

University of Nevada, Reno

**Decision-making in Civil Litigation: Effects of Attorney Credibility, Evidence Strength, and Juror Cognitive Processing**

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Social Psychology

by

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## Abstract

The current study examined the relationship between juror cognitive processing (measured by need for cognition [NFC]), attorney credibility, evidence strength, and civil litigation verdicts (liability, likelihood of causation, and compensatory damages). Participants viewed a videotaped mock civil trial in which the credibility of the attorneys and the strength of the plaintiff's evidence were manipulated. There was a three-way interaction between plaintiff attorney credibility, defense attorney credibility, and strength of evidence for liability verdicts. For participants exposed to strong evidence and a non-credible defense attorney, the likelihood of a liable verdict (compared to a not liable verdict) was higher for a credible plaintiff attorney than a non-credible plaintiff attorney. Participants exposed to ambiguous evidence and a credible defense attorney had a higher likelihood of a liable verdict when the plaintiff attorney was credible versus non-credible. Participants' NFC also interacted with the plaintiff attorney credibility. For high, but not low, NFC participants, the likelihood of a liable verdict was higher for a credible plaintiff attorney than a non-credible plaintiff attorney. Levels of NFC also interacted with plaintiff attorney credibility for likelihood of causation estimates. For high, but not low, NFC participants, the likelihood of causation estimates were higher for a credible plaintiff attorney than a non-credible plaintiff attorney. With regard to compensatory damage awards, there was a higher probability of obtaining the damage award amount requested, or more than the amount requested, for a credible plaintiff attorney than a non-credible plaintiff attorney. A credible plaintiff attorney also led to a lower probability of obtaining a damage award that was less than the amount requested. These findings suggest that the credibility of attorneys is influential to verdict decisions;

however, the credibility of the plaintiff attorney has a more direct influence than the credibility of the defense attorney. The findings also suggest that case evidence is not always the primary determinant of verdicts. The heuristic-systematic model's additivity, attenuation, and bias hypotheses were also tested. None of these hypotheses were supported across any verdict decisions. Practical, theoretical, and policy implications of these findings are discussed.

## Dedication

This dissertation is dedicated to my loving wife, Kelly Wood, who has supported me throughout the doctoral program. Despite the countless nights and weekends that I left her alone with the children to finish my school work, she was always interested in what I was doing and was always there to provide encouraging words when I needed them most. This dissertation was a team effort and is the culmination of hard work, dedication, and sacrifice on behalf of both of us. Without her unwavering support, none of this would have been possible.

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## Chapter 1: Introduction

As of 2010, there were 18,980,531 reported incoming civil cases across all jurisdictions in the United States (National Center for State Courts, 2013). Most civil cases will eventually settle out of court through an agreement between parties or court ratification (Galanter, 1983), but some plaintiffs and defendants choose to take the case to trial. During a trial, jurors hear arguments, view exhibits, and listen to witnesses from both parties. After each side has presented their respective case, jurors attempt to come to a fair and just verdict. In this pursuit, the civil justice system requires that jurors use the facts of the case and not outside factors, such as sympathy (U.S. District Court for the District of Alaska, 2007). While research indicates that jurors tend to follow this directive (Devine, Buddenbaum, Houp, Studebaker, & Stolle, 2009; Reskin & Visser, 1986), they have also been found to use extralegal factors, such as victim and defendant attractiveness (e.g., Jacobson & Popovich, 1983), pre-existing attitudes (Moran, Cutler, & De Lisa, 1994), and defendant race (e.g., ForsterLee, ForsterLee, Horowitz, & King, 2006).

Another extralegal factor used by jurors is attorney performance. Although the relationship between attorneys and verdicts has been empirically examined, the answer to the question, “Do attorneys matter?” is still elusive. Some researchers (e.g., Abrams & Yoon, 2007; Shinall, 2010) have found that the strength of the attorney is related to verdicts, while other researchers (e.g., Diamond, Casper, Heiert, & Marshall, 1996) have found that jurors do not consider the strength of the attorney.

The “strength” of the attorney is often operationalized in various ways. Some authors refer to it as lawyer capability (Smzer, Johnson, & Sarver, 2007), attorney skill

(Abrams & Yoon, 2007; Shinall, 2010), or attorney performance (Wood, 2006; Wood & Libkuman, 2009). Within these definitions, authors consider factors such as the attorney's law school (e.g., Tier 1, Tier 2, etc., Abrams & Yoon, 2007), years of experience (Abrams & Yoon, 2007; Iyengar, 2007), litigation team size (Smzer et al., 2007), and perceptions of attorney persuasiveness (Wood, 2006; Wood & Libkuman, 2009). Other authors discuss aspects of the attorney (e.g., gender - Nelson, 2004; race - Cohen & Peterson, 1981; Abrams & Yoon, 2007; demeanor - Sigal, Braden-Maguire, Hayden, & Mosley, 1985), but do not explicitly state that it is a measure of "strength."

The extant literature on attorney skill, performance, etc. creates two questions that are pertinent to the current study. First, for those studies that find a relationship between the attorney and courtroom verdict, why does this phenomenon occur? More specifically, why would, for example, an attorney's courtroom demeanor be related to verdicts? The current study argues that the rationale behind this relationship is that characteristics of attorneys (personal or performance-related) create perceptions of the attorneys' credibility. The prior literature also supports this notion by explicitly stating that factors such as the gender (Nelson, 2004), dress (Hans & Sweigart, 1993), and the level of emotionality used by attorneys in the courtroom (Hans & Sweigart, 1993) are related to jurors' perceptions of the attorneys' credibility. According to source credibility theory, this means that jurors rely on these factors to decide whether the attorney is an expert or trustworthy source (Hovland, Janis, & Kelley, 1953). Sources that are perceived to be expert and/or trustworthy are more persuasive than non-expert and/or untrustworthy sources (e.g., Chaiken & Maheswaran, 1994; Hovland & Weiss, 1951).

The second question generated from this prior research is, why do some studies find a relationship between aspects of attorneys and courtroom verdicts, while others do not? Aside from differences in the methodology and operationalization of variables, one plausible explanation for the inconsistent findings may be due to differences in the cognitive processing between participants in a given study which goes undetected, but nevertheless influences the study's findings. For example, a study using real jurors found that prosecutor competence was positively correlated with criminal verdicts after controlling for evidence strength (Devine et al., 2009), but another study using real capital jurors found that favorable perceptions of prosecuting attorneys' personal characteristics (physical appearance and personality) were not related to verdicts (Trahan & Stewart, 2011).

The cognitive processing of the jurors was not examined in either of these studies though. Had it been, the results may have been different because the heuristic-systematic model (HSM) of persuasion posits that individuals who are motivated and able to attend to a persuasive message will engage in systematic (i.e., deep and thoughtful) processing, while individuals who are either unmotivated or unable to attend to a persuasive message will engage in heuristic (i.e., shallow and stereotypic) processing (Chaiken, 1980; 1987). In a legal context, systematic processing often coincides with a juror's use of case evidence, while heuristic processing commonly coincides with a juror's use of extralegal factors, including attorney credibility. Using HSM as a theoretical backdrop, there is a possibility that the prior studies may have unintentionally included a large sample of systematic (or heuristic) processors who may view the evidence differently, thereby skewing the results.

Situational correlates that lead an individual to process information systematically or heuristically include personal involvement and task importance. For example, individuals who are highly involved in a topic (Chaiken, 1980) or believe that their responses correspond to real-life decisions (Chaiken & Maheswaran, 1994) are more likely to engage in systematic processing than individuals who are unmotivated or who do not believe that their decision is of any consequence. One other factor related to the utilization of systematic or heuristic processing is an individual's cognitive motivation. Need for cognition (NFC), or an individual's tendency to engage in and enjoy effortful thinking (Cacioppo, Petty, Feinstein, & Jarvis, 1996), is a concept that has been studied both within and outside of the courtroom. The general findings are that individuals who are high in NFC are more persuaded by argument quality than extraneous source factors, such as trustworthiness (Priester & Petty, 1995). Conversely, individuals who are low in NFC, for the most part (see Priester & Petty, 1995 for an exception), will forgo scrutinizing the message and make a decision based upon heuristic cues, such as source expertise (Curseu & Curseu, 2001).

A second plausible explanation for the discrepant findings for attorney credibility may be due to the strength of the evidence. For example, Linz, Penrod, and MacDonald (1986) found no relationship between in-court observers' ratings of aspects of the prosecution and defense attorneys' opening statements (e.g., articulateness, friendliness, level of organization, and emotionality) and jurors' first ballot verdicts. However, the strength of the evidence in these cases tended to favor the prosecution. In 75% of the case, the prosecution won. Linz et al. also did not examine the possible interaction between case strength and attorney credibility.

According to HSM's three hypotheses—additivity, attenuation, and bias—it is possible that the relationship between attorney credibility and verdicts looks different depending on the case strength. The additivity hypothesis suggests that heuristic and systematic processing can individually and directly influence the outcome of a decision-making task (Chen & Chaiken, 1999). For example, when task importance is high (i.e., systematic processing) and the message content does not contradict the source heuristic (e.g., strong arguments from a highly credible source) then attitudes are influenced by a combination of heuristic and systematic processing. When task importance is low (i.e., heuristic processing), then attitudes are influenced by peripheral factors (e.g., source credibility) only. In such a situation, the credibility of a source acts as an additional piece of persuasive information and helps to strengthen an attitude judgment. This would imply that, for systematic processors, credible attorneys can strengthen cases that are already in their favor. By only examining the attorney's direct effect on outcome, a case that is already in the attorney's favor may mask his additional influence.

The attenuation hypothesis suggests that systematic processing may attenuate the influence of heuristic processing (Chen & Chaiken, 1999). When the valence of a consensus cue (heuristic) and message are incongruent (e.g., positive consensus cue and negative message), participants in a high task importance condition attend to the arguments only, implying an attenuation of the heuristic cue (Maheswaran & Chaiken, 1991). For example, Maheswaran and Chaiken (1991) informed participants in a high task importance condition that just under 20% of consumers who had used a certain brand of answering machine were extremely satisfied and 50% were extremely dissatisfied. This constituted their negative-consensus condition. They then gave participants a

positive message about the superiority of the answering machine on four out of six attributes, such as call screening and message retrieval. In these conditions, the positive message, but not the consensus cue, predicted attitudes for high task importance participants. This suggests that the incongruence in valence between these two aspects (consensus and message) led those individuals who were motivated to process systematically to ignore the heuristic cue.

Extending these findings to the current study, they imply that high cognitive motivation might explain why attorney credibility is unrelated to verdicts when the plaintiff/prosecution's case is strong. Systematic processors may not be influenced by a non-credible attorney in strong cases because the incongruence leads them to ignore heuristic cues and focus only on the evidence. This gives the impression that the credibility of the attorney is not related to verdicts when it may be the piece of information that leads participants to only focus on the evidence.

The bias hypothesis suggests that systematic and heuristic processing can exert an interdependent influence such that heuristic processing may influence systematic processing indirectly by altering the valence of thoughts (Chen & Chaiken, 1999). This interdependent influence is thought to occur only when the arguments in a persuasive message are ambiguous (Chen & Chaiken, 1999). When participants in a high task relevant condition receive ambiguous arguments, a high credibility source induces more positive attitudes toward a product than a low credibility source (Chaiken & Maheswaran, 1994). This would suggest that in cases of ambiguous evidence, the attorney's credibility may be related to verdicts.

One could argue that a real-life example of the bias hypothesis is the O.J. Simpson trial of 1994. In the O.J. Simpson trial, there was a considerable amount of evidence against him: physical (shoe print and leather gloves), forensic (DNA), and circumstantial (previous attacks on the victim). However, some legal scholars suggest that jurors understood that the evidence, specifically the DNA evidence, was not as conclusive as it was portrayed by the media (Thompson, 1996). Moreover, the fact that the leather gloves did not fit Mr. Simpson when he tried them on in court further weakened the perception that the case against Mr. Simpson was strong.

Accepting that the case evidence was likely ambiguous, possible alternative explanations for the verdict can be examined. One possible explanation is the credibility of the attorneys. Some believe that O.J. Simpson's acquittal was a result of incompetency on the part of the prosecution (Bugliosi, 1996), while O.J. Simpson believes that, if it were not for Johnnie Cochran, he would not have been acquitted (Collins, 2005). Whichever perspective one chooses to take, the inherent assumption is that there were aspects of the attorneys beyond the case evidence that influenced the verdicts. The idea that it was an incompetent prosecutor supports the notion that a non-credible source can be detrimental to a persuasive message when the arguments are ambiguous. The idea that it was a strong performance on the part of the defense is consistent with the notion that a credible source can be persuasive when the arguments are ambiguous.

Even if one does not believe that the evidence against O.J. was ambiguous, this case creates other interesting questions from the perspective of attorney credibility. If it were assumed that the case evidence was strong, then why was O.J. Simpson acquitted? If it was due to the prosecutors' incompetence, then can a non-credible attorney weaken a

strong case? Conversely, if it was due to the defense team's stellar performance, then can a credible attorney overcome a weak case? HSM's attenuation hypothesis would propose that both of these scenarios would not be possible because the mismatch between the attorney credibility and strength of evidence would attenuate the impact of the attorney. However, this attenuation only occurs for systematic processors (Chen & Chaiken, 1999). The attorney credibility would influence jurors though, independent of the evidence strength, if they were heuristic processors. Such a scenario is plausible since legal commentators have questioned the intelligence of the O.J. Simpson jurors (see Thompson, 1996).

### **Goals of the Dissertation**

All of these aspects generate several broad questions the current study attempts to answer: 1) Does the perceived credibility of attorneys "matter" (i.e., affect liability verdicts, likelihood of causation estimates, or compensatory damage awards) in civil litigation?; 2) Does the perceived credibility of attorneys only matter for high or low NFC individuals?; and 3) Does the perceived credibility of attorneys only matter in certain evidentiary conditions? To this end, the present research seeks a more complete understanding of juror decision-making and the various factors jurors use when making verdicts in civil litigation. Specifically, the current research will focus on the relationship between attorney credibility, case strength, and juror cognitive processing in an attempt to integrate theories of source credibility and dual processing models of persuasion. It is proposed that differences in juror decision-making are a function of individual differences in the motivation to attend to the strength of the arguments, while ignoring the credibility of the presenter. The study will rely on two established social-

psychological theories, source credibility and HSM, that offer complementary predictions concerning how attorney credibility and evidence strength might be related to civil litigation verdicts.

The current study has the potential to fill several gaps in the existing literature. First, it will examine two competing sources (i.e., attorneys). Much of the literature examines the effects of source credibility while utilizing only one source. In some instances (e.g., Moore & Reardon, 1987) two or more sources are used, but they usually magnify one another (e.g., positive product reviews from four sources instead of one) rather than compete with one another. The findings of this study will offer insight into other persuasive situations that involve two competing sources, such as selecting a political candidate or purchasing consumer goods.

Second, the credibility of the attorney will be allowed to emerge via his presentation and interaction with other individuals inside the courtroom. Although the current study will experimentally manipulate the credibility of the attorney, participants will not be told how credible or non-credible the attorney is. Prior research on source credibility tends to explicitly state in the manipulation how credible or non-credible the source is (e.g., Henkel & Mattson, 2011) or uses sources that allow participants to easily infer the credibility based upon prior contact with the source (e.g., Fragale & Heath, 2004: *National Enquirer* versus *Consumer Reports*). Understanding the influence of individual-generated credibility assessments is important not only in the courtroom, but other environments in which an individual must make decisions based upon their own perceptions of and criteria for determining credibility.

Third, some of the prior literature will be extended from the criminal justice system to the civil justice system. Prior research has manipulated attorney behaviors and examined criminal verdicts (e.g., Sigal et al., 1985; Wood, 2006; Wood & Libkuman, 2009). Only one study (Gibbs, Sigal, Adams, & Grossman, 1989), to this author's knowledge, has examined civil trials; however, this study was conducted almost 25 years ago and the findings have not been replicated or updated. In addition, prior research has examined whether attorney competence (Devine et al., 2009) or attorney skill (Shinall, 2010) predict verdicts, after controlling for the strength of the prosecution's evidence (Devine et al., 2009) or the prosecution *and* defense's evidence (Shinall, 2010). No research, to our knowledge, has examined attorney credibility and *civil* verdicts, while controlling for the strength of the plaintiff evidence. The strength of the evidence, and subsequently the credibility of the attorney, may have a different influence on juror decisions for criminal trials than for civil trials because civil trials use a lower verdict threshold (preponderance of the evidence versus beyond a reasonable doubt) and thus the decision-making process might be different.

Finally, HSM's hypotheses will be examined to see whether previous findings can be replicated when there are two attorneys. For example, Chaiken and Maheswaran (1994) found support for the additivity hypothesis when participants' task involvement was high and a credible source was presenting strong evidence. They also found support for the bias hypothesis when the task involvement was high and a credible source was presenting ambiguous evidence. However, no research has been done to this author's knowledge that examines the additivity, bias, and attenuation hypotheses when there are two sources competing with one another. A finding that these hypotheses are supported in

the context of two sources would expand the HSM model into other domains. These findings would be especially important to the legal system since it is adversarial by nature and is designed for two sources to compete with one another to persuade individuals (jurors or judges) to find in favor of the attorney's positions.

