in this journal almost twenty years ago (Speckart, G. and McLennan, L., "Excessive damages awards and tactics for containment," 2002, *For the Defense*, vol. 44; published as a two-part article).

Causative Factors

In their 2002 article, Speckart and McLennan listed five contributing factors that give rise to excessive damage awards. These are listed and described below, with updates based on more recent developments:

1. Problem witnesses

Our research from post-trial juror interviews suggests unequivocally that witness performance is the leading determinant of verdict and damage awards. More importantly, the overwhelming majority (over 70-80%) of the impact of a witness comes from the *nonverbal realm* (mannerisms, vocal intonation, facial expression, "body language," and so on). Since legal teams are typically ill-equipped to train witnesses in this murky, but critical, realm of trial performance – and since plaintiff attorneys are getting better at exploiting shortcomings in defense witness training (note the recent surge in "Reptile" tactics [Ball, D. and Keenan, D., *Reptile: The 2009 Manual of the Plaintiff's Revolution*, 2009, Balloon Press, New York, N.Y.] by the Plaintiff Bar) – the result has been an upward spiral in uncontrolled jury awards. An important note here is that this issue takes hold and exerts influence not only *during* trial, but also *before*, in the deposition stage, where training is needed most urgently but is often overlooked.

Recently, even the most "prepared" witnesses have fallen victim to Reptile tactics because traditional preparation techniques are not sufficient for the emotional and psychological manipulation witnesses endure during Reptile style questioning. Four devastating psychological weapons that are typically used against defendant witness are known as: Confirmation Bias, Anchoring Bias, Cognitive Dissonance, and The Hypocrisy Paradigm (Kanasky, W. F. *Derailing the Reptile Safety Rule Attack*, 2016 www.courtroomsciences.com). The combination of these powerful psychological weapons doesn't influence witnesses; rather, it *controls* witnesses.

Interestingly, some recent witness training methods that are grounded in political debate theory invite defense witnesses to duel with opposing counsel. Specifically, a witness is instructed to use a preemptive strike of sorts by anticipating where the questioner will go and proactively inserting a defense-oriented explanation before the questioner can complete his or her line of questioning. The goal of this technique is to disrupt opposing counsel's series of leading questions to prevent being "trapped" by the questioner later down the line. These deliberately evasive maneuvers were born in the political arena and are referred to as "pivoting." Mock jury data clearly illustrates that a witness who consistently pivots or preemptively tries to beat the questioner to the punch is often described as "dodging" and "sidestepping" questions. Furthermore, witnesses who are seen as evasive and defensive tend to anger jurors and exponentially multiply damages.

A savvy plaintiff attorney begins to salivate when a defense fact witness launches into an argument or attempts to explain away unfavorable issues in the case. This results in a mismatch in relative skills: the defense witness is completely out of his or her element, fighting on foreign soil, and attempting to out-argue a professional trial lawyer. The consequences of such an approach are often devastating to the defense's case because poor deposition testimony inevitably transfers to courtroom testimony and can trigger a nuclear verdict by the jury (Kanasky, W. F., Chamberlain, A., Eckenrode, J. T., Campo, J. R., Loberg, M., & Parker, A. "The effective deponent: Preventing amygdala hijack during witness testimony," *For the Defense*, 2018, vol. 60).

2. Egregious conduct

The kind of conduct that enrages jurors may either inflate punitive damage awards or blur the line between them and compensatory damages. As in the 1999 case in which $296 million was awarded for the death of a teenage girl in a North Texas pipeline explosion, jurors can, and often do, drastically increase compensatory awards as a means to "send a message." The infamous McDonald's hot coffee case in 1994 had the same inflammatory ingredients – while the vast majority of the lay public (i.e., from our focus groups) appears to hold the position that the nearly $3 million verdict was outrageous, most people are unaware of the facts that:

- the McDonald's Quality Assurance Manager testified that the serving temperature of 180-190 degrees would burn the mouth and throat;
- burn experts testified that the temperature would produce third-degree burns within 3-7 seconds;
- over 700 reports of injury had been lodged by customers with no response by the company;
- the plaintiff was elderly, suffered burns in the inner thigh and genital area, and required multiple skin grafts to recover;
- it was suggested to the jury that the stores resisted lowering the temperature because higher temperatures created an attractive coffee smell that would waft through the premises and increase sales (McDonald's witnesses could not proffer an explanation as to why the temperature was never reduced);
- the defense took a strategically ineffective position of blaming the victim – an elderly woman.

We have dozens of cases in our files in which corporate defendants engaged in conduct that was ill-advised or inflammatory, and where accounts of which eventually made their way into the trial, creating highly inflated awards. More details on these fact scenarios may be found in Speckart, G. and McLennan, L., "Excessive damages awards and tactics for containment," 2002, *For the Defense*, vol. 44.

3. Punitive (stealth) jurors

Most of the current explanations for the "nuclear verdicts" proffered by litigators and experts in the field tend to focus on disenfranchised, alienated, or otherwise "fed up" jurors who are unleashing their angst against defendants. In the early 1990's, following the *Exxon Valdez* case, one of the present authors coined the term "stealth juror" describing the individual who attempts to "fly in under the radar, concealing bias while professing neutrality" (Speckart, G. "To down a stealth juror, strike first," *National Law Journal*, 1996, vol. 19). However, this is simply one class of punitive jurors that may be present in high profile cases, and does not cover those jurors who, for example, merely (perhaps "merely" is not the best word here!) wish to create a redistribution of wealth after reading about CEO pay, golden parachutes, and the like.

During jury selection, the overwhelming majority of jurors say that they will put sympathy aside during the trial, then proceed to award high money damages to the plaintiff during deliberations. In post-trial interviews, these jurors commonly admit that sympathy drove their decision-making, despite their earlier assurance that they would put sympathy aside. In reality, jurors who express strong intentions to follow the law often fail to act on them during deliberations because the emotional aspects of the case are overpowering. This scenario is every defense attorney's nightmare, as often even the most well-intentioned *voir dire* efforts are not enough to prevent sympathy from trumping the law. Years of psychology research has shown that the correlation between intentions and behavior is modest at best. Meta-analyses have revealed that intentions only account for approximately 30% of the variance in social behavior.

These findings suggest that defense attorneys need to go well beyond assessment of a juror's intentions to determine whether or not a juror is capable of following the law with regard to sympathy. Since sympathy is such a powerful factor in jury decision-making, defense attorneys need a more sophisticated procedure, such as a scientifically designed Supplemental Juror Questionnaire (SJQ), to assess jurors in jury selection (for more details, see Speckart, G. "How to tap the potential of the juror questionnaire," *The Practical Litigator*, 1999, vol. 10; and Kanasky, W. F. "Assessing sympathy in *voir dire*: Exploring jurors' intention-behavior gap," *Voir Dire*, 2018, vol. 60).