### **Implications of the Current Study**

In addition to filling gaps in the literature, the current project has practical implications for several civil justice system stakeholders, with attorneys being the first. If the findings suggest that attorney performance is related to civil verdicts and explains additional variance over and above the strength of evidence, then attorneys would have an additional area to focus on prior to litigation. Currently, attorneys enlist the help of litigation consultants to help them with case planning which often includes witness preparation, mock trials, and theme development (see Wiener & Bornstein, 2011). These aspects are primarily focused on strengthening the case elements, the persuasiveness of the arguments, or the persuasiveness of witnesses. They are not necessarily focused on strengthening the perceived credibility of the individual who must present the case facts and elicit information from witnesses. This aspect of the trial should not be overlooked though, because attorneys are the ones who give voice to the case facts (McGuire, 1995) and the ones who dictate (within the bounds of the law) what and when information is presented.

Findings of the current study also have implications for law firms. When senior partners of a law firm or general counsel of a company that attorneys are hired to represent are deciding upon which attorney should present the case, knowing whether the credibility of the attorney is related to the verdict could be beneficial. The law firm may

have several lawsuits pending and not have a clear idea of which attorney to use for a specific case. If the findings of this study indicate that attorney credibility does not have any relationship to verdicts, over and above the strength of the evidence, then the law firm can be confident that as long as they have a strong case, they can assign it to any one of their attorneys. Conversely, if the results of the study indicate that the credibility of the attorney is related to case outcome, then the law firm may want to strategize about which attorneys to assign to cases. If a credible attorney can increase the strength of a weak case, then the firm should place a credible, rather than non-credible attorney on that case. The results of the current study can also help the law firm decide which attorney to assign to the case in the instance of ambiguous evidence. If the results indicate that a strong attorney is related to verdicts when the strength of the case is ambiguous, then the law firm can ensure that their strongest attorney is assigned to the case with ambiguous evidence.

Third, the findings of this study will have implications for the legal system. If the results indicate that attorney performance is related to verdicts, over and above the strength of the evidence, then the legal system may want to consider creating an admonishment to the jury. Much like the admonishment for inadmissible evidence or a comment stricken from the record, the judge could instruct the jury to rely on the case facts and not allow the emotion, presentation, or their perceptions of the attorney to influence the verdict.

Finally, the findings have implications for decision-making in various settings. Prior research has examined the influence of source credibility by using a single source that is manipulated between credible, neutral, and non-credible (e.g., prestigious judge,

member of the studio audience chosen at random, and member of the studio audience with a checkered past; Kelman & Hovland, 1953) or two sources with highly discrepant credentials (e.g., Consumer Reports versus the National Enquirer; Fragale & Heath, 2004). The current study will examine the outcomes of situations in which two highly credible sources, two highly non-credible sources, or a mixture of the two, are competing with one another for individuals to adopt their point of view. Moreover, the research examines how the credibility of these sources interacts with the strength of their arguments. The findings, then, may have implications for any field of study in which individuals are interested in whether the strength of the arguments, the credibility of the sources, or both are related to persuasion.

### **Overview of Dissertation**

The current dissertation project seeks a more complete understanding of juror decision-making in the context of civil litigation. Specifically, the focus is on the relationship between attorney strength, case strength, and juror cognitive processing. Chapter 2 presents an introduction to the literature on attorney aspects and courtroom outcome. Included in this discussion will be an examination of the physical or personal characteristics (e.g., race and gender) and performance-related aspects (e.g., speech patterns and demeanor) of attorneys that are related to legal decisions. In addition, the body of literature that suggests attorneys do not affect case outcomes will be discussed.

Chapter 3 presents research on source credibility. This chapter expands upon the attorney performance literature and situates the notion of a “good” or “bad” attorney within a rigorous theoretical framework. Factors that influence the perceived credibility of a source (expertise and trustworthiness) will be highlighted. Additional factors that

moderate the influence of source credibility will also be discussed. The chapter closes by discussing source credibility in the courtroom as it relates to attorneys.

Chapter 4 discusses the heuristic-systematic model (HSM) of persuasion. This dual processing theory suggests that individuals can process information at a deep, intellectual level (systematically) or at a shallow, cognitive miserly level (heuristic). HSM is explained and its implications are situated in the field of legal decision-making. Included in Chapter 4 will be a discussion of the cognitive processing trait of need for cognition and its relationship to heuristic and systematic processing.

Chapter 5 provides an overview of the current project. Several specific hypotheses and research questions will also be posed.

Chapter 6 provides the research methodology for the current study, which will examine whether differences in attorney credibility, case strength, and juror cognitive processing are related to civil litigation decisions (i.e., liability verdicts, likelihood of causation, and compensatory damages) in a liability case.

Chapter 7 will present the results of the current study. Several types of analyses will be conducted to gain a fuller understanding of the relationship between the variables.

Chapter 8 will discuss the findings of the current study in detail, and place the results in the broader context of the source credibility, attorney, NFC, and dual processing literature. Limitations and suggestions for future research will also be included in this chapter. The manuscript will conclude with a summary and general conclusion.

## Chapter 2: Attorney Influence in the Courtroom

The Sixth Amendment of the U.S. Constitution states that, “In all criminal prosecutions, the accused shall enjoy the right to have the assistance of counsel for his defense.” In civil litigation, however, individuals who are bringing suit (plaintiffs) or are being sued (defendants) are not guaranteed this same right. More importantly, even if individuals are able to obtain an attorney through personal funds, plaintiffs and defendants cannot be sure of the quality of the attorney. The attorney may be punctual, organized, and adept, or consistently tardy, unorganized, and inept. The question remains though, “Does any of this matter?” Does the skill, expertise, or credibility of an attorney relate to differences in civil litigation outcomes? Despite the quality of legal representation being an important topic of the American Bar Association (M. Laver, personal communication, March 13, 2013), and the effectiveness of counsel the topic of Supreme Court rulings (e.g., *McMann v. Richardson*, 1970; see Bunin, 2010), a firm, and consistent response to this question continues to be elusive.

The potential for attorneys to influence courtroom outcome is not a novel concept. Numerous books, manuals, and journal articles have been written that are devoted to lawyering skills and persuasion strategies, such as *Trial Diplomacy* (Morrill, 1971), *Courtroom Persuasion: Winning with Art, Drama and Science* (Herman, 2010), and *Increasing Attorney Persuasiveness in the Courtroom* (Linz & Penrod, 1984). A body of scientific literature related to attorneys has also emerged (e.g., Abrams & Yoon, 2007; Diamond et al., 1996; Shinall, 2010). However, the findings and implications of this line of research have been mixed. Some researchers find that attorneys’ skills are an inconsequential component in jurors’ decision-making process (e.g., Diamond et al.,

1996), while others find that attorneys play an integral role in courtroom outcomes (e.g., Shinall, 2010).

### **Attorneys as a Non-Factor in Courtroom Outcome**

Several studies indicate that attorneys do not differentially influence the outcomes of trials. For example, in their seminal work on juries, Kalven and Zeisel (1966) found that in only a little over 1% of all of the 3,576 criminal jury trials from which data was collected, did the presence of a superior defense attorney result in a jury verdict that differed from the one that the judge would have reached had he been trying the same case without the jury. In a study conducted 30 years later, the results remained consist. Diamond et al. (1996) had randomly selected jurors from two Cook County (Illinois) courthouses view one of several versions of a videotaped mock trial of an antitrust or death penalty case. After viewing the mock trial, some participants deliberated in groups of 6 (antitrust) or 12 (death penalty), while other participants indicated their attitudes toward the trial and witnesses. The transcribed juror deliberations indicated that jurors made reference to attorneys, on average, four times per deliberation. However, only 7% of the comments in the antitrust case and 6% of the comments in the death penalty case referred to jurors' personal reactions to the attorneys. The comments about attorneys were primarily directed toward evidence presented by them at trial. The authors concluded that jurors do not spend much time attending to the personal characteristics of the attorney.

Diamond et al. (1996) do concede, however, that jurors may have been influenced by the attorneys without making explicit references or without being cognitively aware. This may imply that skilled attorneys are able to present their cases in a way that

persuades jurors without drawing explicit attention to the individual providing the information. It may be the case that only unskilled attorneys draw attention from jurors. Diamond et al. could not assess whether differences in attorney skill would result in differences in jurors' comments though, because both attorneys were active and articulate. To assess this, the authors suggest that an experimental study is needed which varies only the attorney or the attorney's delivery, while holding everything else constant. The current study aims to do just that.

There is also a body of literature that has examined differences in courtroom outcome between types of defense attorneys (i.e., public defender, assigned private attorney, or retained private attorney). The assumption is that the quality of representation varies as a function of type of attorney (ranging from retained private counsel providing the highest quality to overworked public defenders providing the lowest quality) and this correlates into differential verdicts (Feeney & Jackson, 1990-1991). The findings across these studies are mixed. Regarding defense attorneys, some authors find that the type of defense attorney—public defender, assigned private attorney, or retained private attorney—is not an important determinant of case outcomes (see Feeney & Jackson, 1990-1991 for a review), criminal appellate court decisions (Williams, 1995), or the amount of bail a defendant is required to pay (Turner & Johnson, 2007). Some authors also find that the skill of the defense attorney is not related to the likelihood of conviction or sentence length (Shinall, 2010).

The findings for prosecuting attorneys have tended to mirror those of defense attorneys. Personal characteristics have little effect on either conviction rates or sentencing verdicts (Nardulli, Eisenstein, & Flemming, 1988). Although these findings

are not supported across all studies—as will be indicated next—this body of literature suggests that the type of the attorney does not matter with regard to verdicts. The perceived skill of the attorney (as opposed to the assumed skill based upon the type of the attorney), however, does seem to be an area in need of additional attention. A question remains though, “What are the factors that jurors pay attention to when deciding how skilled or unskilled an attorney is?” The body of literature that shows that attorneys can influence verdicts offers potential answers to this question.

### **Attorneys as a Factor in Courtroom Outcome**

Unlike the prior literature (with the exception of Shinall [2010] and Rattner, Turjeman, & Fishman [2008]) that indicates attorneys are not influential to courtroom outcomes, several studies have found that individual aspects of attorneys are related to courtroom outcome (e.g. Abrams & Yoon, 2007; Cohen & Peterson, 1981; Nelson, 2004). These aspects can be broadly categorized as physical or personal characteristics and performance-related components.

#### **Physical or Personal Characteristics**

There is an old adage that you never get a second chance to make a first impression. When jurors initially see an attorney, one of the first things available for them to notice is the attorney’s physical characteristics. Prior research has examined the influence of three characteristics: race, gender, and clothing.

**Race.** Prior research indicates that race is a predominant factor in the criminal justice system (see Mitchell, 2005). In addition to defendant and victim race, attorney race has also been found to be related to verdicts. However, the findings have been tenuous, inconsistent, and dependent on other case factors.

Using a hypothetical scenario, early research by Cohen and Peterson (1981) found a consistent “pro-white” defense attorney bias. In the presence of white defense attorneys, jurors reported significantly less defendant guilt than jurors in the presence of a black defense attorney. These results must be examined within context, though. First, the study was conducted over 30 years ago. In this time, perceived race relations have improved in the United States (Langer, 2013). Second, the participants for Cohen and Peterson’s study were 11<sup>th</sup> graders—a group that would be unable to serve as jurors in a real trial.

Abrams and Yoon (2007) conducted an archival study using data on 11,866 felony cases from Clark County, Nevada. The authors found that Hispanic defense attorneys, irrespective of the defendant’s race, obtained shorter sentences for their clients than Black, White, or Asian attorneys. Defendants represented by a Hispanic defense attorney received sentences as much as 4.8 months shorter than defendants represented by a White defense attorney. However, these authors found no race effects on the likelihood of incarceration. The authors speculate that these counter-intuitive findings for Hispanic attorneys can be partially explained by a potential language advantage with their Hispanic clients. The ability to have attorney and client speak Spanish to one another without the need of an interpreter may foster improved communication. Abrams and Yoon indicate that language cannot be the only factor though because Hispanic attorneys performed better than their peers, regardless of their clients’ race. They also speculate that Hispanic attorneys are more selective in the cases they choose to accept.

Other research has indicated an interaction between the race and socioeconomic status of the defendant and the race of the attorney. Espinoza and Willis-Esqueda (2008)

experimentally manipulated the race/ethnicity (Mexican American or European American) of the defendant and defense attorney, as well as the socioeconomic status (SES: high or low) of the defendant in a mock criminal case. Participants (all-White college students) blamed the low-SES Mexican American defendant who was represented by a Mexican American defense attorney significantly more than all other conditions. In addition, participants did not believe the Mexican American defendant's version of the crime when he was of low SES and represented by a Mexican American attorney. Low-SES defendants, regardless of race/ethnicity, who were represented by a Mexican American defense attorney, were perceived as less likeable, unethical, insensitive, and lazy.

In sum, the literature on race and attorneys is limited. A clear and consistent argument cannot be made that the race of the attorney matters to courtroom outcomes. Some of the findings do, however, indicate that jurors are attending to factors outside of the case evidence.

**Gender.** Another physical characteristic that sometimes affects jurors' decision-making process is the attorney's gender. As of 2005, 70% of attorneys were male (American Bar Association, 2013). This number means that women are the minority in the legal profession and do not appear in court as often. When women do appear in court, there is a tendency for jurors to be critical of them. For example, research indicates that female attorneys are deemed less intelligent (Hodgson & Pryor, 1984; see Nelson, 2004), less friendly (Hahn & Clayton, 1996; Hodgson & Pryor, 1984), less powerful in their presentation style, less competent, and less credible (see Nelson, 2004) than their male counterparts.

The negative perceptions of female attorneys may depend on the rater. Hodgson and Pryor (1984) had college students read a summary of a mock breaking and entering case and then listen to the audiotape of the defense attorney's closing statements. Half of the participants in the experimental group heard a male defense attorney, while the other half of the experimental group heard a female defense attorney. Although there was no significant difference between the male and female attorney on guilty verdicts, male and female participants differed on their perceptions of the attorneys. Women participants rated the female attorney significantly less intelligent, less friendly, less pleasant, less capable, less expert, and less experienced than the male attorney. Male participants, on the other hand, did not differ in their ratings of the male and female attorney. This study differs from prior studies (e.g., Hahn & Clayton, 1996) by indicating that female jurors, but not males, are the ones who view women attorneys most harshly. However, it should be noted that males and female participants both indicated that they would be more likely to hire the male attorney for their own representation than the female attorney (Hodgson & Pryor, 1984). This suggests that, while males and females may view attorneys differently based on the attorney's gender, female attorneys are still at an overall disadvantage when compared to male attorneys.

The research indicates that jurors have a negative perception of women attorneys, but the findings are mixed regarding whether an attorney's gender is related to verdicts. Some researchers have found that mock jurors reported significantly more not guilty verdicts when the criminal defense attorney was male versus female (e.g., Hahn & Clayton, 1996). In contrast, other researchers have found that jurors rendered significantly more not-guilty verdicts when the defense attorney was female than when he

was male (Villemur & Hyde, 1983). A third group of researchers have found no relationship between defense attorney gender and guilty verdicts (Hodgson & Pryor, 1984; Sigal et al., 1985) or incarceration rates (Abrams & Yoon, 2007).

The extant literature on the relationship between attorney gender and courtroom verdict is mixed. There is literature to suggest that female attorneys enter the courtroom at a disadvantage (see Nelson, 2004) and that whether the attorney is male or female matters to jurors (Hahn & Clayton, 1996; Villemur & Hyde, 1983). There is also literature to suggest that the gender of the attorney is not related to verdicts (Abrams & Yoon, 2007; Hodgson & Pryor, 1984; Sigal et al., 1985).

**Clothing.** A third physical characteristic of attorneys that researchers have examined is clothing. The clothes that attorneys wear create positive or negative perceptions of the attorney in the minds of jurors (Hans & Sweigart, 1993). For example, Trahan and Stewart (2011) conducted a four-phase thematic content analysis on former capital jurors' impressions of the defense and prosecuting attorneys. These authors found that jurors perceive clothing as a singularly powerful stimulus. The most cited physical aspect of the defense attorneys was their clothing. One juror indicated that a defense attorney who was wearing a silk suit was a "sleaze bag" (p. 98). Alternatively, jurors disparaged defense attorneys who wore "cheap" and outdated clothing. Jurors noticed the physical appearance of the prosecutor as well, but their evaluations tended to be positive and focused on the physical attractiveness, hygiene, and dress of the attorney. Most importantly, attorneys' physical appearance and projected self-esteem was related to verdicts. Jurors who formed unfavorable perceptions of defense attorneys, as a result of the way in which the defense attorneys were presenting themselves, were more likely to

sentence defendants to death than jurors with favorable perceptions. Jurors' perceptions of prosecuting attorneys, however, were not related to sentencing verdicts.

In sum, the literature indicates—although not consistently—attorneys' physical characteristics are related to courtroom outcomes. In addition to the strength of the case evidence, jurors are focusing on the attorney's race/ethnicity, gender, and physical appearance. If attorneys do not have the “right” skin color, are not the “right” gender, and do not dress in such a way that is appealing to jurors, then they may be at a disadvantage in the courtroom. However, even if attorneys meet all of the approved physical criteria, they may still falter in the way in which they present their case.

### **Performance-Related Aspects**

In addition to visual aspects of the attorney, research has also examined performance-related aspects. These have included speech patterns, courtroom demeanor, and interpersonal interaction.

**Speech patterns.** Attorneys are in an occupation of advocacy and communication. The need to communicate is inherent in the profession (Findley & Sales, 2012). Silverman and Paynter (1990) examined whether an attorney's speech pattern—namely, whether an attorney stutters—influences the way in which individuals perceive the attorney's competency. Participants rated either an attorney or an attorney who stutters on 81 different measures. Attorneys who stuttered were considered to be, among other things, more afraid, confused, lazy, and disorganized than attorneys who did not stutter. Attorneys who stuttered were also seen as less intelligent, confident, stable, dominant, and aggressive than attorneys who do not stutter. The authors did not,

however, examine whether the perceptions of competence were related to courtroom outcome.