Despite the considerable tactical potential of the SJQ, however, we routinely see such questionnaires on the eve of trial that are packed with items backed by no predictive validity rationale whatsoever – that is, there is no scientific basis for inferring that the questionnaire items differentiate favorable versus unfavorable jurors. Instead, questions are included because they "seem reasonable." Additionally, items are included with improper scale construction and other psychometric properties that make them essentially useless from the perspective of proper psychological measurement. This is not an arcane exercise in scientific snobbery but rather a genuine pragmatic issue: If a questionnaire item reads "Have you, a family member or friend ever been unfairly terminated from a job?" and the response options are "Yes"

and "No," one still has no idea who has had the experience.

The entire area of SJQ construction; *voir dire*; and jury selection strategy generally is one that is often relegated to a subservient position in trial preparation with *post hoc* rationales and tactics that are left to the last minute – usually as a consequence of the fact that juror profiles are not scientifically-derived, but rather "intuited" – leading to less than optimal, and sometimes disastrous, results (Speckart, G. "Identifying the plaintiff juror," *For the Defense*, 2000, vol. 42).

4. Judicial hellholes

First introduced as a problem by the American Tort Reform Association (ATRA), this concept refers to *judicial districts* in which not only the jurors are problematic, but the judges and appellate bench are as well. Indeed, much of the responsibility for popularizing the runaway verdict trend may be traced back to the ATRA's publications on this topic (e.g., an $85 million award in Philadelphia resulting from falling into an open manhole). Judicial hellholes have also included Los Angeles and Alameda Counties in California; the Rio Grande Valley along the Mexican border in Texas; New Orleans Parish; Florida; Manhattan; and so on. The main difference between this factor and the preceding one is that, while the former focuses on the psychological forces "inside" the juror, the current factor identifies *entire venues* as the problem.

5. Plaintiff attorney tactics/defense attorney conservatism

In Dobbs G. and Speckart G., "Streetwise Litigation: 'Legitimate' tactics for operating outside the rules," *Litigation*, 2003, vol. 29, the authors maintain that some defense attorneys essentially become out-maneuvered and out-hustled on the courtroom floor, failing to realize that a trial has more in common with a knife fight than a legal proceeding. The article takes the position that a litigator cannot serve two masters, and that defense counsel chooses the judge as its "master" more often than the jury, leaving them unequipped to navigate effectively and strike decisively on the courtroom floor. The article states, *"After watching dozens of jury trials to verdict, we had the distinct impression that plaintiff attorneys were more likely than defense attorneys to bend the rules in their zeal to capture the hearts and minds of the jury. There seems to be a greater conservatism among defense attorneys, along with a greater focus on protecting the record for appeal and comparatively less emphasis on winning the approval of the jury at any cost. This trend of increasing boldness on the part of plaintiff attorneys is one of several factors that have led to the staggering increase in damage awards in the last two decades."*

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This article, written almost twenty years ago, documents a historical trend in what was referred to at the time as "staggering verdicts." The current label for such courtroom outcomes is "nuclear verdicts." While many defense litigators have taken charge and fought back against plaintiff attorney aggressiveness, this factor still remains as a potential explanation for some of the large verdicts that have recently been recorded.

A more recent issue is the plaintiff bar's current exploitation of the insurance defense industry's system of handling files. In fact, an entire chapter of Ball and Keenan's 2009 "Reptile" book is dedicated to teaching plaintiff attorneys how to conduct psychological warfare on both defense counsel and claims specialists. Specifically, the chapter states: "*The fear button for the insurance company and the self-insured is their awareness of a strong chance of a large verdict. A substantial differential between the final defense offer and a higher jury verdict can undermine careers and make heads roll. It's the ever-present guillotine of the profession. Their Reptiles do not like it. So start by finding out whose head is at stake. This can be tricky, but it's essential. Ultimately, someone's head is at stake for the decision. That's where the fear button will be…*" (Chapter 16, p. 173).

Moreover, the chapter exposes the insurance defense industry's tendency to:

- Be reactive, not proactive;
- Maintain a "save money at all costs" philosophy;
- Only spend money on a case when "needed";
- Rarely use mock trials and focus groups in discovery; and,
- Utilize basic witness preparation techniques, rather than paying for advanced training.

Many, if not most, nuclear verdicts occur because of this faulty, reactive system that ends up surrendering vast amounts of leverage to the plaintiff attorney, all to appease their corporate executives with a cost-savings approach to litigation. As this persists, the impact of third-party litigation financing has increasingly become a thorn in the defense bar's side.

Specifically, third parties invest in lawsuits by giving money to the parties or lawyers in exchange for an interest in the proceeds obtained in the settlement or verdict. This type of financial backing allows plaintiffs and their lawyers to spend more money than the defense in preparing their cases, while traditional defendants are more concerned about cost-savings. This financial assistance also allows plaintiff attorneys to be far riskier in the courtroom, as most, if not all, of the legal costs, will be paid by a third party, not the plaintiff's attorney, if they end up losing.

This is one of the reasons that we are seeing excessive settlement demands – if the defendant turns it down, the plaintiff's attorney simply does not care, and may even increase the demand. A common tactic by today's plaintiff attorney seeking a nuclear verdict is to tell the defendant "Give me $50 million dollars by Friday, or I am raising my demand to $75 million next week. If you refuse to pay that, I will ask the jury for $150 million at trial, in opening statement." Needless to say, these tactics, combined with the increase of nuclear verdicts, have created panic within the defense bar.

At trial, this tactic is known as "anchoring" damages. Specifically, asking for an absurd amount of money (early and often) and hoping that the defense will not give an alternative damages formula (it usually does not). Even if the defense gives an alternative number, plaintiff's counsel is hoping that jurors will split the difference between the two numbers, which still allows a nuclear verdict to occur. As attorney Bob Tyson points out in his book (Tyson, R. *Nuclear Verdicts: Defending Justice for All.* Law Dog Publishing, LLC, 2020), defense attorneys are notoriously uncomfortable talking about money damages to a jury at any time during a trial, much less repeatedly throughout a trial. Tyson's book instructs defense attorneys to provide jurors with an alternative and reasonable number every time, which the authors of this paper wholeheartedly agree with.

Moreover, defense attorneys place themselves at great peril if they wait until closing arguments to discuss money with the jury, as plaintiff attorneys are using the psychological construct of "priming" by repeatedly: a) discussing damages in *voir dire*, and b) discussing damages in opening statements (Kanasky, "W. F. Debunking and redefining the plaintiff Reptile theory," *For the Defense*, 2014, vol. 57). Priming is very powerful, as it desensitizes jurors to the topic of damages and cognitively prepares them to consider such a demand as more reasonable. Priming, particularly during *voir dire*, can eliminate the immediate sticker shock that is naturally attached to large damages requests.

Finally, Tyson states that there are two primary causes of nuclear verdicts: greed and bad lawyering. Attorney greed (plaintiff or defense) leads to bad decision making and harmful outcomes. Regarding bad lawyering, Tyson believes that defense attorneys have evolved into risk-averse rule-followers who fear being aggressive and competitive during litigation. The authors of this paper, who have a combined 50 years of jury consulting experience, agree with Tyson (see Dobbs G. and Speckart G., "Streetwise Litigation: 'Legitimate' tactics for operating outside the rules," *Litigation*, 2003, vol. 29) and believe that defense attorneys and clients need to start "throwing the first punch" in the fight. To quote a different Tyson, boxer Mike Tyson, "Everyone has a plan, until you get punched in the face…" He became the youngest heavyweight champion in the history of boxing, winning his first 19 professional bouts by knockout, *12 of them in the first round.* In litigation, if you wait until Round 9 to start punching, you are going to lose the fight.

An Easily Identifiable Goal - Control

Scientific research designed to conclusively identify the causative factors that give rise to "nuclear verdicts" has not, to our knowledge, been designed or implemented, likely for some very fundamental obstacles pertaining to labeling and identification. While the notion of inappropriately high damages seems to be intuitively reasonable, closer scrutiny indicates that a precise definition is elusive, particularly as regards to what is "reasonable" or "rational."

For example, what precisely is a "nuclear verdict"? Does the *Exxon Valdez* case, a $5 billion award, constitute a "nuclear verdict"? Exxon's stock *went up* after the award because Wall Street thought the amount would be $10-15 billion, so in some respects the verdict was *less* than expected.

Is a $1 million verdict for falling in an uncovered manhole a "nuclear verdict"? If so, when does it stop becoming "nuclear"? At $500,000? $250,000? Is the McDonald's hot coffee case a nuclear verdict?

One can therefore readily appreciate the obstacles to studying this phenomenon – namely, the foundational difficulty of even establishing in an uncontroverted manner what a nuclear verdict actually is. However, from the standpoint of the defense bar, insurers, and defense litigators, we do know one thing: We do not want them to happen. In other words, we need to exercise control and suppression of damage awards, but in order to do this we need *prediction* – knowing when excessively high damages are coming and when they are not – and in order to obtain prediction, we need science.

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The approach to merely suppressing damages circumvents the labeling problem of identifying precisely what a nuclear verdict is because, in the minimization of damages, one need not determine whether the case falls into any specific category – instead, one only needs to ascertain the probable range of damages and then make the most appropriate strategy decision based on the circumstances of the case. However, these considerations do not obviate the need for prediction, and therefore science.

At this juncture we ask the reader to bear with us as we take a brief detour into uncharted territory, namely, the nexus between litigation and scientific method – a nexus that rarely, if ever, is explored or utilized in the practice of litigation.

Litigation and Scientific Method

As a scientific endeavor, *prediction* rests at the highest level of achievement. Recalling basic science classes with the image of Newton sitting under the apple tree, he sees the apple fall (observation), derives an initial explanation to be tested (hypothesis), and then, once the initial idea is tested sufficiently, it evolves to the status of *theory*. A good theory will then predict accurately, which is the ultimate goal of science. But prediction is the holy grail, the final objective, because from *prediction* comes *control* (the desirability of which need not be explicated). When research generates results that predict accurately, we say that the results have *predictive validity*.

Rather than drifting off into a realm that appears to be unnecessarily arcane, it is helpful to conceptualize science as simply society's preferred *means to reliably ascertain what can be known*. Therefore, the use of science, or more precisely psychological technology (the *application* of science) to predict behavior of jurors is nothing other than an all-out assault on the question of exactly what jurors are going to do with a case.

It would seem reasonable, therefore, given the stakes involved in litigation, that such an "all-out assault" would be rather commonplace. Millions of dollars can rest in the balance based on juror behavior, and the only route to obtain valid information on this behavior in advance is scientifically designed jury research. In many cases, post-trial jury interviews are impossible, and the only way to know what jurors are thinking, and how they make decisions, is through jury research.

Recent judicial opinions have been rendered that the legal industry actively avoids science (*Jackson v Pollion, 7th Cir.*, Oct. 28, 2013: www.ims-expertservices.com/bullseye-blog/november-2013/7th-circuit-excoriates-lawyers,-judges-for-fear-of-science/). The 7th Circuit, in a remarkable statement, charged the legal industry with "fear and loathing of science." *Fear and loathing of that which separates fiction from truth, or clever from correct.* In his opinion, Judge Posner cites several other prominent writers who came to a similar conclusion.

We have thus found the reason for why we are being forced to explore an uncharted nexus between litigation and scientific method. In fact, it is uncharted for the same reason that there are so few tourists in Turkmenistan – no one wants to go there. (Nor can the jury research industry be counted on to provide scientific method – for details on this issue, see Speckart G., "Trial by science," *Risk & Insurance*, 2008, vol.19).

Suppression

Suppressing "nuclear verdicts" has been accomplished already, when people insist on, and put their trust in, scientific research methodology addressed to the issue of containing verdicts. The following real-life examples will serve to illustrate:

In 1994, working on the *Exxon Valdez* matter (specifically as regards study of punitive damages) four juries in the multi-day mock trial awarded $2, $3, $4 and $12 billion – an average of $5.2 billion. When the actual award came in at $5 billion, it was obvious that the research had provided predictive results, but it was not so obvious that such success could be replicated in efforts that were less well funded and comprehensive. At this juncture, the work of perfecting the scientific research methodology continued unabated.

By 2003, working for one of the world's largest heavy equipment manufacturers in a Los Angeles case, three mock juries (in a 2-day mock trial) awarded $25, $37 and $112 million. Our client settled out in advance, and the real jury awarded $58 million against the remaining defendants. *This was the highest personal injury award in the history of the state at that time, and the average award by the mock juries was also $58 million.* (The verdict is a matter of record and the dated research report is still present in our files). By this time, with perfect prediction, we realized we had a moral obligation – let us repeat that, a *moral obligation* – to inform the industry that research, when scientifically implemented, could reliably predict damages. The reason for the term "moral obligation" is that there were huge amounts of money to be saved by identifying in advance, and precluding, an oncoming nuclear verdict, as our client had just done.

Two years later, in 2005, we had another catastrophic injury case with the same heavy equipment client, this time in Philadelphia, with average damages in the vicinity of $500 million – a nuclear verdict if there ever was one (only one person died). Apparently, plaintiff counsel had no idea of the worth of his case, as he accepted a settlement offer of just under $2 million. If he had held out for $5, $10, $15 even $20 million our client would have had to have paid it – but armed with science, a fortune was saved.

By 2008, the Great Recession arrived, and this client decided to discontinue the research program (against our advice). The nuclear verdict suppression program had been an unqualified success – from 1985 to 2008 – 13 years – the highest verdict sustained by the company had been $4.2 million with no punitives in that entire time span.

By February of 2009 – two months after the cessation of the research program – the company had been hit for $57 million in San Antonio for a simple back injury.

Other successes of science in heading off the nuclear verdict were also accomplished. In East Texas patent litigation, where 8-, 9- and even 10-figure verdicts had been commonplace, the imposition of scientific methods suppressed verdicts down to the $1-2 million range (average over 14 verdicts), with another 10 defense verdicts. This chain of events was described in a *Law.com* article entitled "Taming Texas" (Raymond, Nate "Taming Texas," *Law.com*,

2008) in which one of the current authors is mentioned by name.