**Courtroom demeanor.** In addition to the way in which attorneys speak, jurors also attend to the way in which attorneys present the case facts and conduct themselves in the courtroom. Hans and Sweigart (1993) found through interviews with civil jurors from 36 cases (28 tort<sup>1</sup> and 8 contract) that several aspects of the attorney's demeanor helped to shape the jurors' case opinions. In one case, jurors indicated that the defense attorney's extreme nervousness made them uncomfortable. In another case, jurors were offended by the obnoxious behavior of the defense attorney. Other jurors indicated that attorneys who were perceived as attempting to evoke too much emotion were seen as acting in an inappropriate manner. Some emotion was appropriate, but jurors disliked emotion that was disproportionate to the plaintiffs' injuries. Although the sample size of the study was too small to allow the authors the ability to conduct a statistical test to determine whether the perceived superiority of one attorney (over the other attorney) translated into a favorable outcome, the jurors indicated that these aspects led them to side against the attorney whose demeanor they disapproved of. Other researchers have found that defense attorneys who are perceived as "cocky" and "arrogant" are viewed negatively by jurors, while similar characteristics possessed by prosecuting attorneys are viewed favorably by jurors (Trahan & Stewart, 2011).

Several studies have indicated that the demeanor of the attorney is related to verdicts. For example, Sigal et al. (1985) found that passive defense attorneys (low amplitude speech with many pauses, minimal use of hand gestures and body language,

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<sup>1</sup> A tort is a civil, as opposed to a criminal, wrong that resulted in an injury to a person.

and little eye contact with the camera) received fewer not guilty verdicts in a mock robbery trial than assertive (normal speech tone without pauses, some expressive body language and hand gestures, and moderate amount of eye contact with the camera) and aggressive (high amplitude speech that was rapid in rate and contained angry or hostile inflection, much gesturing and pounding on the defense table, and a high degree of eye contact with the camera) defense attorneys. Similarly, Gibbs et al. (1989) found that defense attorneys were perceived by jurors in a mock personal injury case to be less effective when the attorneys were hostile toward an expert witness (used an angry voice and expressive hand gestures) and asked leading questions, or were non-hostile and asked non-leading questions, than attorneys who were hostile and asked non-leading questions or were non-hostile and asked leading questions. Gibbs et al. suggested that hostile attorneys who ask leading questions create a negative impression of attorneys by generating sympathy for the individual whom the questions are being directed at and create an increase in jurors' suspicion regarding whether they are "getting the full picture" (p. 279). Conversely, non-hostile attorneys who ask non-leading questions are perceived negatively because they are acting at odds with the behaviors expected of an attorney.

Following up on Sigal et al. (1985) and Gibbs et al.'s (1989) work, Hahn and Clayton (1996) found that, overall, aggressive defense attorneys (e.g., ones who spoke loudly and quickly, and sometimes seemed angry or hostile) were more successful at obtaining not guilty verdicts in a mock assault-and-robbery trial than passive attorneys (e.g., ones who spoke slowly and quietly, and paused often). The authors conclude that an aggressive style is more successful than a passive style because the former is able to

captivate the attention of the jury, while the latter leads jurors to become bored. However, Hahn and Clayton also found that female participants were not as affected by the presentation style as male participants. Male participants found the defendant significantly guiltier when the attorney was aggressive, as opposed to passive. Female participants found the defendant just as guilty in the aggressive and passive conditions. Moreover, male participants were influenced by the gender of the attorney, with the most successful attorney being the aggressive male defense attorney with male participants. In an archival study using data from the U.S. District Court for the Southern District of Iowa, Wood, Sicafuse, Miller, and Chomos (2011) examined jurors' perceptions of plaintiff, prosecuting, and defense attorneys across criminal and civil trials. These authors found that a decrease in the perceived sincerity of a prosecution or plaintiff attorney was related to an increase in the odds that the jurors would side with them. However, unlike the previously discussed studies, Wood et al. did not find a relationship between defense attorney sincerity and criminal or civil verdicts. Overall, this body of literature indicates that jurors hold certain expectations about attorneys' courtroom demeanor (e.g., they should not be passive) that affect subsequent perceptions and outcomes.

**Interpersonal interaction.** A final aspect of the attorney that jurors may attend to is the way in which attorneys interact with witnesses and defendants. Jurors, especially females, do not respond favorably to attorneys that verbally attack and badger witnesses (Hans & Sweigart, 1993). Such behavior makes jurors feel uncomfortable and tends to evoke sympathy for the witness. Aggressive attorneys are also considered less friendly than passive attorneys (Hahn & Clayton, 1996).

In sum, the literature on the effects of attorney characteristics and performance on courtroom outcome is mixed. Some results suggest that attorneys matter (i.e., affect trial outcomes), while others suggest that attorneys do not matter. Therefore, it may be difficult for attorneys to decide whether to worry about attending to controllable aspects of their presentations. However, extensive research that has been conducted outside of the courtroom on source credibility may help to clarify the importance of attorneys attending to the way in which they are perceived by jurors.

### Chapter 3: Source Credibility

As discussed in Chapter 2, the literature is mixed regarding whether the personal characteristics of the attorney are related to courtroom verdicts. Some studies suggest that attorneys matter (e.g., Abrams & Yoon, 2007; Hahn & Clayton, 1996; Shinall, 2010), while others suggest the opposite (e.g., Diamond et al., 1996). For those studies that do show a relationship between attorney characteristics and courtroom outcome, not all of them explicitly state the mechanism by which this occurs. However, some authors indicate that jurors are using factors such as the attorney's appearance (Hans & Sweigart, 1993), emotional displays (Hans & Sweigart, 1993), and gender (Nelson, 2004) to make assumptions about the attorney's credibility. Comments from past jurors also support this notion. For example, Hans and Sweigart were told by one juror that "[the attorney] did not have the credibility he should have [had, because of] his appearance" (Hans & Sweigart, 1993, p. 1321).

Source credibility has been a well-researched topic in the social science literature (see Pornpitakpan, 2004). A credible source is commonly defined as someone who is perceived to have expertise and who appears trustworthy (e.g., Hovland et al., 1953). Expertise is the degree to which an audience perceives the speaker's information to be valid, while trustworthiness is the extent to which audience members perceive a speaker's ability to present correct information (Hovland et al., 1953). Some researchers (e.g., Berlo, Lemert, & Mertz, 1969-1970; McCroskey, 1966) have suggested that credibility consists of additional factors (e.g., dynamism, objectivity, authoritative, and attractiveness), but their studies have been criticized for, among other things, the procedures used for scale selection and factor naming (Cronkhite & Liska, 1976).

## Expertise and Trustworthiness

The current trend in research (e.g., Fragale & Heath, 2004; Nan, 2009; Tormala, Briñol, & Petty, 2006; Tormala & Clarkson, 2007) is to focus predominantly on expertise and trustworthiness. It is important to note that perceptions of expertise and trustworthiness are *subjective* qualities given to a communicator by the audience, not an individual trait possessed by the communicator (Curseu & Curseu, 2001; Kaufman, Stasson, & Hart, 1999). However, these subjective perceptions are related to persuasion inside and outside the courtroom.

### Expertise

A line of research has manipulated source expertise, independent of other source characteristics. The general findings indicate that high credibility sources influence participants' perceptions across various measures. Tormala et al. (2006) found that, compared to participants viewing a low credibility source, participants viewing a high credibility source rated the source as being more of an "expert." Moreover, participants were more confident in their thoughts about the source. Bannister (1986) found that feedback from high credibility sources was judged as more accurate than feedback from low credibility sources, and participants indicated a greater intent to use this feedback when coming from a high as opposed to low credibility source.

The findings concerning an expert source's ability to change attitudes is less clear. Some researchers have found that high credibility sources lead to more favorable attitudes toward the communication object than low credibility sources (e.g., Chaiken & Maheswaran, 1994), while other researchers have found null effects (e.g., Tormala et al., 2006). Possible explanations for these discrepant findings will be discussed later in the

chapter. The results must also be examined within the context of the second component of source credibility, perceived trustworthiness.

### **Trustworthiness**

Other researchers have examined the isolated influence of perceived source trustworthiness on persuasion. Early research on the topic was conducted by Hovland and Weiss (1951). They had participants read articles on four different topics (anti-histamine drug, atomic submarines, the steel shortage, and the future of movie theaters) that had been written by a trustworthy or untrustworthy source. For example, the trustworthy source on the anti-histamine drug was the *New England Journal of Biology and Medicine*, while the untrustworthy source was a mass circulation monthly pictorial magazine called *Pravada*. Participants who read an article from a trustworthy source changed their opinions in the direction advocated by the communicator more than participants who read an article from an untrustworthy source. Interestingly, there were no significant differences in the amount of factual information acquired by participants in the trustworthy versus the untrustworthy conclusions. This finding seems to suggest that the trustworthiness of the communicator is not related to the amount or accuracy of the information that is retained; rather, it is related to how influential this information is in the decision-making process.

Subsequent research has supported these early findings on the persuasive influence of trustworthy sources (e.g., Copeland, Gunawan, & Bies-Hernandez, 2011). For example, participants have more trust in and more confidence in evaluations received from high as opposed to low credibility sources—as manipulated by perceived trustworthiness (Tormala et al., 2006, Experiment 2); although this effect has been found

to be especially pronounced for individuals who are high in need for cognition (Briñol, Petty, & Tormala, 2004). In addition, arguments coming from a trustworthy source are perceived as more accurate than arguments coming from an untrustworthy source (Kaufman et al., 1999).

Hovland and Weiss (1951) also found that a trustworthy source was more persuasive than an untrustworthy source; however, their research indicated that the amount of agreement with a trustworthy source decreased after a 4-week interval. Conversely, there was an increase in the amount of agreement with the untrustworthy source after the same interval. This reversal effect is referred to as the “*sleeper effect*” (Hovland, Lumsdaine, & Sheffield, 1949). The *sleeper effect* is thought to occur because the untrustworthiness of the source impedes the initial acceptance of the message (Hovland & Weiss, 1951). As time passes, the receiver forgets about who the source of the message was, but is able to retain the content of the message (Hovland & Weiss, 1951). Without the distraction of the source cue, the receiver can attend to the merits of the message and will subsequently increase his or her agreement with the untrustworthy source. In fact, Hovland and Weiss (1951) found that participants agreed more with a trustworthy source than an untrustworthy one immediately after receiving the persuasive message. However, after a four week period, the level of agreement with the two sources was almost identical. Although interesting to the literature on source credibility and possessing utility, this finding has no bearing in the courtroom. Verdicts are given out shortly after the final communication from the attorneys. Whether a juror decides at a later point that they were persuaded more or less than they were initially is immaterial. The verdict has already been rendered and the sentence has already been meted out.

Other research on source credibility, as it pertains to trustworthiness, has shown that whether the strength of the message from a trustworthy source is scrutinized less than a message from an untrustworthy source depends on strength of the evidence. For example, across two studies (holding expertise constant), Priester and Petty (2003) found that when participants read an advertisement in which the endorser was trustworthy (figure skater Nancy Kerrigan or an endorser who only puts his name on products he believes in), they were less influenced by the quality of the arguments than when the endorser was untrustworthy (figure skater Tonya Harding or an endorser who puts his name on multiple products). When the endorser was untrustworthy, strong arguments were more influential than weak arguments. The authors suggest that this occurred because high trustworthy sources reduce cognitive elaboration and therefore a reduction on the reliance of message strength. Conversely, low trustworthy sources create skepticism and apprehension on the part of message receivers. As a result of this uneasiness, message receivers increase their cognitive elaboration to assess the argument's cogency.

Within the legal realm, these findings suggest that jurors will examine the case evidence more closely when an attorney is perceived as expert and untrustworthy. Moreover, it implies that the strength of the evidence will matter to the final verdict—strong arguments from an untrustworthy attorney will be more persuasive to jurors than weak arguments from the same attorney.

It is unclear whether the findings from Priester and Petty's (2003) study would be applicable to the courtroom and whether they can inform the current study. One of the reasons is due to the number of sources providing information. In Priester and Petty's

study, there was only one source. In the current study, there will be two sources (i.e., two attorneys). The number of sources is a criticism that could be leveled against many source credibility studies, but it applies to the current study because it is possible for several different variations to exist in the strength of the attorneys, all of which may result in different outcomes. For example, the plaintiff attorneys could be perceived as untrustworthy and the defense attorney as trustworthy. In this instance, it is unclear whether jurors would use the untrustworthy plaintiff attorney as a cue that would divert their attention to the evidence or whether jurors would adopt the trustworthy defense attorney's opinion without much thought. The latter scenario seems more probable because Priester and Petty's study suggests that individuals use peripheral cues to guide them on whether they should exert more cognitive effort. The untrustworthy plaintiff attorney may initiate deep thought, but this deep thought may be abandoned once the trustworthy defense attorney begins his presentation. Alternatively, a trustworthy plaintiff attorney could lead to jurors adopting the attorney's opinion without much thought. This surface-level thinking may persist even after an untrustworthy defense attorney presents his case because the jurors have already obtained their necessary peripheral cue with the prior trustworthy plaintiff attorney.

It is also possible that both attorneys are perceived as trustworthy. In this instance, it seems likely that jurors will be forced to focus on other aspects of the case (i.e., the strength of the arguments). This is because there will not be any extraneous cues for jurors to focus on. They may initially begin to adopt the opinion of the trustworthy plaintiff attorney only to be influenced by the trustworthy defense attorney. When this occurs, the juror may think "both of my peripheral cues (the trustworthiness of the

attorneys) are not providing me with enough information to make an accurate decision. As a result, I must examine the other available information.” In a courtroom setting, this “other available information” would include the strength of the arguments being presented by the attorneys.

Alternatively, it is possible that both attorneys are perceived as untrustworthy. In this instance, it also seems likely that jurors would focus on the strength of the evidence. Jurors may begin to focus on the evidence because the untrustworthy plaintiff attorney leads to suspicion. After viewing the untrustworthy defense attorney, the jurors may continue to focus on the case evidence because the defense attorney did not provide any additional peripheral cues, only additional suspicion. Overall, both of these scenarios, two trustworthy attorneys or two untrustworthy attorneys, do seem to fit within the findings of Priester and Petty (2003) though.

A second reason why the results may not be applicable to the courtroom is related to the amount of cognitive elaboration by study participants. Priester and Petty (2003) note that the amount of cognitive elaboration was moderate (i.e., participants had the ability to process the message, but their motivation was not constrained to be high or low). They suggest that had the elaboration been high, most participants would have likely been influenced by the strength of the arguments. Had the elaboration been low, participants would have likely been influenced by the trustworthiness of the source. This dissertation seeks to examine these possible scenarios.

A third reason why the results may not be applicable to the courtroom is related to the experimental manipulation. In their study, Priester and Petty (2003) held the source’s expertise constant at a high level and manipulated the trustworthiness. This is not always

consistent to the courtroom. It is possible that an attorney can be perceived as non-expert and untrustworthy. For example, former prosecutor Vincent Bugliosi (1996) stated that the prosecutors' performance in the O.J. Simpson murder trial in 1995 "...was the most incompetent criminal prosecution I have ever seen. By far." (p. 91). Although Bugliosi did not indicate that he believed the prosecutors were untrustworthy, it indicates that it is possible for attorneys to be perceived as non-experts. Therefore, it raises the question whether Priester and Petty's results would be similar if the source was perceived as non-expert and untrustworthy. As shown next, it seems plausible that their results may differ.

### **Combined Expertise and Trustworthiness**

While some studies have examined source credibility by manipulating either the sources' expertise or trustworthiness, others have manipulated both factors. One of the earliest studies was conducted by Kelman and Hovland (1953) in which they manipulated the "prestige" of the communicator who was giving his opinion of the treatment of juvenile delinquents on a radio program. A positive communicator was a trustworthy, well-informed juvenile court judge who was an author of several books on the topic of juvenile delinquency. The negative communicator was an untrustworthy, poorly informed "man on the street" who gave the impression of being an obnoxious, self-centered individual with a questionable past and present. Both communicators argued for leniency in the treatment of juvenile offenders; however, participants had a more favorable opinion toward leniency after hearing from the positive communicator (the judge) than the negative communicator (the "man on the street").

These effects were also shown after an extensive time delay. As a follow-up to their initial data collection, Kelman and Hovland (1953) contacted the same study

participants after a 3-week time interval. For half of the participants, the authors reintroduced the communicator (positive or negative depending on the original experimental condition) by playing back some of the radio program the participants heard in the prior session. For the other half of the participants, the authors made no mention of the prestige of the communicator. When the communicator was reintroduced, participants' opinions toward the treatment of juvenile offenders were more favorable after hearing from the positive communicator than the negative communicator. When the communicator was not reintroduced, the findings re-affirmed the "sleeper effect"—a phenomenon not applicable to jury decision-making. Later studies have also supported the notion that communicators high in expertise and trustworthiness are more persuasive than communicators low in expertise and trustworthiness (e.g., Wiener & Mowen, 1986).

Overall, the consensus from past research, albeit not unanimous, is that high credibility sources are more persuasive than low credibility sources (Pornpitakpan, 2004). Sources that are perceived as possessing expertise, emitting trustworthiness, or both, are more persuasive than sources not possessing or emitting these qualities. This persuasiveness occurs because listeners internalize the credible source's message and integrate it into their existing cognitive framework. The listener subsequently adopts the information as their own and uses it in their decision-making process (Linz & Penrod, 1984). For example, when people assume that their beliefs are true (i.e., they receive no feedback to suggest otherwise or they receive external feedback that indicates their beliefs are true), individuals will attribute statements consistent with their beliefs to high credibility sources and statements inconsistent with their beliefs to low credibility sources (Fragale & Heath, 2004, Experiment 3).