Later, working on the plaintiff side in a legal malpractice case, three mock juries awarded an average of $82 million. At the end of the real trial, the defense wanted to settle the case and proffered a check for $20 million during jury deliberations. Defense counsel claimed, "$20 million – that's as high as this jury is going to go." Going back to the research results and examining the three mock jury awards, $20 million was found to be representative of the *lowest* award – not the highest. We rejected the $20 million check (not an easy thing to do). The jury came back at $73 million – one of the largest verdicts in the country that year (2009).

Again, we have an exemplar of *control* – knowing where the "true bottom" is – and how to navigate through the pomp and bluster of settlement negotiations using science instead of clever ideas, but this time *creating* a nuclear verdict instead of pre-empting one. A friend of ours noted in response to this case, "When you go up against science, you incur heavy losses."

It is important to note that "prediction" as currently discussed does not and cannot achieve a level of absolute certainty. Unpredictable court rulings, intractable witnesses, and the "luck of the draw" in jury selection can each play a role in changing trial outcomes. The point here is that the accuracy of scientifically-derived estimates far exceeds that of the hunches and intuition typically used to value and settle cases – for example, the divergence between the Wall Street estimate ($10-15 billion) versus the research-derived estimate ($5.2 billion) in the *Valdez* case. Our research demonstrates unequivocally that the cost of guessing in settling cases is not only more expensive than the research, but it is in fact *far more* expensive than the research, when it is based on scientific method and theory (see Speckart, G. "Do mock trials predict actual trial outcomes?" *In House*, 2010, vol. 5).

Closing Considerations

It is of course possible to approach this issue academically and design studies that will identify which of the causative factors identified in the earlier section wield a predominant influence over nuclear outcomes. Such research would involve dissecting multiple cases, but would carry as an encumbrance the labeling, definitional, and identification problems mentioned previously. It would also have to be funded, and the costs would not be trivial.

Given the availability of the scientific method, the most pressing question therefore is, "What do policy makers want?" Do they want to examine the potential antecedents of the nuclear verdict and formulate theoretical conclusions about how they create the observed effects? We already know that some of the factors (e.g., problematic witnesses and egregious conduct) can be fatal to a case, and that prior scientific juror profile research can pre-empt stealth and other punitive jurors (Speckart, G. "To down a stealth juror, strike first," *National Law Journal*, 1996, vol. 19; Speckart, G. "Identifying the plaintiff juror," *For the Defense*, 2000, vol. 42). But what do policy makers really want?

It seems clear that what legal teams and their in-house directors really want is *suppression and control*. We know, however, based on the previous observations, that these are already available for the asking. If that is the case, then why does this issue remain as a challenge?

We have already documented the putative "fear and loathing" of science in the legal industry. While we doubt that this state of affairs applies to everyone in the industry, there does appear to be an unwarranted skepticism that science would actually work. There are other factors at work as well. For example, one litigator told us that "some people would find the claim that you can predict verdicts to be offensive." We are not sure what the offensive nature of the claim is, but the statement warrants consideration.

The jury research industry is an enormous one, with hundreds, if not thousands of practitioners. Jury research is done, its clients report, not to predict damages outcomes but to predict "themes." In other words, they are saying "we believe the research predicts themes (what jurors will think in response to the case) but not damages (how much they will award)." However, when this position is subjected to scrutiny it starts to fall apart: How can one segregate and predict one but not the other? The damages are the outgrowth of the themes that jurors find to be persuasive. If one is accurately forecasted, then so is the other. If it is not, then neither is the other.

Additionally, mock jury research is often done incorrectly (i.e., not scientifically, thereby defeating predictive validity).

Specifically, gathering a group of friends and family members to listen and talk about your case is not valid scientific methodology. Mock jurors need to be carefully recruited, screened, and demographically matched to replicate who will likely show up in the courtroom. This is a tedious process that is often skipped in favor of cost savings.

One new cost-savings trend is to conduct mock jury research online, even though no jury in the history of the United States has ever deliberated with a keyboard. This methodology has no predictive validity, as it violates practically every step of the scientific method. People behave very differently online as compared to face to face, as many people develop "keyboard muscles," meaning they type things that they would never say in a room of 11 other people staring at them.

In the real world, look no further than dating sites to illustrate this point, as the person you have been chatting with electronically is often now a huge turn off when you meet them face to face (if you have never been through such an experience, you have surely heard horror stories from a single friend). Another example is the colleague who sends nasty email correspondences, but when challenged during a meeting quickly becomes quiet and passive. Electronically, what you see is rarely what you get in-person. With regards to mock jury research, the authors disagree with the notion that "something is better than nothing," but rather believe that it is a "garbage in, garbage out" equation.

The same is true for "real time feedback" dials that are often used during mock trials. Real jurors do not judge attorney presentations and witnesses with fancy dials or any other gadgets; therefore, predictive validity can never be attained using this system. Unfortunately, many clients are enamored with the "wow" effect of such technology, falsely assuming that more sophisticated technology equals more predictive validity.

One of the authors recently asked an insurance claims specialist, "what do you think those dials, and fancy lines on the screen, are actually measuring?" The claims specialists responded, "Hmmm… I really don't know, but boy this stuff is cool!" In another instance, an equipment provider of the dials and meters admitted to us that his clients liked it because it was "eye candy." This very same technology was used during the 2016 presidential campaign TV coverage, as several news outlets broadcasted focus group participants (voters) responding to debate performances by each candidate. Most of the results of such focus groups showed Hillary Clinton clearly outperforming Donald Trump over and over again. How did that work out?

Perhaps the most serious shortcoming in "electronic dial feedback" research is that data is being collected in real time on moment-to-moment responses, whereas jurors do not deliberate based on these responses – they deliberate instead on what they *retain in memory* and *retrieve from memory much later* in the deliberation room – a truncated subset of their reactions that has invariably morphed into something far different based on how memory operates. Finally, one of the key functions of jury research is *information reduction* – cutting back the massive number of potential perceptions of the case into those which are more correct than clever. "Electronic dial feedback" results do just the opposite, piling on massive additional amounts of data that simply confound the issues.

While the nuclear verdict topic is attracting strong attention today, no one seems to be talking about how the nuclear settlement is becoming a major problem.

Some of the other factors that invalidate mock trial methodology include: a) not showing witness testimony, or choosing excerpts from videotapes that are biased or unrepresentative; b) leaving out key evidence of various types; c) utilizing a watered down plaintiff case that is diluted, distorted, or incomplete (even poor graphics on one side can cripple a project); and d) inadequate or improper simulation of actual trial conditions (as discussed in the immediately preceding section).

The authors have "parachuted" in on many high exposure cases in which a "mock trial" was already performed, with results fully favoring the defense. When redesigning and repeating mock trials, on the very same case, we often see nuclear verdicts from mock jurors in deliberations. Many clients, obviously without any scientific training, assume that "a mock trial is a mock trial is a mock trial." Nothing could be further from the truth, as the validity and reliability of

mock trial results is fully dependent on the mock jury sample composition, research design, methodology and analysis.

However, it does appear the success of the Reptilian manipulation tactics against defense witnesses has indeed "woken up" the insurance defense industry. One of the current authors (see Kanasky, "W. F. Debunking and redefining the plaintiff Reptile theory," *For the Defense*, 2014, vol. 57; Kanasky, W. F. *Derailing the Reptile Safety Rule Attack, 2016*, www.courtroomsciences.com; Kanasky, W. F., & Loberg, M. "Rehabilitating the defendant in the reptilian era: A neurocognitive approach," *For the Defense*, 2017, vol. 59; and Kanasky, W. F., Speckart, G., Parker, A "Early Anti-Reptile Tactics May Save Millions of Dollars: The role of the litigation psychologist and why it matters," *Trucking Industry Defense Association*, 2019, Spring Newsletter) has debunked and redefined the plaintiff Reptile Theory and has provided a blueprint in how to defeat the Reptile methodology in both discovery and trial. In particular, Kanasky, W. F. (*Derailing the Reptile Safety Rule Attack*, 2016, www.courtroomsciences.com) offers a deep psychological and scientific breakdown of the Reptile questioning tactics and how to thwart them with high levels of success. Additionally, the same author and a defense attorney invented and implemented the "Reverse Reptile" (Motz, P., Kanasky, W. F., Loberg, M., "The 'Reverse Reptile': Turning the tables on plaintiff's counsel," *For the Defense*, 2018, vol. 60) in which a strategy was developed to use Reptile tactics on both plaintiffs and adverse co-defendants.

Our jury research results, along with innumerable stories from attorneys about deposition and trial testimony successes, clearly illustrate that the scientifically-supported "Anti-Reptile" methodology is seeing great success at the witness-level, but perhaps is lacking at the jury research level due to the insurance defense industry's cost-savings philosophy. Indeed, a likely explanation for why witness training advances over the past decade have "caught on," while resistance to scientific research continues to persist, is the lopsided cost differential between the two – even though the savings from obtaining scientifically-derived damages estimates dwarfs the costs of the research.

Ultimately, the decision to use science will rest on the institutional and policy barriers inherent in the client's organizational setting. For example, in the insurance industry, the *claims* department is responsible for duty to defend and has to pay for jury research. But the results of this research benefit the *indemnity* side of the house, not the claims side which has to pay for it. As one insurance insider told us, "No one from the claims side wants to spend $50,000 to save $200,000 from the indemnity side of the house."

As such, the plaintiff's bar has fully taken advantage of this claims-indemnity conflict of interest by outmaneuvering the defense from the moment the case is filed. By the time excess coverage kicks in, plaintiff's counsel often has the defense behind the eight-ball. Excess coverage claims people have no problem spending money to properly defend the case, but it is often too little too late. The result: a nuclear verdict, or equally as bad, a nuclear settlement.

While the nuclear verdict topic is attracting strong attention today, no one seems to be talking about how the nuclear settlement is becoming a major problem. Paying out nuclear settlements inevitably leads to more lawsuits filed against that particular client, as word spreads fast in the plaintiff's bar on which companies are fearful of trials and would rather pay their way out of trouble.

In short, when those who decide whether to use the research are evaluated solely on the basis of short-term budgetary constraints, one is likely to encounter "budget" research that is unscientific. In general, those who have to pay for the research are not the ones to reap the financial benefit, so it will not get done. For science to permeate litigation practice, institutional changes are required that tie cost savings on a long-term basis to policy decisions made for short-term operations.

Authors

Dr. George Speckart is Director of Research and Consulting for Courtroom Sciences, Inc. where he oversees the design and implementation of psychological research for corporate clients facing imminent litigation with significant exposure.

Dr. Bill Kanasky is Senior Vice President of Litigation Psychology for Courtroom Sciences, Inc. and a nationally recognized expert, author, and speaker in the areas of advanced witness training and jury psychology in civil litigation.

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Preventing Nuclear Settlements at Deposition

The Role of Cognitive Fatigue on Witness Performance

Bill Kanasky Jr., Ph.D. and John Nunnally, Esq.

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Preventing Nuclear Settlements at Deposition: The Role of Cognitive Fatigue on Witness Performance

INTRODUCTION

Nuclear settlements have not received the same intense attention as nuclear verdicts in today's litigation atmosphere. This is not surprising, as it is well documented that jury damage awards are spiraling out of control in many industries, particularly the transportation, pharmaceutical and healthcare areas. Thus, the topic of preventing nuclear verdicts is finally getting ample attention from the defense bar, as defendants and insurance companies are fearful of being the next victim. However, one could argue that the phenomenon of nuclear settlements is far more prevalent, considering the vast majority of cases never reach a courtroom. Paying nuclear settlements inevitably leads to more lawsuits against that particular client, since word spreads fast in the plaintiffs' bar about which companies are fearful of trials and would rather pay their way out of trouble (Kanasky, B. and Speckart, G. April 2020. The Nuclear Verdict: Old Wine, New Bottles. *For the Defense*, p. 14-21).

Deposition performance is critical to case outcome, particularly economically. Strong, effective depositions decrease a client's financial exposure and costs, while weak, ineffective depositions result in higher payouts on claims during settlement negotiations (i.e., a nuclear settlement). Specifically, when witnesses drop "bombs" at deposition, those "bombs" end up costing an extraordinary amount of money. Clearly, poor deposition testimony greatly widens the gap between the real and perceived economic value of a case, putting a client in an unfavorable position when trying to settle (Kanasky, W. F. (2010). Don't shoot the messenger: Exploring ineffective witness testimony. *In-House Defense Quarterly*, 55, 20-21).

It is universally accepted that an attentive witness who can maintain maximum concentration levels during deposition is far less vulnerable to making critical testimony errors compared to an inattentive witness who struggles to concentrate. The neuroscientific literature clearly illustrates that cognitive fatigue, the failure to sustain the level of attention needed to optimize performance (Chaudhuri A, Behan PO. Fatigue in neurological disorders. *Lancet*. 2004;363(9413):978–988.), induces significant decline in key areas of executive functioning that are essential to effective witness performance at deposition and prevention of nuclear settlements. However, no one has explored the relationship between witness cognitive fatigue and witness performance. If impaired attention and concentration due to fatigue leads to harmful testimony, then preventing witness cognitive fatigue should be a top priority for defense counsel. As a 30-year veteran trucking attorney recently stated, *"when mental fatigue sets in at deposition, bad things happen."*

To prevent fatigue-based witness errors at deposition, defense attorneys have preached for decades "I make my witness take a break every hour during deposition." The key neuropsychological questions from the authors are:

- Why one hour?
- How long should the break be to sustain optimal performance?
- What should the witness do during the break to sustain optimal performance?
- If the purpose of the break is to prevent cognitive fatigue and allow the witness to replenish their cognitive resources, shouldn't this decision be scientifically supported?

The purpose of this paper is to illustrate that the "take a break every hour" philosophy long held by most attorneys is a gross strategic and neuropsychological mistake that leaves the witness highly vulnerable to cognitive fatigue. This fatigue can often result in poor testimony that unnecessarily harms the defense's case, both strategically and economically.

THE SCIENCE OF COGNITIVE FATIGUE

Cognitive fatigue causes deterioration of key executive functions such as executive attention, sustained attention, goal-directed attention, alternating attention, and divided attention.