### **Additional Factors that Interact with Source Credibility**

The influence of a highly credible source is not straightforward, though. Prior literature indicates that there are main effects for source credibility (Pornpitakpan, 2004), but there is an additional body of literature to indicate an interaction between source credibility and other factors that may increase or decrease the amount of persuasiveness. These factors include pre-existing attitudes and strength of the arguments.

#### **Pre-existing Attitudes or Knowledge**

The presence or absence of a prior attitude has been shown to be a moderator of source credibility. Kumkale, Albarracin, and Seignourel (2010) found that, when individuals possess no prior attitude toward a topic, they will use the credibility of the source as a heuristic cue. When they do possess a prior attitude, a reliance on the source's credibility is diminished.

The influence of a credible source is smaller in attitude change than in attitude formation, though (Kumkale et al., 2010). This is important to the legal decision-making process because seated jurors will likely possess no or a weak opinion on the trial subject matter. For the most part, those jurors who have a strong opinion on the subject matter will be excused by the attorneys via peremptory challenges (eliminating a potentially biased juror for an unspecified reason) or challenges for cause (removing a juror over concern that he or she cannot be fair and impartial).

#### **Argument Strength**

The strength of the arguments presented by the source is another factor related to persuasion. Tormala et al. (2006) conducted two studies to examine the influence of argument strength and source credibility on persuasion. The authors found that a high

credibility source (as manipulated by source expertise in one study and trustworthiness in the other) was more persuasive than a low credibility source only when the message arguments were strong. When the arguments were weak, using a highly credible source “backfired” and led to less persuasion than using a low credibility source.

Bohner, Ruder, and Erb (2002) provide an explanation for the backfire effect. These authors suggest that message recipients believe that a highly credible source will likely have the expertise and knowledge to provide the strongest arguments when compared to those arguments that would likely be put forth by a source with less expertise or knowledge. If the weak arguments are the strongest ones that the credible source could produce, then the arguments must truly be weak or no better case can be made. Conversely, non-credible sources are not expected to have the ability to present strong arguments. Therefore, weak arguments that they do present are viewed more favorably because the audience believes that there are other, stronger arguments that could be made if the source was more credible. If a non-credible source presents strong arguments, this does not necessarily imply that a more credible source could present better ones.

There is one caveat to these findings and the subsequent explanation that is important to the current study. In Tormala et al. (2006) and Bohner et al.’s (2002) studies, participants were motivated to engage in effortful cognitive processing. As will be highlighted in the next chapter, these findings may not hold when participants are processing the information using an alternative, less motivated, cognitive approach.

### **Source Credibility in the Courtroom**

Research on the effects of source credibility in the courtroom often focuses on the

credibility of children (e.g., Eaton, Ball, & O’Callaghan, 2001), victims (Bottoms, Davis, & Epstein, 2004), defendants (e.g., Bottoms et al., 2004; Eaton et al., 2001), eyewitnesses (Neal, Christiansen, Bornstein, & Robicheaux, 2012), or expert witnesses (Cramer, Brodsky, & DeCoster, 2009), with little focus on credibility aspects of attorneys. When the credibility of the attorney is examined, it is often done in two ways—correlational or via experimental manipulation.

### **Correlational Studies**

In civil trials, Haire, Lindquist, and Hartley (1999) found that plaintiff attorneys who lacked process expertise (understanding of the institutional characteristics of the court and the ideology or other predilections of individual judges) and defense attorneys who lacked substantive expertise (knowledge of legal principles in a particular area of law) were less successful in obtaining judicial support for their respective clients than attorneys who possessed these characteristics.

Similar to attorney expertise, researchers have found that the amount of courtroom experience possessed by an attorney is also related to sentence length. For example, Abrams and Yoon’s (2007) study using data from the Clark County Office of the Public Defender found that a defense attorney with 11 years of litigation experience was able to obtain an average sentence reduction of 17% (1.2 months) when compared to a defense attorney with only one year of experience. Iyengar (2010) found similar results in his study of 51 U.S. federal district courts. An additional year of experience for a defense attorney (public defender or Criminal Justice Act attorneys) decreases sentence length by about five months. Other studies have also discovered that an increase in the amount of courtroom experience an attorney possesses increases the attorney’s chance of

success (McGuire, 1995; Szmer, Johnson, & Sarver, 2007).

Courtroom experience has also been found to be related to the likelihood of incarceration. In their study of the Clark County Office of the Public Defender, Abrams and Yoon (2007) found that every ten years' worth of experience that a public defender had equated to a 1.7% reduction in the probability of incarceration. Iyengar (2010) found similar results in that a year increase in the experience of a public defender or Criminal Justice Act attorney was related to an approximate 1.2% reduction in the probability of being found guilty.

Because measuring attorney ability is one of the most difficult areas in legal research (Abrams & Yoon, 2007), in many of the correlational studies researchers must use proxies for attorney skill. For example, Abrams and Yoon (2007) and Iyengar (2007) used the defense attorneys' law school and years of experience. Szmer et al. (2007) used litigation experience, Queen's Counsel designation, and litigation team size. Shinall (2010) defined attorney skill as the ability to research, to apply the research to his client's case, and to be persuasive enough that jurors believe his version of the case facts.

Researchers have also used pre-existing instruments for measuring attorney performance. For example, Hodgson and Pryor (1984) had participants rate attorneys on 12 bipolar scales (e.g., intelligent-unintelligent, honest-dishonest, and expert-inexpert). However, these scales are generic and can be used to rate any type of source. They are not specific to aspects of attorneys.

One group of researchers developed their own instrument for measuring attorney performance. After extensive literature reviews and interviews with four Michigan attorneys, Libkuman, Stensrud, Lange, and Pfeiffelmann (2003) distributed a

questionnaire to 29 U.S. attorneys. The questionnaire consisted of items referring to the attorney's knowledge, skills, abilities, and daily work activities. Using the top 10 competency items identified by these attorneys, Libkuman et al. developed the Behavioral Assessment of Trial Attorney (BATA). The BATA instrument measures an attorney's persuasion, critical listening, oral expression, physical presence, interpersonal interaction, speech clarity, organization, adaptability, synthesis, and social perceptiveness on a 7-point Likert scale in which a 1 indicates a negative dimension of an attorney's behavior and 7 indicates a positive dimension. In two initial, correlational studies, BATA scores were related to criminal verdicts in a murder case and parental responsibility case. Higher BATA scores were related to more verdicts in the attorney's favor than lower BATA scores (Libkuman, Kimble, & Pfeiffelmann, 2004; Libkuman, Wood, & Pfeiffelmann, 2004).

More important to the current study, a factor analysis indicated that the "presentation factor" of the BATA instrument (i.e., BATA-p) is related to civil verdicts. In a study using mock jurors listening to attorneys presenting a real case, Wood and Miller (2012) found that BATA presentation factor (BATA-p) scores, which are similar to ratings of source expertise, were related to several civil verdicts across the plaintiff and defense attorneys. Increases in the defense attorney's BATA-p score led to a reduction in general damages awarded to the plaintiff, as well as an increase in the percentage of fault apportioned to the plaintiff. These authors also found that the relationship between defense and plaintiff BATA-p scores interacted with one another. Regarding special damages (e.g., medical expenses and loss of past and/or future income) awarded to the plaintiff, when the plaintiff attorney's BATA-p score was low (one standard deviation

below the mean), high defense BATA-p scores (one standard deviation above the mean) were associated with lower special damages than were low defense BATA-p scores.

When the plaintiff attorney's BATA-p score was high, the amount of special damages did not differ across defense attorneys' BATA-p scores. Regarding apportionment of fault to the defendant, when the defense attorney's BATA-p was high, low plaintiff BATA-p scores were associated with lower defendant fault than were high plaintiff BATA-p scores.

In sum, this line of research suggests that aspects of the attorney (e.g., expertise, experience, and persuasion) are related to criminal and civil verdicts. In some instances, only perceptions of the prosecutor's credibility matters. In other instances, only perceptions of the defense attorney's credibility matters. And sometimes there is an interaction between the strength of the plaintiff and defense attorney. However, one potential drawback of these studies is that they are correlational in nature and the researchers did not explicitly manipulate aspects of the attorney to examine the relationship to verdicts.

### **Experimental Studies**

In the source credibility literature, a source is often made more or less credible by explicitly manipulating the expertise or trustworthiness. For example, Copeland et al. (2011) explicitly stated in their research that one of the sources was "dishonest and untrustworthy" (p. 121). They also implied that one of the sources was an expert by stating that he "has analyzed and published over one hundred scientific papers and has also won numerous research awards" (p. 124). However, researchers do not tend to use experimental designs in which the attorney credibility is manipulated.

In addition to the prior correlational studies with the BATA instrument, it has also been used as a guide to experimentally manipulate attorney performance. Two studies used the BATA instrument to explicitly manipulate the strength of the attorney. In Wood (2006), participants viewed a mock criminal trial that included the opening statements, direct examination of an eyewitness, cross-examination of the defendant, and closing statements given by a strong or weak prosecuting attorney. The strength of the case facts were also manipulated between strong and weak. Wood found that the strength of the prosecuting attorney and the evidence were related to guilty verdicts. Participants who saw a strong prosecutor (i.e., one who had positive BATA characteristics) had an increased likelihood of rendering a guilty verdict in comparison to participants who saw a weak prosecutor (i.e., one who had negative BATA characteristics). This effect was found, independent of the strength of the evidence (i.e., there was no interaction between the attorney and evidence strength).

In a follow-up study, Wood and Libkuman (2009) used the same mock criminal trial, but added a defense attorney and manipulated the strength of both attorneys and the evidence. Once again, participants who saw a strong prosecutor, independent of the strength of the evidence, had a higher likelihood of giving guilty verdicts than participants who saw a weak prosecutor. The strength of the defense attorney was not related to the likelihood of guilty verdicts. The findings from this study are similar to Shinall's (2010) research that highlights the importance of a skilled prosecuting attorney and the unimportance of the skill of the defense attorney. Moreover, it supports the notion that "the jury will make clumsy prosecutors pay" (Shinall, 2010, p. 296) and that the O.J. Simpson verdict may have been a result of incompetent prosecution.

Overall, these studies suggest that individuals attend to the perceived credibility of sources. In some instances, the source's credibility is used as an exclusive piece of information in the decision-making process. That is, credible sources are more persuasive than non-credible sources, independent of the message. In other instances, the credibility of the source is used as a framework with which to judge additional information. Credible sources presenting weak arguments are less persuasive because message receivers expect stronger arguments. Conversely, non-credible sources can be persuasive by presenting strong arguments due to message receivers diverting their attention away from the source and to the context of the message.

Within the framework of the current study, this suggests that attorneys who are perceived as credible will be more influential in the courtroom than attorneys who are perceived as non-credible. In addition, jurors will use their perceptions of the attorney's credibility to help them decide how much weight to give to the evidence. However, as will be seen next, the level of attention given to the credibility of the attorney, as well as how the perceptions of credibility are used may depend on the individual.

## Chapter 4: Heuristic-Systematic Model

Similar to the Elaboration Likelihood Model of persuasion (Petty & Cacioppo, 1986), the heuristic-systematic model (HSM) posits that individuals may process a persuasive argument in one of two ways depending on their motivation or ability (Chen & Chaiken, 1999; Luo, Zhang, Burd, & Seazzu, 2013). When motivation or ability is high, due to factors such as increased personal relevance, individuals will process messages systematically (Chaiken, 1980). Systematic processing involves thoughtful, logical approaches to decision-making, with focus on the quality of arguments.

When motivation or ability is low, due to factors such as decreased personal relevance or time pressures, individuals will process messages heuristically (Chaiken, 1980). Heuristic processing involves a surface-level examination of arguments or use of cognitive shortcuts (e.g., the stereotype “experts can be trusted”). HSM stipulates that these cognitive heuristics must be available (stored in memory), accessible (retrievable from memory), and applicable (relevant to the decision-making task) in order to be utilized (Chen, Duckworth, & Chaiken, 1999). Although many social psychologists suggest that using heuristics is a “second-best” solution to obtaining as much information as possible, in a jury decision-making context when an optimal decision may not be attainable, heuristics may be the only solution (Gigerenzer, 2006). Whether one fully accepts this notion, it implies, at the very least, that using heuristics should not be viewed as unequivocally inferior to other routes of decision-making.

In addition to explaining the situations in which individuals will engage in systematic or heuristic processing, HSM also provides the mechanisms for such behavior. According to HSM’s sufficiency principle, individuals make decisions by attempting to

compromise between exerting as little cognitive effort as possible and fulfilling their accuracy (desire to hold accurate attitudes and beliefs), defense (desire to hold attitudes and beliefs that are congruent with one's interests or self-definitional attitudes and beliefs), or impression (desire to hold attitudes and beliefs that satisfy current social goals) motive concerns (Chen & Chaiken, 1999; Chen et al., 1999). In these situations, individuals' current level of confidence and their sufficiency threshold (the desired level of judgmental confidence) will dictate how much cognitive effort to exert. Processing should cease once individuals' confidence meets or exceeds their sufficiency threshold, but should continue (if possible) when the actual confidence level is below the sufficiency threshold (Eagly & Chaiken, 1993). Therefore, factors such as personal relevance or task importance exert their motivational effects on cognitive processing by helping to increase individuals' actual confidence or decrease their desired level of confidence.

One factor that may increase the sufficiency threshold is being required to make a decision on behalf of another individual. Chaiken (1980) argues that when recipients believe that their judgments of a message are consequential for themselves or another individual—consistent with the context of the courtroom—then they will engage in systematic processing. Conversely, when individuals believe their judgments to be inconsequential, then they will engage in heuristic processing. Prior research supports this argument, finding that inducing high task importance (individuals being told that their decisions would weigh heavily on a company's decision to release a product in the individuals' area) led to participants exhibiting more systematic processing than participants in low task importance (individuals being told that their decisions were

unimportant) conditions (Chaiken & Maheswaran, 1994). This would lead to the assumption that jurors should be processing systematically more often than not and attending primarily to the case evidence. However, there is a large body of literature to suggest that jurors attend to other case factors, such as defendant attractiveness (e.g., Jacobson & Popovich, 1983), eyewitness credibility (e.g., Shermer, Rose, & Hoffman, 2011), expert witness credibility (e.g., Cramer et al., 2009), and defendant race (e.g., ForsterLee et al., 2006). This literature suggests that there may be some additional factor influencing jurors' cognitive processing approach.

### **Need for Cognition, Source Credibility, and HSM**

Need for cognition (NFC), an individual's tendency to engage in and enjoy effortful thinking (Cacioppo et al., 1996), has been found to influence whether individuals will process systematically or heuristically (Luo et al., 2013). Individuals high in NFC tend to be more persuaded by argument quality than extraneous source factors, such as trustworthiness (Priester & Petty, 1995). Conversely, low NFC individuals tend to forgo scrutinizing a message and make a decision based upon heuristics, such as source expertise (Curseu & Curseu, 2001) and source trustworthiness (Briñol et al., 2004).

Although NFC may be defined as a proclivity to engage in effortful thought, it is a construct that taps *motivation* to think rather than a true *ability* (Cacioppo et al., 1996). Prior research has shown that NFC is correlated with intelligence in student samples, and with level of education in adult samples (see Cacioppo et al., 1996); however, low NFC individuals have been shown to engage in systematic processing in certain situational contexts. For example, an untrustworthy source can initiate deep thinking in low NFC

individuals (Kaufman et al., 1999; Priester & Petty, 1995). As predicted, argument strength had no effect on attitudes when the message was given by a highly credible source, but strong arguments from a non-credible source were considered more persuasive than weak arguments from the same source. No such interaction occurred for high NFC individuals because they were presumably attending to only the strength of the arguments (Kaufman et al., 1999).

Within the context of the current study, it seems plausible that source credibility (vis-à-vis attorney strength) may be an additional component that encourages low NFC jurors to process systematically. Specifically, if one attorney is much stronger than the other, low NFC jurors can easily make a decision (in favor of the stronger attorney), so there is no need to focus on evidence strength. However, if there are two attorneys (plaintiff and defense) who are of similar strength (or weakness), there may not be sufficient heuristic cues for a juror to make a decision, thereby causing these low NFC, heuristically processing jurors to focus on the strength of the evidence.

Although NFC is defined as a stable, dispositional trait that indicates an individual's tendency to engage in and enjoy effortful thinking (Cacioppo & Petty, 1982), it has also been viewed as an intrinsic motivation that can vary (Cacioppo et al., 1996). Similarly, research has indicated that HSM may be referring to both processing traits (Axsom, Yates, & Chaiken, 1987) and states (Chaiken, 1980).

As a result of these findings, the argument could be made that HSM and NFC are using the term "processing" the same way. Research involving NFC has found that high NFC participants had more positive attitudes toward a persuasive message when it was supported by strong rather than weak arguments, whereas argument quality did not

influence the attitudes of low NFC participants (e.g., Briñol et al., 2004; Cacioppo, Petty, & Morris, 1983). Likewise, HSM research has found that participants processing systematically were more persuaded by strong rather than weak arguments, whereas argument quality did not influence the attitudes of participants processing heuristically (e.g., Chaiken, 1980).