Cognitive fatigue causes deterioration of key executive functions such as ***executive attention*** (Holtzer et al, 2011), ***sustained attention*** (van der Linden D, Frese M, Meijman TF (2003) Mental fatigue and the control of cognitive processes: effects on perseveration and planning. *Acta Psychol* (Amst) 113: 45-65; Dorrian J, Roach GD, Fletcher A, Dawson D (2007) Simulated train driving: fatigue, self-awareness and cognitive disengagement. *Appl Ergon* 38: 155-166; Langner R, Steinborn MB, Chatterjee A, Sturm W, Willmes K (2010) Mental fatigue and temporal preparation in simple reaction-time performance. *Acta Psychol* (Amst) 133: 64-72; Lim J, Wu WC, Wang J, Detre JA, Dinges DF, et al. (2010) Imaging brain fatigue from sustained mental workload: an ASL perfusion study of the time-on-task effect. *Neuroimage* 49: 3426-3435.), ***goal-directed attention*** (Boksem MA, Meijman TF, Lorist MM (2005) Effects of mental fatigue on attention: an ERP study. *Brain Res Cogn Brain Res* 25: 107-116.), ***alternating attention*** (van der Linden D, Frese M, Meijman TF (2003) Mental fatigue and the control of cognitive processes: effects on perseveration and planning. *Acta Psychol* (Amst) 113: 45-65.), ***and divided attention*** (van der Linden D, Eling P (2006) Mental fatigue disturbs local processing more than global processing. *Psychol Res* 70: 395-402.).

Deluca (DeLuca J. Fatigue: Its Definition, its Study and its Future. In: DeLuca J, editor. *Fatigue as a Window to the Brain.* Cambridge (MA): MIT Press; 2005b. pp. 319–325.) defines four areas of cognitive fatigue; each of which directly apply to the deposition experience:

1. Decreased performance following an extended period of time;
2. Decreased performance after a challenging mental exertion;
3. Decreased performance after a challenging physical exertion; and
4. Decreased performance during acute but sustained mental effort.

Witnesses can be exposed to all four of these circumstances during deposition. First, many depositions last over extended periods of time, ranging from several hours to multiple days. The cumulative number of hours of deposition testimony alone represents a major mental challenge to a deponent, requiring incredible amounts of mental energy to perform optimally over time. Second, witness testimony requires high amounts of mental exertion. Many questions challenge the witness' memory of events, conduct, and decision-making, while other questions require strenuous document review and interpretation. Multiple cognitive activities can multiply the rate of cognitive fatigue. Third, deposition testimony carries with it a significant biomechanical/physical investment by the witness. Contrary to popular belief, the act of sitting upright and maintaining professional demeanor and body language for multiple hours is physically exhausting. Review of video-taped deposition testimony often illustrates that witnesses eventually resort to postures that are specifically designed to reduce the physical effort of sitting up straight, such as leaning back and/or slouching in the chair, as well as supporting their head with one or both hands. Finally, witnesses must maintain sustained mental effort during deposition in the face of an acute, negative stimuli. Specifically, acute negative stimuli including the three emotional attack methods can force a witness into fight or flight response patterns: aggression, humiliation, and confusion. All three can represent direct threats to a witness, causing him or her to depart high road, logical cognition and regress into low road, fight or flight cognition. This neurochemical process known as Amygdala Hijack, results in exponentially higher mental energy expenditure, as well as harmful deposition responses (Kanasky, W. F., Chamberlain, A., Eckenrode, J. T., Campo, J. R., Loberg, M., & Parker, A. (2018, June). The effective deponent: Preventing amygdala hijack during witness testimony. *For the Defense*, 60, 12-21).

Six years later, Holtzer et al's (2011) study results suggest that cognitive fatigue should be defined as an executive failure to monitor performance over acute but sustained cognitive effort, which results in decline and more variable performance than the individual's optimal ability. Importantly, their study states that the body of research findings suggest that tasks that are mediated by the prefrontal cortex (PFC) may be more sensitive to the effect of cognitive fatigue. Put another way, tasks that require persistent prefrontal cortex activation may increase the risk of cognitive fatigue on performance (witness testimony). It has been demonstrated that effective witnesses are specifically trained to maintain prefrontal cortex activation throughout deposition, rather than regressing into subcortical (Amygdala) fight or flight information processing (Kanasky, W. F., Chamberlain, A., Eckenrode, J. T., Campo, J. R., Loberg, M., & Parker, A. (2018, June). The effective deponent: Preventing amygdala hijack during witness testimony. *For the Defense*, 60, 12-21.). Therefore, this suggests that well-trained witnesses that are successfully utilizing their prefrontal cortex and providing more effective answers simultaneously become more susceptible to cognitive fatigue. In other words, effective witnesses will likely fatigue faster than ineffective witnesses due to intensive prefrontal cortex activation. Perhaps the most impressive finding of their study showed that in a relatively healthy sample of adults, only 35 minutes of testing stimuli exposure was necessary to elicit cognitive fatigue. These findings have huge implications on the philosophy of when witnesses should take breaks during deposition testimony, as they directly contradict the "*I ensure my witness takes a break every hour*" philosophy adopted by most attorneys.

Perhaps the most impressive finding of their study showed that in a relatively healthy sample of adults, only 35 minutes of testing stimuli exposure was necessary to elicit cognitive fatigue.

Finally, Borragán et al's (2016) literature review shows that cognitive fatigue is associated with significantly impaired cognitive control, high-level information processing, and sustained attention. Additionally, they suggest that exposure to High Cognitive Load (HCL) levels, conditions where the time to process ongoing cognitive demands is restricted, also leads to increased cognitive fatigue. Many plaintiff attorneys deliberately try to restrict the amount of time a witness has to fully process a question by using the tactic of "rapid fire" questioning. This occurs when plaintiff's counsel attempts to speed up the question-answer sequence by rapidly asking the next question the moment the witness has finished their answer. Most witnesses attempt to match the questioner's speed, resulting in a high-pressure situation that can quickly fatigue a witness. This time restriction tactic deserves careful attention, as it shows that witnesses can experience cognitive fatigue not only over the course of the deposition day, but also during the actual question-answer sequence much earlier in the deposition day. This means that cognitive decline can easily occur in "short" depositions that are scheduled for 2-3 hours. Many defense attorneys may give the witness a false sense of security if they inform the witness that cognitive fatigue will not play a significant role in a shorter deposition.