Additional research bolsters the argument that the underlying notions of NFC (high and low) and HSM (systematic and heuristic processing) may be, to a large extent, congruent. Chaiken (1987) found that people who were lower, versus higher, in NFC were more responsive to persuasion cues in the absence of situational inducement to process systematically. In the same study, she conducted three pilot studies that contained 20 NFC items and 8 additional items designed to tap an individuals' tendencies to rely on heuristics, and found no evidence across all studies that the two sets of items tapped different constructs. Other authors (e.g., McAuliff, Kovera, & Nunez, 2009) also mention HSM's systematic/heuristic processing components and NFC together. Legal scholars and jury consultants such as McAuliff, Ellis, and Phillips (2011) even encourage attorneys to include measures of NFC in their voir dire in order to gain a better understanding whether a potential juror is likely to process systematically or heuristically. These authors suggest that if NFC questions cannot be asked, attorneys are recommended to use education or occupation as a "loose proxy" (p. 56) that corresponds to NFC. The direct insinuation of both of these recommendations is that NFC will predict whether jurors process systematically or heuristically.

### **HSM's Three Hypotheses**

In addition to describing when and for whom systematic and heuristic processing may occur, HSM describes how these two processes may interact with one another.

Unlike other dual processing models of persuasion such as the elaboration-likelihood model (ELM; Petty & Wegener, 1999) and the cognitive-experiential self-theory (CEST; Epstein, 1990), HSM explicitly posits that heuristic and systematic processing may co-occur in several ways. These co-occurrences are defined in HSM's additivity, attenuation, and bias hypotheses.

#### **Additivity Hypothesis**

The additivity hypothesis suggests that heuristic and systematic processing can individually and directly influence the outcome of a decision-making task by creating an additive effect with one another (Chen & Chaiken, 1999). For example, when task importance or involvement is high (i.e., systematic processing) and the message content does not contradict the source heuristic (e.g., strong arguments from a highly credible source), then attitudes are influenced by a combination of heuristic and systematic processing. When task importance or involvement is low (i.e., heuristic processing), attitudes are influenced by peripheral factors (e.g., source credibility) only (Chaiken, 1980; Chaiken and Maheswaran, 1994).

Findings from several studies have supported the additivity hypothesis. For example, Chaiken and Maheswaran (1994) manipulated task importance (high or low), source credibility (high or low), and message strength (unambiguous strong, unambiguous weak, and ambiguous). In a series of path analyses, the authors found that for individuals in the high-importance and unambiguous message condition, attitude

ratings were influenced by a mixture of systematic processing vis-à-vis the strength of the arguments and heuristic processing vis-à-vis source credibility. For low-importance participants, the credibility of the source influenced attitudes, but the strength of the message did not.

Within the framework of the current study, these results suggest that a credible attorney presenting strong evidence or a non-credible attorney presenting weak evidence will result in an additive persuasive effect for those individuals processing systematically. That is, a credible attorney can improve an already strong case and a non-credible attorney can be a further detriment to an already weak case. For individuals processing heuristically, the strength of the evidence will not be influential in their decision-making. For these individuals, it will be the credibility of the attorney alone that predicts their verdicts.

### **Attenuation Hypothesis**

The attenuation hypothesis suggests that systematic processing may attenuate the influence of heuristic processing (Chen & Chaiken, 1999). This attenuation occurs in a situation in which the implications of heuristic and systematic processing are in opposition or contradict one another (Todorov, Chaiken, & Henderson, 2002). Maheswaran and Chaiken (1991) found support for the attenuation hypothesis across two studies in which participants received a positive (81% of consumers who had used a certain brand of answering machine were extremely satisfied and less than 3% were extremely dissatisfied) or negative (20% of consumers were extremely satisfied and 50% were extremely dissatisfied with the answering machine) consensus cue along with a positive or negative message. When the valence of the consensus cue and message were

congruent (e.g., positive consensus cue and positive message), participants in the high task importance condition attended to both the consensus cue and message, implying additivity. When the valence of the consensus cue and message were incongruent (e.g., positive consensus cue and negative message), participants in the high task importance condition attended to the arguments only, implying an attenuation of the heuristic cue. For low task importance participants, their attitudes were influenced by the perceived consensus opinion when the consensus cue and message were congruent. When the consensus cue and message were incongruent, however, low task participants' attitudes were influenced by the message only—further supporting the attenuation hypothesis.

However, subsequent research has not supported the attenuation hypothesis for low task importance (i.e., heuristic processing) participants. Two separate studies (Chaiken & Maheswaran, 1994; Maheswaran, Mackie, & Chaiken, 1992) indicated that the attenuation hypothesis holds only for systematic processing conditions, not heuristic processing conditions. Under heuristic processing conditions, these authors found that peripheral cues (i.e., source credibility and a favorable brand name) were related to attitudes, independent of message congruency.

These findings have utility for the current study by suggesting that a credible attorney presenting weak evidence or a non-credible attorney presenting strong evidence may result in an attenuated persuasive effect for those individuals processing systematically. This means that these individuals will focus on the strength of the evidence and not the credibility of the attorney. For individuals processing heuristically, the extrapolations to the current study are less clear. Prior research has shown that heuristic processors utilize the credibility of the source and not the strength of the arguments (Chaiken &

Maheswaran, 1994; Maheswaran et al., 1992). However, other research has shown that heuristic processors will utilize the credibility of the source and the argument strength when these two factors contradict one another (e.g., non-credible source and strong arguments) (Maheswaran & Chaiken, 1991).

The current study will operate under the assumption that participants processing systematically, but not heuristically, will attend to discrepancies in the credibility of the attorney and evidence strength. Support for this assumption comes from Chaiken and Maheswaran's (1994) assertion that Maheswaran and Chaiken's (1991) results occurred because of a "blatant level of incongruence" (p. 462) that did not exist in Chaiken and Maheswaran's study and will not exist in the current study. Maheswaran and Chaiken had participants read a scenario in which 80% of consumers liked (or disliked) a product and then read a strong message asserting that the product was inferior (or superior) to alternative brands. In the current study, as in Chaiken and Maheswaran's study, arguments will be given that support the perspective of the individual presenting them; the valence of these arguments, however, will be manipulated. None of the presenters will give information blatantly counter to their perspective.

### **Bias Hypothesis**

HSM posits a third hypothesis, the bias hypothesis, to indicate the co-occurrence of systematic and heuristic processing. According to the bias hypothesis, systematic and heuristic processing can exert an *interdependent* influence such that heuristic processing may influence systematic processing indirectly by altering the valence of thoughts (Chen & Chaiken, 1999). This interdependent influence is thought to occur only when the arguments in a persuasive message are ambiguous (Chen & Chaiken, 1999). Chaiken and

Maheswaran's (1994) research provided support for the bias hypothesis. These authors found that when participants in a high task relevant condition (i.e., systematic processors) received an ambiguous message, a high credibility source induced more positive attitudes toward a product than a low credibility source. This suggests that attitudes were mediated by a combination of heuristic processing and biased systematic processing. When high task relevant participants received an unambiguously strong or unambiguously weak message, the credibility of the source exerted an independent effect on attitudes, over and above the strength of the message. This suggests that attitudes were the result of a combination of heuristic processing and unbiased systematic processing—confirming the additivity hypothesis. Low task relevant participants, however, were influenced by source credibility, regardless of message strength—a finding that conflicts with Maheswaran and Chaiken's (1991) research that was discussed above.

These findings can be applied to the current study by suggesting that in instances where the arguments are ambiguously strong, the attitudes of individuals processing systematically will be directly and indirectly influenced by the credibility of the attorney. Conversely, the attitudes of individuals processing heuristically will be directly influenced by the credibility of the attorney, regardless of the evidence strength.

In sum, these three hypotheses have utility in the current study. They suggest that despite a juror processing systematically, the perceived credibility of an attorney may still influence a juror's decision-making. Depending on the situation, the attorney's credibility may act as an additional piece of information (additivity), an inconsequential extralegal factor (attenuation), or an important extralegal factor that helps to persuade a juror to side with one party over the other when arguments are ambiguous (bias). Moreover, these

hypotheses, as well as HSM in general, help to clarify and inform the body of literature on attorney influence as to when the credibility of the litigator may matter.

## Chapter 5: Study Overview of Hypotheses and Research Questions

Drawing upon HSM and source credibility theory, the current study will examine the interactive effects of attorney credibility, case strength, and juror cognitive processing. Specifically, the current study will examine when the credibility of the attorney matters, when the strength of the case matters, and whether there is an interaction between the two—and also whether these interact with jurors' cognitive processing traits. Based upon the hypotheses and assumptions of HSM, it is proposed that when individuals are processing heuristically, there should be a relatively greater weight given to peripheral cues that are present in the environment (Chaiken, 1980). Regarding source credibility, this means that a high credibility source will be more persuasive than a low credibility source. However, prior literature suggests that the superiority of a high credibility source relates to individuals' NFC and the strength of the arguments.

When individuals are processing systematically, there should be an increased focus on the strength of the arguments and, in some instances, a focus on peripheral cues (Chaiken, 1980). This means that attorney credibility will be influential in some instances, but not in others. More specifically, when there is a mismatch between the credibility of the attorney and the strength of the arguments (e.g., strong plaintiff evidence and non-credible plaintiff attorney), then only the strength of the arguments will influence persuasion (attenuation hypothesis). When the arguments are unambiguously strong or weak, and the credibility of the attorney does not contradict the validity of the heuristic (e.g., strong plaintiff evidence and credible plaintiff attorney), then strong arguments will be strengthened by a credible attorney or weak arguments will be weakened by a non-credible attorney (*additivity* hypothesis). When the arguments are

ambiguous, then the credibility of the attorney will influence attitudes (bias hypothesis). In this scenario, a credible attorney will be more persuasive than a non-credible attorney.

To test these assumptions, participants watched a videotaped mock civil trial in which the credibility of the plaintiff and defense attorneys (credible or non-credible) and plaintiff evidence (strong or ambiguous) were experimentally varied between conditions. Jurors' cognitive processing states (via their thought listing scores) and traits (via their NFC scores) will also be measured. Guided by source credibility and HSM, the following hypotheses and research questions were posed.

**Hypothesis 1:** NFC will be related to whether participants engage in systematic or heuristic processing, as defined by the total number of evidence and attorney-related thoughts listed by participants.

**1a:** Higher NFC scores will be related to a higher number of evidence-related thoughts, which will be indicative of systematic processing.

**1b:** Lower NFC scores will be related to a higher number of attorney-related thoughts, which will be indicative of heuristic processing.

**Research Question 1:** Are participants' NFC scores related to mock-juror decisions (i.e., liability verdicts, likelihood of causation estimates, and compensatory damages)?

**Hypothesis 2:** The credibility of the attorney will be related to mock-juror decisions.

**2a:** A credible plaintiff attorney will receive more verdicts decisions in his favor than a non-credible plaintiff attorney.

**2b:** A credible defense attorney will receive more verdicts in his favor than a non-

credible defense attorney.

**Hypothesis 3:** The strength of the plaintiff's case will be related to mock-juror decisions. Strong evidence will be related to more verdicts in the plaintiff's favor than ambiguous evidence.

**Hypothesis 4:** There will be a two-way interaction between participants' NFC scores and the credibility of the attorney. Hypotheses 4c and 4d are competing hypotheses with 6b and 7b. This is due to conflicting research findings in prior studies and the subsequent inability to predict one outcome over the other. Posing separate hypotheses will help to inform both bodies of literature.

**4a:** For low NFC participants (defined as NFC scores one standard deviation below the mean), the credibility of the plaintiff attorney will be related to mock-juror decisions. A credible plaintiff attorney will receive more verdicts in his favor than a non-credible plaintiff attorney.

**4b:** For low NFC participants, the credibility of the defense attorney will be related to mock-juror decisions. A credible defense attorney will receive more verdicts in his favor than a non-credible defense attorney.

**4c:** For high NFC participants (defined as NFC scores one standard deviation above the mean), the credibility of the plaintiff attorney will not be related to mock-juror decisions.

**4d:** For high NFC participants, the credibility of the defense attorney will not be related to mock-juror decisions.

**Hypothesis 5:** There will be a two-way interaction between participants' NFC scores and the strength of the plaintiff evidence.

**5a:** For low NFC participants, the strength of the plaintiff evidence will not be related to mock-juror decisions.

**5b:** For high NFC participants, the strength of the plaintiff evidence will be related to mock-juror decisions. Strong plaintiff evidence will be related to more verdicts in the plaintiff's favor than ambiguous plaintiff evidence.

**Hypothesis 6:** There will be a three-way interaction between participants' NFC scores, the credibility of the plaintiff attorney, and the strength of the plaintiff evidence.

**6a:** For low NFC participants, the credibility of the plaintiff attorney will be related to mock-juror decisions, regardless of the strength of the plaintiff evidence. Across both evidence conditions, a credible plaintiff attorney will receive more verdicts in his favor than a non-credible plaintiff attorney.

**6b:** For high NFC participants, the credibility of the plaintiff attorney and the strength of the plaintiff evidence will be related to mock-juror decisions, but in a different pattern from low NFC participants. In support of HSM's additivity hypothesis, a credible plaintiff attorney presenting strong evidence will receive the most verdicts in his favor in comparison to all other conditions: credible plaintiff, ambiguous evidence; non-credible plaintiff, strong evidence; and non-credible plaintiff, ambiguous evidence. In support of HSM's bias hypothesis, a credible plaintiff attorney presenting ambiguous evidence will receive more verdicts in his favor than a non-credible plaintiff attorney presenting ambiguous evidence. In support of HSM's attenuation hypothesis, a non-credible plaintiff attorney presenting strong evidence will receive more verdicts in his favor than a non-credible plaintiff attorney presenting ambiguous evidence.

**Hypothesis 7:** There will be a three-way interaction between participants' NFC

scores, the credibility of the defense attorney, and the strength of the plaintiff evidence.

**7a:** For low NFC participants, the credibility of the defense attorney will be related to mock-juror decisions, regardless of the strength of the plaintiff evidence. Across both evidence conditions, a credible defense attorney will receive more verdicts in his favor than a non-credible defense attorney.

**7b:** For high NFC participants, the credibility of the defense attorney and the strength of the plaintiff evidence will be related to juror decisions, but in a different pattern from low NFC participants. In support of HSM's additivity hypothesis, a non-credible defense attorney facing strong plaintiff evidence will receive the fewest verdicts in his favor in comparison to all other conditions: non-credible defense, ambiguous evidence; credible defense, strong plaintiff evidence; and credible defense, ambiguous evidence. In support of HSM's bias hypothesis, a credible defense attorney facing ambiguous plaintiff evidence will receive more verdicts in his favor than a non-credible defense attorney facing ambiguous plaintiff evidence. In support of HSM's attenuation hypothesis, a credible defense attorney facing strong plaintiff evidence will receive fewer verdicts in his favor than a credible defense attorney facing ambiguous plaintiff evidence.

**Research Question 2:** Is there a four way-interaction between participants' NFC scores, the credibility of the plaintiff attorney, the credibility of the defense attorney, and the strength of the plaintiff evidence?

**Research Question 3:** For low NFC participants, is the strength of the plaintiff's evidence related to verdicts when the attorneys do not differ on their credibility?

**3a:** Is the strength of the plaintiff's evidence related to civil litigation decisions when the plaintiff and defense attorneys are both credible?

**3b:** Is the strength of the plaintiff's evidence related to civil litigation decisions when the plaintiff and defense attorneys are both non-credible?

**Research Question 4:** For high NFC participants, are HSM's hypotheses supported when there are two attorneys? Does the credibility of the attorneys dictate whether this hypothesis would be supported?

**4a:** Is the additivity hypothesis supported when there are two attorneys? Does the credibility of the attorneys dictate whether this hypothesis would be supported?

**4b:** Is the bias hypothesis supported when there are two attorneys? Does the credibility of the attorneys dictate whether this hypothesis would be supported?

**4c:** Is the attenuation hypothesis supported when there are two attorneys? Does the credibility of the attorneys dictate whether this hypothesis would be supported?

## Chapter 6: Method

### Participants

Four hundred and forty-six participants were recruited through the online survey website, Amazon Mechanical Turk (MTurk) and had \$5 deposited into their MTurk account. The demographic make-up of the participants was varied: 54.8% ( $n = 244$ ) were male, 69.3% ( $n = 309$ ) were age 21 to 39, 42.8% ( $n = 191$ ) had a bachelor's degree or higher, and 75.6% were White ( $n = 337$ ). See Table 1 for a demographic breakdown. In addition to varied demographics, the location of participants was highly variable. Individuals from 42 states participated in the current study.

Research by Buhrmester, Kwang, and Gosling (2011) indicates that MTurk participants are more demographically diverse than standard Internet samples and more diverse than university samples. Moreover, the data obtained from MTurk has been found to be similar to published studies.

Although some researchers (e.g., Diamond, 1997; Wiener, Krauss, & Lieberman, 2011) suggest that researchers should test hypotheses on college students and then attempt to replicate these findings with a community sample, a community sample is only being used in the current dissertation. This is being done for a few reasons. First, the goal of the study is to get the most accurate examination of the relationship between cognitive processing states, NFC, attorney credibility, evidence strength, and civil litigation decisions. The findings will be more robust if a generalizable, realistic sample is used. The second reason is due to time constraints on the project. A prior mock trial study was conducted by the author and after one year (two semesters) of data collection, a viable

Table 1

*Demographic Breakdown (in Percent) for Participants*

	Valid Percent
<b>Age</b>	
18-20	.9
21-29	36.8
30-39	32.5
40-49	16.6
50-59	10.8
60-69	2.2
70 or older	.2
<b>Sex</b>	
Male	54.8
Female	45.2
<b>Education</b>	
Some high school or less	.7
High school graduate/GED	11.7
Trade/technical school	4.0
Some college	28.5
Associate's degree	12.3
Bachelor's degree	33.0
Some graduate school	3.1
Graduate degree/post graduate study	6.7
<b>Race</b>	
African-American	8.7
Asian-American	8.5
Caucasian	75.6
Hispanic	4.3
Native American	1.1
Other	1.8

student sample (with complete data to analyze and passing the attention checks) of only 35 participants was obtained.