DEPOSITION-SPECIFIC FACTORS THAT EXACERBATE COGNITIVE FATIGUE

NEGATIVE REINFORCEMENT

The concept of negative reinforcement is poorly understood by attorneys and is generally defined by a response or behavior that is strengthened by stopping, removing, or avoiding a negative outcome or aversive stimulus. In a deposition setting, this occurs when a witness repeatedly provides long, wordy, often defensive explanations (response) in an effort to avoid difficult questioning by the plaintiff attorney (adverse stimulus). In other words, the plaintiff represents an adverse stimulus to the witness; thus the witness tries to remove the adverse stimulus by excessive explanation. The human brain is pre-wired to use negative reinforcement in adversarial discussions, as bilateral discussion of an issue often resolves the tension involved in such a discussion. Deponents are notorious for thinking "if I just explain myself to this reasonable attorney, he/she will back off and the deposition will be over sooner." In reality, it is well known that more explanation will not only make the deposition longer but will undoubtably leave the witness open to more intense attack. Importantly, the mental effort involved in excessive explanation during deposition is a key causative factor of witness cognitive fatigue. Witnesses that are instructed to repeatedly "pivot" away from unfavorable facts or allegations during deposition (i.e., "Yes, but....No, because...) tend to fatigue quickly and eventually regress into fight or flight response patterns (Kanasky, W. F., Chamberlain, A., Eckenrode, J. T., Campo, J. R., Loberg, M., & Parker, A. (2018, June). The effective deponent: Preventing amygdala hijack during witness testimony. *For the Defense*, 60, 12-21.). While witnesses may be told by defense counsel "don't try to win the deposition because you can't," the witness' brain is pre-wired to do the opposite, thanks to negative reinforcement. Fortunately, advanced neurocognitive witness training exists to rewire the witness' brain to disable negative reinforcement circuitry.

VIRTUAL TESTIMONY

One of the authors can attest that the phenomenon known as "Zoom Fatigue" is real. Specifically, this refers to the (negative) impact of technology and virtual communication on the human brain. Fosslien and Duffy (*Harvard Business Review*, April 2020) hypothesize that virtual videoconferencing requires extensive amounts of focus and attention that is simply not necessary during face-to-face communication. They believe that virtual communication requires a "constant gaze" at a computer screen, which makes people uncomfortable and tired. Sander and Bauman (IDEAS.TED.COM, May 2020) posit that "People feel like they have to make more emotional effort to appear interested, and in the absence of many non-verbal cues, the intense focus on words and sustained eye contact is exhausting." They suggest online meetings increase cognitive load, therefore leading to faster cognitive fatigue. Specifically, they note that the lack of non-verbal cues, anxiety regarding the reliability of the technology, and the discomfort of constantly seeing one's own face during conversation are factors that lead to cognitive fatigue. While no empirical research exists to illustrate the causative factors of cognitive fatigue involved in online videoconferencing, it is evident that people experience faster levels of cognitive fatigue in a virtual setting. Therefore, one can conclude that witnesses participating in virtual depositions need more frequent rest breaks to prevent cognitive fatigue from impacting their performance.

REPTILE QUESTIONS

The plaintiff Reptile methodology at deposition is an intense neurocognitive manipulation attack that requires intense cognitive effort by the witness to not fall into the Reptile safety and danger rule traps. Specifically, Reptile attorneys use four devastating psychological weapons against defendant witnesses: Confirmation Bias, Anchoring Bias, Cognitive Dissonance, and the Hypocrisy Paradigm. The combination of these powerful psychological tactics does not merely influence witnesses; rather, it controls them. These psychological tactics are precisely what the Reptile plaintiff attorney use to destroy defendant witnesses at deposition (Kanasky, W. F. Derailing the Reptile Safety Rule Attack: A Neurocognitive Analysis and Solution. (2015). Thankfully, advanced witness training methods have been developed and implemented to modify witness' cognitive patterns, making them impervious to the Reptile attacks. Witnesses who effectively and repeatedly diffuse Reptile attacks during deposition will fatigue at a higher rate than the untrained witness, as their cognitive effort remains at maximum capacity for the entirety of the process. Therefore, strategically determining the time intervals for breaks is crucial to witness success throughout the full deposition.

LITIGATION STRESS

Interestingly, Matthews et al (Matthews, G. (2011). "Personality and individual differences in cognitive fatigue," in *Cognitive Fatigue: Multidisciplinary Perspectives on Current Research and Future Applications*, ed. P. L. Ackerman (Washington, DC: APA), 209–227. doi: 10.1037/12343-010) defines cognitive fatigue as the result of an individual's evaluation of task demands and not as high workload per se. This may play a large role in deposition performance, as so many witnesses enter the process with feelings of inadequacy and/or feeling overwhelmed with the legal process.

Witnesses who enter the deposition process with high levels of fear and anxiety that are related to the legal process will wear down quickly during testimony. In fact, many witnesses experience intense litigation stress due to unrealistic and inaccurate assumptions about a case. For example, some witnesses feel that if they perform poorly at deposition it will result in termination of their job, loss of personal property, financial penalties, and even incarceration. These sources of stress are all unnecessary and will result in poor witness performance.

LITIGATION GUILT/SORROW

Many fact witnesses enter a deposition with intense feelings of guilt and sorrow towards a plaintiff that was killed or suffered a catastrophic injury. An obvious example of this are nurses who are deposed in birth injury/death cases. These are inherently emotional cases that put intense psychological pressure on witnesses. Another clear example are trucking cases in which a driver, passengers, and/or pedestrians are killed or suffer gruesome injuries. Such cases often have horrific post-accident pictures presented at deposition, and some even have dash-cam footage of the actual accident. Witnesses who are experiencing feelings of guilt and/or sorrow not only cognitively fatigue quickly at deposition but have significantly impaired attention and concentration. The "take a break every hour" philosophy will not be adequate for these emotional witnesses.

CORPORATE REPRESENTATIVES

Most corporate representatives are exceptional cognitive multi-taskers, meaning they can process information at lightning speed as they listen and think simultaneously. While this skill is a perfect fit for an occupational setting, it represents an enormous vulnerability at deposition that plaintiff's counsel can quickly capitalize on. Specifically, the majority of errors made by corporate representatives at deposition are inadvertent cognitive errors caused by precisely this same multi-tasking, meaning that a) the witness never heard the full question, therefore giving an erroneous answer or b) the witness misinterpreted a key word or phrase in the question, leading to an incorrect, if not harmful, answer. The fact is, the deposition of a corporate representative, or any other witness for that matter, is inherently an unfair fight. Plaintiff's counsel has heavy weaponry: a list of pre-written questions, documents that are marked up with a highlighter and/or sticky notes, prior depositions, and maybe even a colleague to assist with those documents or additional questions. In turn, the deponent has their brain, a glass of water, and an attorney who usually can only object to "form," and cannot coach their witness. They have no pre-written answers to questions to refer to throughout the questioning, only clean documents without notes or highlights, and no one to turn to for help with an answer. Therefore, the environment is one of vulnerability, and not opportunity. With such an imbalance of resources, cognitive multitasking combined with a fast, efficient communication style leads to habitual errors, many of which can be harmful. This situation is ripe for witness cognitive fatigue. The human brain cannot maintain full attention and concentration for long periods of time without assistive resources, and corporate representative depositions can last for days. Maintaining full attention and concentration, without any resources (notes, phone, computer, etc.) to assist, requires an enormous amount of mental energy (far more energy than is required in an occupational setting, in which people are surrounded by multiple informational resources that greatly limit mental energy expenditure). Therefore, it is crucial that corporate representative witnesses receive breaks frequently, as these witnesses will experience fatigue-based decreases in attention and concentration, regardless of their level of intellect or preparation.