One potential issue with only including community members is the possibility

that there may be an imbalance in which the sample comprises of mainly high or low NFC individuals. Prior research has been inconsistent on whether students or community members are higher in NFC. Some studies have found that community members have higher NFC scores than students (e.g., McCabe & Krauss, 2011), while other studies have found that students score higher on the NFC measure than community members (e.g., McCabe, Krauss, & Lieberman, 2010). If one group tends to be higher on NFC than another group, then this may create a possible confound for the study. However, a pilot study was conducted on a sample of 72 participants (24 community members and 48 students) using the 18-item NFC scale. Students ( $M = 17.00$ ,  $SD = 21.86$ ) and community members ( $M = 24.13$ ,  $SD = 22.67$ ) did not differ on their NFC scores,  $p = .20$ .

### **Trial Stimulus**

Participants watched a videotaped mock trial (*Summers v. Chemco Chemicals Inc.*). This was a civil trial in which the plaintiff, Kathy Summers, alleges that she developed ovarian cancer from drinking local groundwater that was contaminated with a hazardous chemical called Ketamine. The defendant, Chemco Chemicals Inc., manufactured the Ketamine. This case has been used in other civil litigation research (e.g., Bornstein, Whisenhunt, Nemeth, & Dunaway, 2002) and was altered for the purposes of the current study.

The mock trial contained opening statements, direct and cross-examination of witnesses, and closing statements from the plaintiff and defense attorneys. At the completion of the attorney presentations, participants heard jury instructions from the judge. See Appendix B for the jury instructions and Appendix C for the trial transcripts. Videotapes were used instead of other possible trial stimuli (i.e., audiotapes or written

text) because prior research indicates that credibility manipulations are affected by visual representations of the source (Andreoli & Worchel, 1978; Worchel, Andreoli, & Eason, 1975).

Actors were recruited to play the plaintiff and defense attorneys. Actors were also recruited to play the role of Dr. Raymond Jones (plaintiff expert witness), Dr. Mark Davis (defense expert witness), and the judge.

### **Experimental Manipulations**

The study utilized a 2 (plaintiff attorney credibility: credible vs. non-credible) x 2 (defense attorney credibility: credible vs. non-credible) x 2 (plaintiff evidence strength: strong vs. ambiguous) factorial design. The credibility of the attorneys and the strength of the case evidence were manipulated across the eight conditions.

#### **Attorney Credibility**

To manipulate the attorney's perceived credibility, each component of the BATA instrument was used and altered to give the impression of a credible or non-credible source. Throughout the trial, the credible attorney portrayed behaviors indicative of a rating of 5 to 7 on each of the 10-items. A non-credible attorney portrayed behaviors indicative of a rating of 1 to 4 on each of the 10-items. Appendix C contains the BATA manipulations.

Prior studies have successfully used the same approach to manipulate attorney credibility. In Wood's (2006) study, the credible prosecutor averaged 5.02 to 5.86 on each of the 10 BATA items and the weak prosecutor averaged 2.20 to 2.95. In Wood and Libkuman's (2009) study, the credible prosecutor averaged 5.18 to 6.07 on each of the 10 BATA items, while the credible defense attorney averaged 5.22 to 6.34. For a non-

credible prosecutor, the mean values ranged from 3.46 to 4.17 and the mean values of a non-credible defense attorney ranged from 3.40 to 4.31. A definition of the 10-items, as well as descriptions of how, when, and at what strength each item were present in the case is described in detail below.

It should be noted that there is some overlap between BATA items. For example, the oral expression item indicates that "...Attorney makes understandable points by speaking clearly." Likewise, the speech clarity item indicates that "...[the attorney] pronounces all words in an easily understandable manner..." However, each item contains aspects that are independent of the others. For example, the oral expression item also indicates that "...[the attorney uses]...everyday language that everyone can understand..." The speech clarity item does not contain such language. The experimental manipulations of the attorney strength attempted to highlight the orthogonal aspects of each BATA item, while also including those aspects that may overlap with one another.

**Persuasion.** The persuasion component is defined as the ability to convince a jury to adopt the attorney's point of view using factual knowledge or emotional connections. A 7 indicates "Attorney combines the facts of the case, uses theory, outlines and explains the evidence, and integrates visuals and technology into their presentations so that the information is easily understood," while a 1 indicates "Attorney makes an unclear presentation that is not easily understood and not very convincing. Attorney does not utilize any visuals or technology into his presentation and does not make connections between the facts, theory and evidence of the case."

**Credible.** The credible plaintiff attorney laid out the facts of the case in a clear and persuasive manner. He also spoke very candidly to the jury during his opening and

closing statements. In the opening statements, the attorney gave a brief overview of the civil justice system and explained how it is different from the criminal justice system. He used a glass of water as a prop to introduce the case. He also used a picture of the plaintiff, Mrs. Summers, to introduce her to the jury. In closing arguments, he attempted to gain sympathy for the plaintiff.

The credible defense attorney conceded liability in his opening and closing statements. However, he passionately argued that the evidence does not prove the defendant's chemical is the cause of the ovarian cancer.

*Non-credible.* The non-credible plaintiff attorney used minimal physical gestures and lacked expressiveness while he laid out the facts of the case. He also avoided attempting to evoke sympathy from the jury. He used a picture of the plaintiff, Mrs. Summers, to introduce her to the jury. However, he momentarily presented the picture upside down. The non-credible defense attorney begrudgingly admitted liability and unemotionally argued that the evidence does not prove the defendant's chemical is the cause of the ovarian cancer.

**Critical Listening.** Critical listening is considered the ability to listen to what other people are saying, retain that information, and ask appropriate questions. A 7 indicates "Attorney asks relevant and important questions during cross-examination and asks appropriate follow-up questions. Attorney also has excellent listener/speaker interaction with witnesses by anticipating responses of witnesses and paying attention to witnesses and clients" and a 1 indicates "Attorney ignores previous information, does not pay attention, does not follow the sequence of events, and may even ask unusual questions. Therefore, the attorney does not anticipate the responses of witnesses and also

does not ask important cross-examination follow-up questions.”

**Credible.** The credible plaintiff attorney asked appropriate follow-up questions during direct and cross-examination. Appropriate questions during direct examination are ones that elicit important information from the witness. Appropriate questions during cross-examination are ones that challenge the testimony of the witness. The credible defense attorney exhibited the same behaviors of the credible plaintiff attorney during his direct and cross-examinations.

**Non-credible.** The non-credible plaintiff attorney asked incorrect questions during cross-examination and had to be corrected by the witness. In addition, he failed to ask appropriate follow-up questions during direct and cross-examinations. Similarly, the non-credible defense attorney engaged in the same behaviors as the non-credible plaintiff attorney.

**Oral Expression.** Oral expression is the ability to communicate information and ideas orally so others will understand. A 7 indicates “Attorney makes understandable points by speaking clearly and using everyday language that everyone can understand without insulting individuals. Attorney connects evidence and facts of the case from each phase of the trial” and a 1 “Attorney does not cover all points of the trial, rambles, uses complicated language, and speaks so low that people have a hard time hearing.”

**Credible.** Credible plaintiff and defense attorneys used language/words that were easily understandable to the jury and successfully projected their voice.

**Non-credible.** Non-credible plaintiff and defense attorneys fumbled their words, used overly complicated words in place of simpler ones (e.g., “antecedent” in place of

“cause,” “lacks the ability” instead of “cannot,” and “consuming” instead of “drinking”), and were asked by the judge to speak up.

**Physical Presence.** Physical presence is the quality of self-assurance and sincerity that permits the attorney to achieve rapport with jury and judge. A 7 indicates “Attorney expresses confidence by using open body language that is non-threatening and has good eye contact. Attorney has a sincere tone of voice and a professional appearance” and a 1 indicates “Attorney does not display confidence, is poorly dressed and is unprofessional.”

**Credible.** The credible plaintiff attorney wore conservative clothing (i.e., dark suit, white shirt, and red tie). During his opening statements, he emphasized his major points by freely gesturing with his hands. He also kept good eye contact with the jury. During his closing statements, he exhibited the same behaviors and gently knocked on the podium to emphasize one of his points.

The credible defense attorney also wore conservative clothing (i.e., dark suit, white shirt, and gold tie; see Appendix D for a photo of the ties). He also freely gestured with his hands and kept good eye contact with the jury during opening and closing statements.

**Non-credible.** The non-credible plaintiff attorney wore a dark suit, gaudy tie (red, black, and grey), and a ‘flashy’ black and gold watch. His dress shirt was also disheveled (i.e., the buttons on the collar were not buttoned). During his opening statements he used minimal gestures and had poor eye contact with the jury. During his closing statements, he exhibited the same behaviors.

The non-credible defense attorney wore a dark suit, gaudy tie (bright pink and

black), and a ‘flashy’ gold watch. See Appendix E for photos of the gaudy ties and ‘flashy’ watches. His dress shirt was also wrinkled. During his opening and closing statements, he used minimal gestures and had poor eye contact with the jury.

**Interpersonal Interaction.** Interpersonal interaction is the ability to establish effective exchanges with witness(es). A 7 indicates “Attorney establishes excellent rapport with witnesses that involves trust, and also elicits excellent cooperation from witnesses. Attorney asks relevant questions of witnesses that elicit any relevant personal information” and a 1 indicates “Attorney elicits hostile reactions from witnesses, asks confusing and poor questions, leading to uncooperative witnesses. Attorney may also argue with witnesses and demonstrate a lack of practice and preparation that leads to wasted time and confusion.”

**Credible.** Credible plaintiff and defense attorneys interacted with witnesses in a non-threatening way, even during cross-examination.

**Non-credible.** The non-credible plaintiff attorney interacted with the plaintiff’s expert witness in a pleasant manner, but, at times, harassed the defense’s expert witness (e.g., speak in a condescending tone). The non-credible defense attorney interacted with the defense’s expert witness in a pleasant manner, but, at times, harassed the plaintiff’s expert witness (e.g., speak in an aggressive tone).

**Speech Clarity.** Speech clarity refers to the ability to pronounce and enunciate speech so that it is understandable to a listener. A 7 indicates “Attorney uses proper English at all times, pronounces all words in an easily understandable manner and speaks loud enough in order for everyone to hear” and a 1 indicates “Attorney mumbles, uses improper grammar, and cannot be heard or understood very well most of the time.”

**Credible.** Credible plaintiff and defense attorneys spoke clearly during all facets of the trial.

**Non-credible.** Non-credible plaintiff and defense attorneys mumbled during their respective direct and cross-examinations. The witnesses asked the attorneys to repeat themselves. In addition, these attorneys used improper grammar during their opening and closing statements (e.g., saying “were seeping” instead of “was seeping”).

**Organization.** Organization is the ability to classify multiple pieces of information and/or ideas. A 7 indicates “Attorney organizes important aspects of the case through the use of opening and closing arguments that emphasize the important points of the case, and uses graphics, which lists or presents the important facts visually. Attorney also has all files organized and knows where important papers are at all times” and a 1 indicates “Attorney fails to tie important evidence to the facts of the case, and is unprepared and does not know where all papers are. Attorney does not have any visuals to show the important facts of the case.”

**Credible.** Credible plaintiff and defense attorneys emphasized the important points of their respective cases in a clear and concise manner during opening and closing statements. During their respective direct and cross-examinations, they were aware of important information and the location/order of their questions.

**Non-credible.** The non-credible plaintiff attorney fumbled with his papers during his opening statements, as if he is unsure of his next point. During his direct-examination, he lost his place and was confused as to the location of his next question. During his cross-examination, he made an incorrect statement regarding the witness’s testimony and

had to be corrected. The non-credible defense attorney exhibited the same behaviors as the non-credible plaintiff attorney.

**Adaptability.** Adaptability is the ability to “switch gears” from phase to phase of a trial without loss of efficiency or composure. A 7 indicates “Attorney is prepared for unexpected events that may occur during the trial and deals with them appropriately without losing composure. Attorney thinks ahead during the trial, is overly prepared, and knows exactly what comes next” and a 1 indicates “Attorney is confused and unprepared when confronted with unexpected events in court. Attorney is caught off guard, and may lose control in the courtroom because he is unprepared for the next phase of the trial.”

**Credible.** The credible plaintiff attorney had a technical issue (video equipment did not display his photographs) during his direct examination. He quickly noticed the issue, corrected it immediately, and moved on to his questions.

The credible defense attorney had one of his questions objected to during direct examination. He quickly rephrased the question and moved on without any hesitation.

**Non-credible.** The non-credible plaintiff attorney had the same technical issue regarding the video equipment during his direct examination. It took him a moment to notice the issue. Once he noticed, he panicked, tried to fix it himself and then gave up. He asked the witness to explain what was in the pictures.

The non-credible defense attorney had one of his questions objected to during direct examination. He asked a similar question and that one was objected to as well. He became flustered and took a moment before rephrasing the question properly.

**Synthesis.** Synthesis is defined as the ability to make varied information coherent and to reorganize it for different approaches. A 7 indicates “Attorney easily handles

unexpected rulings or information and reorganizes arguments appropriately. Attorney has an exceptional knowledge of case law and presents facts favorably for their client, including the use of graphics” and a 1 indicates “Attorney does not have the ability to handle unexpected rulings, may not understand all information that is presented to him, and may misuse material for his client. Attorney does not incorporate any graphics into his presentation.”

**Credible.** The credible plaintiff attorney used several pictures during his direct examination of the plaintiff’s expert: 1) three-legged frog, 2) fish with an extra fin, 3) a laboratory rat with tumors, and 4) graph detailing the results of the expert’s research on Ketamine. The credible defense attorney used two graphs (the results of a national survey on women 30-40 years of age developing ovarian cancer and the expert’s research findings) during his direct examination of the defense’s expert.

**Non-credible.** The non-credible plaintiff and defense attorneys did not use visual aids in their presentations.

**Social Perceptiveness.** Social perceptiveness involves the attorney’s ability to be aware of other’s reactions and understand why and how people react to certain situations. A 7 indicates “Attorney has the ability to bring important information out of a witness, can read how the jury is reacting to the testimony and then use these responses appropriately. Attorney knows how to deal with witnesses to elicit the necessary testimony” and a 1 indicates “Attorney does not read others’ emotions and therefore does not ask appropriate follow-up questions, and may even push the witness because of the inability to understand their emotions.”

**Credible.** Credible plaintiff and defense attorneys thanked the jury for their hard

work and dedication, and asked them to return a verdict in the attorneys' respective favor. In addition, the credible defense attorney empathized with the plaintiff's injuries.

*Non-credible.* Non-credible plaintiff and defense attorneys thanked the jury and asked that they return a verdict in the attorneys' respective favor. In addition, the non-credible defense attorney did not empathize with the plaintiff's injuries.

### **Evidence Strength**

The evidence was manipulated between strong and ambiguous in favor of the plaintiff. The perspective of the plaintiff was used for a few reasons. The first reason was for clarity regarding which party's evidence was being considered "strong" or "ambiguous." The strength of the plaintiff's evidence was being used as the conceptual reference point for "evidence."

The second reason for using the perspective of the plaintiff's evidence strength is that the burden of proof rests on the plaintiff. In the civil justice system, the individual or entity who has suffered an alleged injury (i.e., plaintiff) files a formal complaint against the individual or entity (i.e., defendant) that the plaintiff alleges is responsible for his or her injury (Federal Rules of Civil Procedure Rule 3). In addition, the instructions that are read to a jury prior to deliberation contain some variation of the language "In this case, the plaintiffs must prove every essential part of their claims by a preponderance of the evidence."

The plaintiff evidence remained constant across all conditions. The plaintiff presented testimony from an expert witness, Dr. Raymond Jones. Dr. Jones testified that he collected wildlife and water samples from a lake next to the dump site. The wildlife samples showed deformations (e.g., fish with an extra fin and frogs with a third leg) and

infertility. Only Ketamine was found in the lake water. Dr. Jones also conducted a laboratory study in which he gave rats large doses of Ketamine from five chemical manufacturers. The defendant's Ketamine was included in this study. The results showed that rats exposed to the defendant's Ketamine developed 10 times more health complications (e.g., tumors and skin discolorations) than the average. Ovarian cancer was not a very common health problem, but it occurred most often in rats that took the defendant's Ketamine. See Appendix G for the plaintiff's demonstrative evidence.

To create the strong and ambiguous evidence conditions, the defense's evidence was manipulated. In the strong evidence condition, the defense presented little contradictory evidence. The defendant's expert witness, Dr. Mark Davis, presented data from a national survey that shows that 3 out of every 1,000 women age 30-40 develops ovarian cancer, regardless of what chemicals they are exposed to. He also testified about research he has conducted on women who have unknowingly ingested high amounts of one of four different chemical products, one of which was Ketamine, or no chemicals at all. The results showed that cancer rates were only 10% higher for women in the Ketamine group compared to all other groups. However, Dr. Davis did not specifically compare different brands of Ketamine. Dr. Davis also testified that he took water samples from the lake next to the dump site. He tested the water and found no other chemicals besides Ketamine. In the ambiguous evidence condition, three facts were altered from the strong evidence condition: (1) the 3 out of every 1,000 women figure was changed to 10 out of every 1,000 women; (2) the 10% difference in cancer rates was changed to no difference in cancer rates; and (3) Bromomethane was found in the lake water in addition to Ketamine. See Appendix H for the defense's demonstrative evidence.

The rationale for manipulating the defense's evidence instead of the plaintiff's evidence was done for two reasons. First, one side's evidence needed to be held constant to reduce the complexity of the research design. Second, the decision was made to hold the plaintiff's evidence constant because it would allow the plaintiff to always put forth a plausible case. By manipulating the defense's evidence, the plausibility of this case could be strengthened or weakened without diminishing the underlying facts that precipitated the lawsuit. For example, a plaintiff could have an ambiguous case due to moderately strong evidence against the defendant and the defendant having weak evidence to refute the plaintiff's claims. Conversely, a plaintiff could have an ambiguous case due to both parties having strong or moderately strong evidence to refute one another's claims. In both of these instances, the law dictates that participants make decisions based upon whether the plaintiff has proven his or her case by a preponderance of the evidence. It is not based upon a preponderance of the evidence that the defense has disproven the plaintiff's case.

A weak evidence condition has been excluded from the current study for two reasons. First, was to keep the number of conditions at a manageable level of eight. Including a weak evidence condition would have led to 12 conditions (2 x 2 x 3 factorial design). The second reason weak evidence was excluded was because it is highly probable that a case containing weak plaintiff evidence would be dismissed prior to trial.

### **Pre-Testing of Experimental Manipulations**

The attorney credibility and strength of evidence manipulations were both pre-tested to ensure they were eliciting the desired outcomes.

#### **Attorney Credibility**

The attorney credibility was pre-tested in a two-stage process. Stage 1 involved written descriptions of the attorneys' behaviors throughout the trial (credible plaintiff attorney: 502 words; non-credible plaintiff attorney: 429 words; credible defense attorney: 370 words; and non-credible defense attorney: 445 words). Participants read the descriptions and rated the attorneys' behavior on the BATA instrument. See Appendix F for the written attorney performance descriptions. Separate participants rated the plaintiff and defense attorneys to ensure that the behaviors of one attorney did not influence the ratings of the other attorney. Wood (2006) successfully used the same pre-test approach to assess the attorney credibility.

In the current study, the pre-tests were successful. For the plaintiff and defense attorneys, there was a significant difference on all 10 BATA items, all  $ps < .001$ . The credible plaintiff attorney had a higher score on each of the 10 BATA items than the non-credible plaintiff attorney. Similarly, the credible defense attorney had a higher score on each of the 10 BATA items than the non-credible defense attorney.

In a separate pre-test condition, participants rated photographs of the plaintiff and attorneys on dimensions of attractiveness, likeability, friendliness, and perceived credibility on a 7-point Likert scale, with higher scores indicative of more positive perceptions. This pre-test was to ensure neutrality for all individuals or, at the least, neutrality for the plaintiff and similarity between attorneys. In addition, prior literature

indicates that the plaintiff's physical attractiveness has been found to be related to civil verdicts (Stephan & Tully, 1977). The picture of the woman selected for the plaintiff had scores ranging from 4.67 to 5.14 across the four dimensions of attractiveness, likeability, friendliness, and perceived credibility. This suggests that participants viewed her as neutral to somewhat positive on each of these dimensions.

There was a significant difference between the two individuals chosen to play the plaintiff and defense attorneys on their attractiveness ratings,  $t(43) = 3.38$ ,  $p = .002$ ,  $d = .46$ . The actor chosen to play the defense attorney ( $M = 4.18$ ,  $SD = 1.33$ ) was perceived as more attractive than the actor chosen to play the plaintiff attorney ( $M = 3.57$ ,  $SD = 1.30$ ). As a result of this finding, the perceived attractiveness of the attorneys was included as a question in the main study.

Stage 2 involved participants viewing the videos of either the plaintiff or defense attorney's full presentation (opening statements, direct examination, cross examination, and closing statements) and evaluating the attorney on attractiveness, animation, likeability, and credibility. The attractiveness, animation, and likeability aspects were measured using a 7-point Likert scale, with higher scores indicative of more positive perceptions. The credibility was assessed using the BATA instrument and a single item credibility question (Overall, how credible or non-credible is the attorney?) on a 7-point Likert scale from 1 = very non-credible to 7 = very credible. As expected, the credible plaintiff attorney had a higher total BATA score and was perceived as more credible, animated, and likeable, than the non-credible plaintiff attorney, all  $ps < .001$ . Similarly, the credible defense attorney had a higher total BATA score and was perceived as more credible, animated, and likeable than the non-credible defense attorney, all  $ps < .001$ .

In addition to rating the attorney credibility, the credibility of the expert witnesses was also pre-tested on a 7-point Likert scale (1 = very non-credible to 7 = very credible). This was done because prior research indicates that jurors' perceptions of expert witnesses' credibility are related to verdicts (Bornstein, 2004; Shermer et al., 2011). There was a significant difference between the plaintiff and defense expert witness's credibility ratings in the strong evidence condition,  $t(115) = -3.93, p < .001, d = .83$ . The plaintiff expert witness ( $M = 5.19, SD = 1.36$ ) was perceived as more credible than the defense expert witness ( $M = 4.53, SD = 1.37$ ). There was no significant difference between the expert witnesses on perceive credibility in the ambiguous evidence condition,  $p = .09$ . As a result of this finding, questions regarding the credibility of the expert witnesses were added to the main study and used as control variables.

### **Evidence Strength**

The evidence conditions were pretested with community members prior to using them in the study. Participants read either an 807 word summary (strong evidence) or an 889 word summary (ambiguous evidence) of the case (see Appendix I). In addition, they read the jury instructions, rendered a liable verdict, indicated the likelihood that the defendant caused the plaintiff's injuries, awarded compensatory damages (if any), and rated the pieces of evidence for each respective party. It was expected that the strong evidence condition would be related to a higher number of verdicts and evidence strength ratings than the ambiguous evidence condition. There was no significant difference between the strong and ambiguous condition on any of the evidence measures or verdict ratings, all  $ps > .10$ . However, all of the ratings were trending in the correct direction. As a result, the 10 out of every 1,000 women figure offered by the defense expert witness

was changed to 15 out of every 1,000 women for the main study. Increasing the incidence of ovarian cancer in women, regardless of whether they had ingested Ketamine, was intended to provide stronger evidence that the defendant's chemical may not have caused the plaintiff's injuries. No other changes to the strength of the evidence were made because caution had to be taken to ensure that the level would not be reduced to a level that was considered "weak."

### **Procedure**

Participants were randomly assigned to one of the eight conditions. After being assigned to a condition, participants completed an initial questionnaire with several attitudinal variables (i.e., tort reform and sense of entitlement) and the need for cognition (NFC) scale. They then completed a demographics measure (see Appendix J) that served as a distracter task to reduce participant suspicion of the connection between the attitudinal measures and the legal decision-making task. More specifically, the distracter task was to diminish a possible concern that completing the NFC scale (a questionnaire that asks about individuals' affinity toward deep thinking) inadvertently primed some participants to begin thinking harder about the case than they may have, had they not completed the NFC scale.

They then watched a videotaped mock civil trial, completed a three-minute thought listing task, rendered verdict decisions (i.e., liability, likelihood of causation, and compensatory damages), rated the strength of evidence, rated the attorney and expert witness credibility, rated the attorney attractiveness, completed an emotion questionnaire, answered two questions about their prior jury experience, and responded to a attention check question. The attention check question asked respondents to identify a number that

was prominently displayed in the middle of the screen for ten seconds. This helped to identify which participants were multi-tasking during the mock trial and therefore not likely to be attending to aspects of the attorneys aside from their verbal behavior.

To control for possible order effects, presentation of the strength of evidence and credibility of attorney questions were counterbalanced across conditions. In half of the conditions, participants were asked these questions before rendering a verdict. In the other half of the conditions, participants were asked these questions after rendering a verdict.

### **Independent Variables**

Several independent variables were used the study. Each one is detailed below. See Appendix J for all measures.

**Need for cognition.** Need for cognition was measured using the 18-item short form of the Need for Cognition Scale (NFC; Cacioppo, Petty, & Kao, 1984). Participants indicated their level of agreement with each item using a 5-point Likert scale ranging from 1 = extremely uncharacteristic of me to 5 = extremely characteristic of me. Sample items include “Thinking is not my idea of fun” (reverse-scored) and “I would prefer complex to simple problems.” Whether the 34-item or 18-item scale is used, prior research shows that the NFC is highly reliable, with Cronbach’s alphas greater than or equal to .85 across multiple studies (Cacioppo et al., 1996).

### **Control Variables**

Based upon prior research that indicates that pre-existing attitudes are related to civil verdicts, several control variables were used. Each is listed below.

**Tort reform & Psychological entitlement.** Participants also completed the seven-item Litigation Crisis scale (Hans & Lofquist, 1994) which asked several questions concerning the tort reform movement. Similarly, there was also a nine-item scale Psychological Entitlement Scale (Campbell, Bonacci, Shelton, Exline, & Bushman, 2004) which assessed jurors' sense of entitlement. Because none of these scales qualified any of the findings reported here, they are not reported further.

**Emotion.** Prior research indicates that individuals' affective states may influence their cognitive processing style and the information they attend to (Bodenhausen, Sheppard, & Kramer, 1994). To examine any possible influences of emotion, participants completed a slightly condensed, 10-item version of the Juror Negative Affect Scale (JUNAS; Bright & Goodman-Delahunty, 2006) in which they rated the negative emotions (e.g., angry, disgusted, and upset) they felt in response to the case scenario. In addition, four statements (interested, happy, excited, and concentrating) from the Positive and Negative Affect Schedule – Expanded Form (PANAS-X; Watson & Clark, 1994) were included. All responses were on a 5-point scale ranging from 1 = not at all to 5 = extremely.

**Expert witness credibility.** Based upon prior literature (e.g., Bornstein, 2004; Shermer et al., 2011) and the pre-test results, participants responded to the question, “How credible or non-credible are the expert witnesses?” on a 7-point Likert scale ranging from 1 = very non-credible to 7 = very credible.

### **Manipulation Checks**

The successfulness of the manipulations was measured using several questions. The attorney credibility and strength of the plaintiff's case was measured.

**Attorney credibility.** Attorney credibility was measured using the 10-item BATA instrument. Prior research has shown the BATA to have good internal consistency with Cronbach's alphas ranging from .81 to .97 across four studies utilizing nine attorneys (Libkuman, Kimble et al., 2004; Libkuman, Wood et al., 2004; Wood, 2006; Wood & Libkuman, 2009).

Attorney credibility was also measured using two questions: "Overall, how credible or non-credible is the plaintiff attorney?" and "Overall, how credible or non-credible is the defense attorney?" These questions were answered on a 7-point Likert scale ranging from 1 = very non-credible to 7 = very credible.

**Evidence strength.** Participants answered several questions about the perceived strength of the plaintiff's evidence. The six pieces of evidence were rated on a 7-point Likert scale ranging from 1 = very weak to 7 = very strong. Participants also responded to the question, "Overall, how strong or weak do you believe the plaintiff's case is?" on the same 7-point Likert scale.

### **Dependent Variables**

Participants responded to three verdict questions: (1) liability, (2) likelihood defendant caused the plaintiff's injuries, and (3) compensatory damage awards. See Appendix J for verdict form. In addition, participants' processing state was measured.

**Liability.** Participants responded to the liability verdict by circling *Liable* or *Not Liable*.

**Likelihood defendant caused the plaintiff's injuries.** Participants indicated an estimate of the likelihood that the defendant caused the plaintiff's injury on a 0 to 100 scale. They were instructed that any rating above 50 indicates a belief that the defendant

was more likely than not to have caused the harm. This rating scale conceptually mirrors the notion of preponderance of the evidence (i.e., greater weight of the evidence).

**Compensatory damage awards.** If participants found the defendant liable for the plaintiff's injuries, they awarded her compensatory damages in dollars. Compensatory damages are awarded to the plaintiff to replace what was lost (e.g., wages or medical bills). The attorneys offered guidance on the amount of damages to award, but participants were able to award any value they saw fit.

**Processing state.** Participants' processing states were measured using a thought listing task. Participants were given three minutes to write down anything that came to mind regarding the videotaped mock trial. After three minutes, the online survey automatically advanced to the next set of questions. Three minutes is a common length of time used in cognitive processing research (e.g., Chaiken, 1980; Chaiken & Maheswaran, 1994). Two independent coders examined the thoughts for references to the plaintiff attorney, defense attorney, evidence, or any other aspect of the trial (e.g., jury instructions). The total number of references to each of these trial aspects was calculated.

## Chapter 7: Results

### Reliability of Measures

The reliability of the measures (predictor and manipulation variables) included in the analyses was examined. The plaintiff and defense BATA instruments were highly reliable, with respective alphas of .97 and .94. The NFC scale was also highly reliable,  $\alpha = .96$ .

### Manipulation Checks

The plaintiff and defense attorneys' credibility conditions were examined to ensure the manipulations were successful; analyses indicate that they were successful. Mean BATA scores were created by averaging across the 10 BATA instrument items. The mean BATA scores for the plaintiff attorney credibility condition were in the predicted direction,  $F(1, 444) = 445.92, p < .001, \eta_p^2 = .50$ . The mean BATA score for a credible plaintiff attorney ( $M = 5.74, SD = 0.88$ ) was higher than the mean BATA score for a non-credible plaintiff attorney ( $M = 3.55, SD = 1.28$ ). The mean BATA scores for the defense attorney credibility condition were in the predicted direction,  $F(1, 444) = 123.99, p < .001, \eta_p^2 = .22$ . A credible defense attorney ( $M = 5.27, SD = 0.98$ ) had a higher mean BATA score than a non-credible defense attorney ( $M = 4.19, SD = 1.07$ ).

The success of the evidence manipulation was also examined. There was no significant difference between the strong and ambiguous evidence on the single item evidence rating,  $F(1, 443) = 1.31, p = .25, \eta_p^2 = .00$ . This suggests that the evidence manipulation was not successful. The values were, however, trending in the expected direction with strong evidence ( $M = 5.06, SD = 1.52$ ) being rated higher than ambiguous evidence ( $M = 4.89, SD = 1.48$ ).

The ratings for the six pieces of evidence were also examined using a MANOVA to further test the effectiveness of the evidence manipulation. As expected, there was a significant difference between the strong and ambiguous conditions on the strength ratings of the defense evidence. The strength rating of the evidence regarding the national prevalence of ovarian cancer in women was higher in the ambiguous condition ( $M = 4.69$ ,  $SD = 1.48$ ) than the strong condition ( $M = 4.23$ ,  $SD = 1.51$ ),  $F(1, 436) = 10.13$ ,  $p = .002$ ,  $\eta_p^2 = .02$ . As a reminder, higher ratings for defense-related evidence equates to weaker plaintiff evidence. The strength rating of the evidence regarding other chemicals in the water was higher in the ambiguous condition ( $M = 4.71$ ,  $SD = 1.37$ ) than the strong condition ( $M = 4.33$ ,  $SD = 1.56$ ),  $F(1, 436) = 7.16$ ,  $p = .008$ ,  $\eta_p^2 = .02$ . The strength rating of the evidence regarding the defense expert's laboratory testing was higher in the ambiguous condition ( $M = 4.44$ ,  $SD = 1.36$ ) than the strong condition ( $M = 4.10$ ,  $SD = 1.50$ ),  $F(1, 436) = 5.97$ ,  $p = .015$ ,  $\eta_p^2 = .01$ . As expected, there was no significant difference between the strong and ambiguous conditions on the strength ratings of the plaintiff evidence (deformations and infertility in the animals, presence of Ketamine in the water samples, and plaintiff expert's laboratory tests involving rats), all  $ps > .05$ .

As a final examination of the evidence manipulation, a mean evidence rating was created by averaging across the six evidence items. The defense evidence ratings were reverse coded. The six-item evidence measure had good reliability,  $\alpha = .74$ .

The results indicated that the manipulation was effective,  $F(1, 444) = 7.85$ ,  $p = .005$ ,  $\eta_p^2 = .02$ . The mean evidence rating was higher in the strong evidence condition ( $M = 4.73$ ,  $SD = .90$ ) than in the ambiguous evidence condition ( $M = 4.49$ ,  $SD = 0.88$ ).

Overall, these findings indicate that the manipulation was successful when examining all

pieces of evidence versus a single item measure of the strength of the plaintiff's case.

### **Attorney Credibility and BATA Score**

To examine whether the BATA instrument is measuring attorney credibility, correlational analyses were conducted. The mean BATA score of a given attorney and the single item credibility question (e.g., "Overall, how credible or non-credible is the defense attorney?") were highly correlated. For the plaintiff attorney, the correlation was  $r(445) = .89, p < .001$ . For the defense attorney, the correlation was  $r(446) = .74, p < .001$ .

### **Initial Data Screening**

Several analyses were conducted to assess preliminary concerns regarding data integrity and possible control variables. The first analysis concerned the attractiveness of the attorneys. Unlike the pre-tests, there was no difference between the attorneys on perceived attractiveness,  $p = .99$ . Thus, attorney attractiveness was not included in any statistical models.

The second analysis concerned whether the dependent measures would differ depending on the timing of the verdict decisions. Liable verdict, likelihood of causation, compensatory damage awards, mean plaintiff attorney BATA score, mean defense attorney BATA score, and mean evidence rating did not differ depending on the order of administration of these measures, all  $ps > .10$ .

The third analysis concerned the attention check question. Twenty-four (5.4%) participants did not pass the attention check question. The participants who failed the attention check question were not removed from analysis, however. There was no difference between individuals who passed and failed the attention check question on the

dependent measures (liability verdict, likelihood of causation, and compensatory damage awards), all  $ps > .10$ . Analyses were also conducted with and without participants who failed the attention check question. The results of these analyses were almost identical, with only small variations in the coefficients and test statistics. Hence, analyses were based on the full sample.