PERSONAL ISSUES UNRELATED TO LITIGATION

Social factors that are unrelated to the case mentally wear down witnesses at deposition. Examples include divorce, child/spouse/family illness, recent death of someone close, job loss, financial problems, other litigation, and drug/alcohol issues. Many witnesses are concurrently coping with one or more of these social issues at the time of deposition. It is the authors' experience that the COVID-19 pandemic has increased the intensity and prevalence of these social issues. The key for defense counsel is to identify the presence of these issues well before the deposition is scheduled and ensure that a qualified consultant is on board to provide special assistance to the witness. Such witnesses are highly distractible at deposition, as their focus is often elsewhere. The combination of these negative social factors with the inherent stress of the deposition leads to rapid cognitive fatigue and responses that are harmful to the case. These witnesses don't have the cognitive or emotional resources necessary to sustain acceptable deposition performance for one hour and will require more frequent breaks.

PREVENTING WITNESS COGNITIVE FATIGUE

There is no scientific literature that suggests that the "take a break every hour" philosophy is an effective tactic to protect a witness' cognitive abilities and optimize deposition performance. Rather, it is the authors' scientific and experiential opinion that for even the best-prepared, intelligent, well-intentioned witness, a break should be taken every 45 minutes. The scientific literature clearly demonstrates that cognitive fatigue significantly impairs attention and concentration and can begin as early as 35 minutes into a task requiring persistent mental effort. Providing the deponent a break every 45 minutes can not only prevent cognitive fatigue, but also doesn't appear unusual or inappropriate (vs. a break every 20-30 minutes). Forcing a break during deposition every 45 minutes (compared to every hour) gives the witness a substantial advantage throughout the process, as this break interval maximizes attention and concentration levels while simultaneously avoids cognitive fatigue impairments. To use an auto racing analogy, the witness' "pit window" is at the 40-50 minute mark once questioning starts or restarts.

Forcing a break during deposition every 45 minutes (compared to every hour) gives the witness a substantial advantage throughout the process, as this break interval maximizes attention and concentration levels while simultaneously avoids cognitive fatigue impairments.

How can the breaking every 45 minutes be done practically at deposition? When the deposition begins, a routine opening will include the statement that breaks can be taken whenever the witness wants and that they just need to answer the pending question prior to the break. Therefore, during deposition preparation, it is wise to advise the client to ask for a break every 45 minutes if defense counsel hasn't already done so. Importantly, witnesses should also be instructed to ask for a break even sooner than the 45 minute mark if they feel their attention and concentration fading. If plaintiff's counsel objects, defense counsel can remind them of their earlier opening instruction regarding breaks. Technically, if the breaks are not taking away from their deposition time, plaintiff's counsel does not have grounds to object. Another way to ensure defense witnesses get more frequent breaks is to make sure that the break occurs in the next hour on the clock, rather than the same hour. For example, if a questioning restarts at 2:30pm, and the next break is requested at 3:15pm, it appears more reasonable compared to questioning restarting at 3:00pm and a break being requested at 3:45pm.

Importantly, witnesses with special physical and/or mental health circumstances require breaks even more frequently for optimal performance. While this will surely aggravate opposing counsel, it is absolutely necessary in preventing cognitive fatigue for these witnesses with additional cognitive, emotional, and/or physical challenges. For example, witnesses who are experiencing chronic pain from a medical condition or injury may not be able to sit in a chair for 45 minutes without experiencing significant pain. Female witnesses who are pregnant often need to take breaks at a higher frequency. Witnesses with significant emotional problems, whether case-related or not, need breaks at a higher frequency than typical witnesses. Finally, elderly witnesses, for both mental and physical reasons, may need more frequent breaks than the average witness. Defense counsel should warn plaintiff's counsel at the start of the deposition that more frequent breaks will be necessary, given these special health circumstances. An important secondary question is: how long should the break be to fully replenish the witness' cognitive resources? The empirical research in the area is not stellar; however, most studies report that breaks of all lengths were most beneficial for reducing fatigue and increasing vigor, and that the length of the break positively correlates with the quality of performance on subsequent tasks. In other words, a longer break tends to

lead to higher performance when the task resumes. At deposition, attorneys and witnesses have schedules so breaks must be limited. However, the authors would argue that a 10-minute break is sufficient to replenish a witness' cognitive "fuel" while a 5-minute break is insufficient time for the witness' brain to refuel. Unfortunately, many witnesses take breaks that last 5 minutes or less purposely, to complete the deposition faster. This is a grave mistake, as insufficient breaks early in the deposition can lead to catastrophic responses in the afternoon as the witness has depleted their cognitive resources and is unable to process and answer questions effectively.

A final question related to breaks during deposition is: what should the witness do during the break? Bennett, Gabriel, and Calderwood (2019) recently examined the impact that different "micro-break" durations and activities have on fatigue, vigor, and attention; they also looked at the effect of duration and break activity on "psychological detachment" from work tasks. They discovered that "detachment breaks," those types of breaks that focused on mentally disengaging from a task, of all lengths were most beneficial for reducing fatigue and increasing vigor; they also more effectively allowed for mental disengagement from work tasks and were more relaxing and enjoyable than the other types of breaks (work-related/switching tasks and relaxation activities). These findings have huge implications on how defense counsel should handle a witness during the break, as performing more witness preparation during the breaks may very well be counterproductive. Rather, the science suggests that defense counsel allow the witness to "detach" from the deposition for at least 10-minutes before allowing the deposition to proceed. The take home message for defense counsel on this point is that the break needs to be a true break for the witness, rather than a coaching session. It is the authors' opinion that a witness must leave the deposition environment to be able to truly disengage and replenish their cognitive energy. This means not only leaving the conference room, but actually leaving the office altogether, preferably allowing the witnesses to go outdoors (weather permitting) to walk around and get fresh air. This change of environment will maximize cognitive replenishment.

CONCLUSION

The scientific literature shows us that the human brain is neurocognitively incapable of maintaining maximal levels of attention and concentration for 60 minutes, therefore the additional 15 minutes of questioning exposes the witness to needless and unnecessary vulnerability. Fatigue-based errors during deposition are 100% preventable if and only if the witness is given the opportunity to rest at the correct time intervals. A longer deposition, with appropriately spaced rest breaks, is much safer for the witness than a shorter deposition with inadequate rest breaks. Witnesses are notoriously incapable of determining when they need a break; therefore the defending attorney needs to be in charge of asking for breaks.

The first step in preventing nuclear settlements is preventing plaintiff's counsel from taking control of the trajectory of the case. Providing witnesses with advanced witness training that consists of cognitive, behavioral, and emotional components has proven to be highly disruptive to plaintiff attorneys who attempt to force a nuclear settlement by torpedoing defense witnesses one by one. This is particularly true in cases in which the plaintiff Reptile questioning methodology is employed. This paper now offers a scientifically supported weapon for defense counsel to use to further protect their clients at deposition. Going forward, preventing witness cognitive fatigue at deposition should be a top priority for defense counsel, as the economic risks are enormous.

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