### **Thought Listing Task**

To examine whether NFC was related to the number of thoughts listed by participants (Hypothesis 1), two independent raters (the first author and a fellow doctoral candidate) categorized participants' thoughts into several categories. Thoughts were coded as relating to the plaintiff attorney (AP), defense attorney (AD), both attorneys (AB), evidence/case (E), or other (O). In addition, the valence of the comments related to the attorneys was also recorded as positive (+), negative (-), or neutral. For example, a positive comment about the plaintiff attorney was coded as AP+, a negative comment about the plaintiff attorney was coded as AP-, and a neutral comment about the plaintiff attorney was coded without a valence indicator as AP.

The current study only used valence ratings for the defense and plaintiff attorneys, but not for the evidence. The rationale was that there was an interest in whether the credibility manipulations would evoke a differential response from participants (i.e., non-credible attorneys eliciting negative responses and credible attorneys eliciting positive responses). It was assumed that strong evidence would elicit more positive responses from participants than ambiguous evidence. Moreover, the evidence ratings should provide information regarding participants' responses, with higher ratings indicating more positive ratings.

Prior to coding thoughts, the first author trained the second individual on the coding scheme during a one-hour training session. During the training session, the coding scheme was explained and the two coders practiced on example statements. See Appendix K for the codebook. After the training session, all comments for each of the 446 participants were coded by both individuals. The coders had a high level of agreement with a Cohen's kappa coefficient of .84 across all 3,318 thoughts.

After assessing the reliability, the number of thoughts for each category was averaged across the coders. On average, there were 1.54 ( $SD = 1.60$ ) attorney-related, 4.43 ( $SD = 2.69$ ) evidence-related, and 1.37 ( $SD = 1.68$ ) "other" related thoughts.

A 2 (Plaintiff Attorney Credibility) x 2 (Defense Attorney Credibility) x 2 (Plaintiff Evidence Strength) factorial design with NFC as continuous predictor was deployed to examine the relationship between NFC and participants' thoughts. For each analysis, potential outliers were examined for each model. If outliers were identified, the analysis was repeated without these values. Outliers were not removed if results were consistent and the model results were stable (i.e., minor deviations in coefficients, test statistics, and alpha values). Unless noted otherwise, results reported here pertain to the full sample of participants.

### **Attorney-Related Thoughts**

The first analysis focused on the total number of attorney-related thoughts. A significant main effect for Plaintiff Attorney Credibility,  $F(1, 430) = 105.70, p < .001, \eta_p^2 = .20$ , showed that participants listed more thoughts when the plaintiff attorney was non-credible rather than credible ( $M = 2.26$  vs.  $M = 0.85$ ). This main effect, however, was qualified by a Plaintiff Attorney Credibility x Defense Attorney Credibility interaction,

$F(1, 430) = 4.07, p = .04, \eta_p^2 = .01$ . As indicated in Figure 1, when the plaintiff attorney was credible and the defense attorney was non-credible, more thoughts were listed about the attorneys than when both of them were credible ( $M = 1.06$ , vs.  $M = 0.64$ ), pairwise  $p = .03$ . When the plaintiff attorney was non-credible, there was no difference in the number of thoughts listed about the attorneys across either Defense Attorney Credibility condition (non-credible:  $M = 2.19$  vs. credible:  $M = 2.33$ ),  $p = .48$ . Because the number of attorney-related thoughts was independent of participants' level of NFC, all  $F(1, 430) < 2.16, p > .05, \eta_p^2 < .001$ , there was no support for Hypothesis 1b.

Follow-up analyses focused on the valence (positive or negative) of the thoughts and whom they were directed toward (plaintiff or defense attorney). The number of

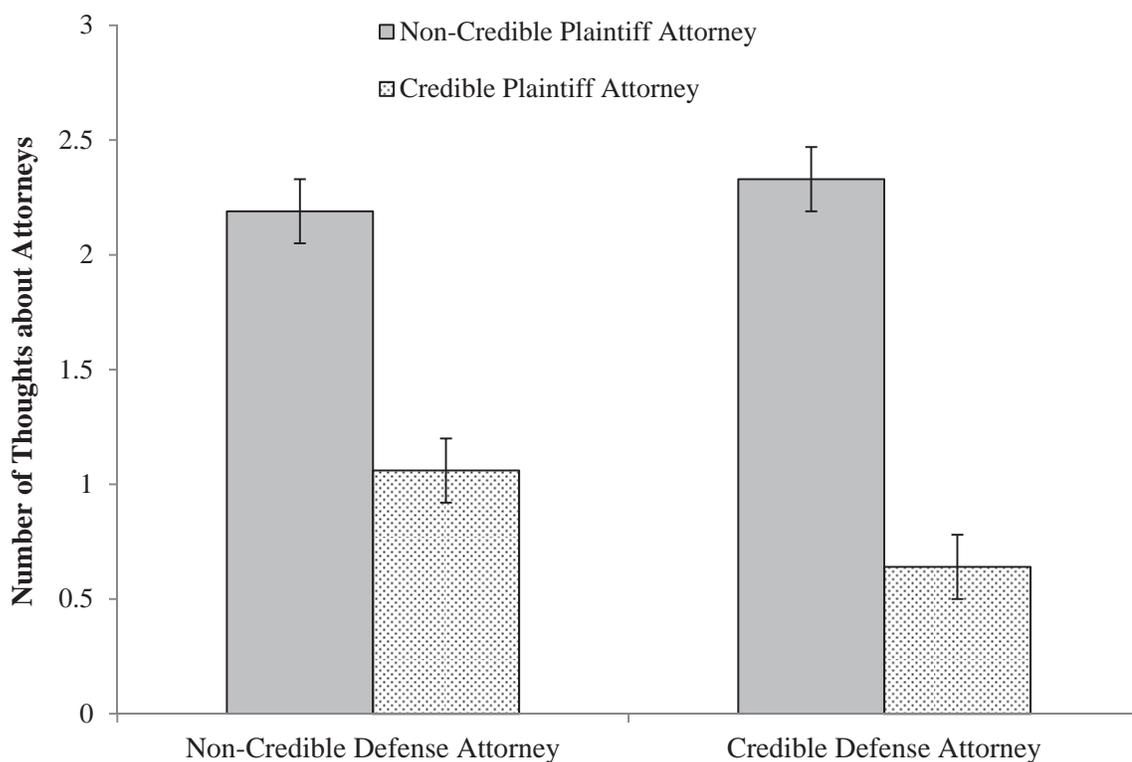


Figure 1. Mean Number of Thoughts Listed about Attorneys by Plaintiff Attorney Credibility and Defense Attorney Credibility

thoughts in each category was submitted to a separate Plaintiff Attorney Credibility x Defense Attorney Credibility x Plaintiff Evidence Strength factorial analysis with NFC as a continuous predictor.

**Positive thoughts about plaintiff attorney.** As could be expected, a main effect for Plaintiff Attorney Credibility,  $F(1, 430) = 24.54, p < .001, \eta_p^2 = .05$ , revealed that a credible plaintiff attorney received more positive thoughts than a non-credible one ( $M = 0.16$  vs.  $M = 0.02$ ). Interestingly, the plaintiff attorney also received more positive thought when the defense attorney was credible versus non-credible ( $M = 0.13$  vs.  $M = 0.05$ ),  $F(1, 430) = 7.89, p = .005, \eta_p^2 = .02$ .

These main effects were qualified by a Plaintiff Attorney Credibility x Defense Attorney Credibility interaction,  $F(1, 430) = 7.83, p = .005, \eta_p^2 = .02$ . As summarized in the upper left quadrant of Table 2, a credible plaintiff attorney received more positive thoughts when paired with a non-credible defense attorney compared to when paired with a credible defense attorney, pairwise  $p < .001$ . Conversely, a credible plaintiff attorney received more positive thoughts than a non-credible plaintiff attorney when paired with a non-credible defense attorney, pairwise,  $p < .001$ .

**Negative thoughts about the plaintiff attorney.** A main effect,  $F(1, 430) = 203.25, p < .001, \eta_p^2 = .32$ , revealed that more negative thoughts were listed about the plaintiff attorney when he was non-credible than when he was credible ( $M = 1.25$  vs.  $M = 0.07$ ). Similarly, a main effect was also found for Defense Attorney Credibility,  $F(1, 430) = 15.55, p < .001, \eta_p^2 = .04$ , that pointed to more negative thoughts about the plaintiff attorney being listed when the defense attorney was credible rather than non-credible ( $M = 0.82$  vs.  $M = 0.50$ ).

Again, Plaintiff Attorney Credibility and Defense Attorney Credibility interacted,  $F(1, 430) = 10.46, p = .001, \eta_p^2 = .02$  (see Table 2, upper right quadrant). Across both Defense Attorney Credibility conditions, more negative thoughts were listed about a non-credible plaintiff attorney than a credible plaintiff attorney, pairwise  $ps < .001$ . However, the pattern of negative thoughts within the Plaintiff Attorney Credibility conditions looked different depending on the credibility of the defense attorney. When the plaintiff attorney was non-credible, he received more negative thoughts when his opposing counsel was credible rather than non-credible, pairwise  $p < .001$ . When the plaintiff attorney was credible, there was no difference in the number of negative thoughts listed about him across defense attorney credibility conditions,  $p = .61$ .

**Positive thoughts about the defense attorney.** The expected main effect,  $F(1, 430) = 20.13, p < .001, \eta_p^2 = .05$ , showed more positive thoughts being listed about a credible defense attorney rather than a non-credible defense attorney ( $M = 0.25$  vs.  $M = 0.08$ ). And again, a corresponding main effect,  $F(1, 430) = 50.05, p < .001, \eta_p^2 = .10$ , revealed participants recording more positive thoughts about the defense attorney when he was accompanied by credible rather than non-credible plaintiff attorney ( $M = 0.29$  vs.  $M = 0.03$ ). The significant interaction term,  $F(1, 430) = 13.52, p < .001, \eta_p^2 = .03$ , showed that the number of positive thoughts about the defense attorney was higher when the opposing counsel was non-credible versus credible, pairwise  $ps < .05$ . However, when the plaintiff attorney was non-credible, more positive thoughts were listed about a credible defense attorney compared to a non-credible one, pairwise  $p < .001$  (see mean in the lower left quadrant of Table 2). When the plaintiff attorney was credible, a similar

Table 2

*Means of Plaintiff Attorney Credibility x Defense Attorney Credibility Interaction*

## Thoughts about Plaintiff Attorney

Defense Attorney		Positive		Negative	
		Credible	Non-Credible	Credible	Non-Credible
Plaintiff Attorney	Credible	0.08 <sup>a</sup>	0.23 <sup>b</sup>	0.10 <sup>a</sup>	0.04 <sup>a</sup>
	Non-Credible	0.02 <sup>a</sup>	0.02 <sup>a</sup>	1.55 <sup>b</sup>	0.96 <sup>ab</sup>

## Thoughts about Defense Attorney

Defense Attorney		Positive		Negative	
		Credible	Non-Credible	Credible	Non-Credible
Plaintiff Attorney	Credible	0.04 <sup>a</sup>	0.01 <sup>a</sup>	0.26 <sup>a</sup>	0.69 <sup>b</sup>
	Non-Credible	0.45 <sup>b</sup>	0.14 <sup>ab</sup>	0.21 <sup>a</sup>	0.30 <sup>a</sup>

*Note:* Means within each quadrant that do not share the same superscript differ at  $p < .05$ .

number of positive thoughts were listed about credible and non-credible defense attorneys,  $p = .56$ .

**Negative thoughts about the defense attorney.** Again, main effects for Defense Attorney Credibility,  $F(1, 430) = 24.45$ ,  $p < .001$ ,  $\eta_p^2 = .05$ , and Plaintiff Attorney

Credibility,  $F(1, 430) = 16.37, p < .001, \eta_p^2 = .04$ , showed more negative thoughts about a non-credible than a credible defense attorney ( $M = 0.50$  vs.  $M = 0.23$ ), and more negative thoughts about the defense attorney when the plaintiff attorney was credible rather than non-credible ( $M = 0.47$  vs.  $M = 0.26$ ). Once again, an interaction revealed these differences occurred unevenly across experimental conditions,  $F(1, 430) = 9.92, p = .002, \eta_p^2 = .02$  (see Table 2 lower right quadrant for means). A non-credible defense attorney was the target of more negative thoughts when the plaintiff attorney was credible rather than non-credible, pairwise  $p < .001$ . However, when the defense attorney was credible, there was no difference in the number of negative thoughts listed about him across the Plaintiff Attorney Credibility conditions,  $p = .53$ ; yet, when paired with a credible plaintiff attorney, participants listed more negative thoughts about the non-credible compared to the credible defense attorney,  $p < .001$ .

Overall, the findings indicate that participants are contrasting the credibility of the attorneys against one another and discrepancies in credibility result in differences in the valence of thoughts. Whenever a credible attorney is paired with a non-credible one, the credible one will “attract” positive thoughts from participants, and the non-credible one will “attract” negative thoughts compared to when both attorneys do not differ in their credibility. There was no evidence that the frequency of valenced thoughts was related to or moderated by NFC. All main effects of NFC and interactions involving NFC were non-significant,  $ps > .05$ . This further indicates a lack of support for Hypothesis 1b.

### **Evidence-Related Thoughts**

The next analysis examined the number of evidence-related thoughts. Responses from six participants were identified as potential outliers based on standardized residuals

greater than 3. Excluding outliers increased the amount of explained variance ( $R^2 = .16$  versus  $.13$ ) and resulted in a more stable model. The presented results are from the reduced sample with  $N = 440$ .

As predicted, a main effect was found for NFC,  $F(1, 424) = 6.28, p = .013, \eta_p^2 = .02$ . Higher levels of NFC were associated with a higher number of evidence-related thoughts. This finding confirms Hypothesis 1a that high NFC participants would list more thoughts about the evidence than low NFC participants.

A main effect emerged for Plaintiff Attorney Credibility,  $F(1, 424) = 56.38, p < .001, \eta_p^2 = .12$ . More thoughts were listed about the evidence when the plaintiff attorney was credible compared to non-credible ( $M = 5.05$  vs.  $M = 3.43$ ). This, however, was qualified by a significant Plaintiff Attorney Credibility x Defense Attorney Credibility interaction,  $F(1, 424) = 4.34, p = .04, \eta_p^2 = .01$ . Pairwise comparisons indicated that participants for whom a credible plaintiff attorney was paired with a credible defense attorney thought more about the evidence compared to when the same plaintiff attorney was paired with a non-credible defense attorney ( $M = 5.37$  vs.  $M = 4.73$ ),  $p = .03$ .

As a final analysis of the thought listing task, the zero-order correlations between evidence and attorney-related thoughts were examined. As indicated in Table 3, several significant relationships were found. The number of thoughts about the evidence was negatively correlated with several variables: the number of thoughts about the attorneys, the number of negative thoughts about the plaintiff attorney, the number of negative

Table 3

*Zero-Order Correlations between Number and Valence of Thoughts*

	Evidence	Attorneys	Plaintiff Attorney	
			Negative	Positive
Attorneys	-.37**	-----	.77**	.21**
Plaintiff Attorney				
Negative	-.31**	.77**	-----	-.12*
Positive	-.03	.21**	-.12*	-----
Defense Attorney				
Negative	-.13**	.39**	.01	.39**
Positive	-.21**	.52**	.52**	-.04

Note: \*\* $p < .01$ ; \* $p < .05$

thoughts about the defense attorney, and the number of positive thoughts about the defense attorney, all  $ps < .01$ . As participants thought more about these factors, the less they thought about the evidence.

As expected, the number of thoughts about the attorneys was positively correlated with negative and positive thoughts about both attorneys, all  $ps < .001$ . Also as expected, the number of negative thoughts about the plaintiff attorney was negatively correlated with positive thoughts about the plaintiff attorney,  $p = .012$ . What was unexpected, though, was the positive correlation between the number of thoughts about the plaintiff and defense attorneys. When participants listed positive thoughts about one attorney, they subsequently listed negative thoughts about the other attorney and vice versa,  $ps < .001$ .

### Liability

Of the 446 participants, 317 (71.1%) believed that the defendant was liable for the plaintiff's injuries. To test all hypotheses and examine all research questions pertaining to liability, a 2 (Plaintiff Attorney Credibility) x 2 (Defense Attorney Credibility) x 2 (Plaintiff Evidence Strength) Generalized Linear Model with a logit link function and NFC as continuous predictor was used.

In support of Hypothesis 2a, a main effect on liability for plaintiff attorney credibility,  $\chi^2(1, N = 446) = 13.29, p < .001$ , showed that a credible plaintiff attorney was more likely than a non-credible plaintiff attorney to elicit a liable verdict ( $M = .81$  vs.  $M = .64$ ). Similarly, a main effect for plaintiff evidence strength,  $\chi^2(1, N = 446) = 5.02, p = .025$ , revealed that, when the evidence strongly supported the plaintiff's case, the likelihood of a liable verdict was higher than when the evidence was ambiguous ( $M = .78$  vs.  $M = .68$ ). This supports Hypothesis 3.

These main effects were qualified by a non-hypothesized Plaintiff Attorney Credibility x Defense Attorney Credibility x Evidence Strength interaction,  $\chi^2(1, N = 446) = 4.01, p = .045$ . Pairwise comparisons in the strong evidence condition revealed a significant difference between the credible and non-credible plaintiff attorneys when the defense attorney was non-credible,  $p = .007$ , but not when the defense attorney was credible,  $p = .81$ . As indicated in Figure 2, the likelihood of a liable verdict was higher for participants who were exposed to strong evidence, a non-credible defense attorney, and a credible plaintiff attorney ( $M = .89$ ) than participants who saw strong evidence, a non-credible defense attorney, and a non-credible plaintiff attorney ( $M = .68$ ).

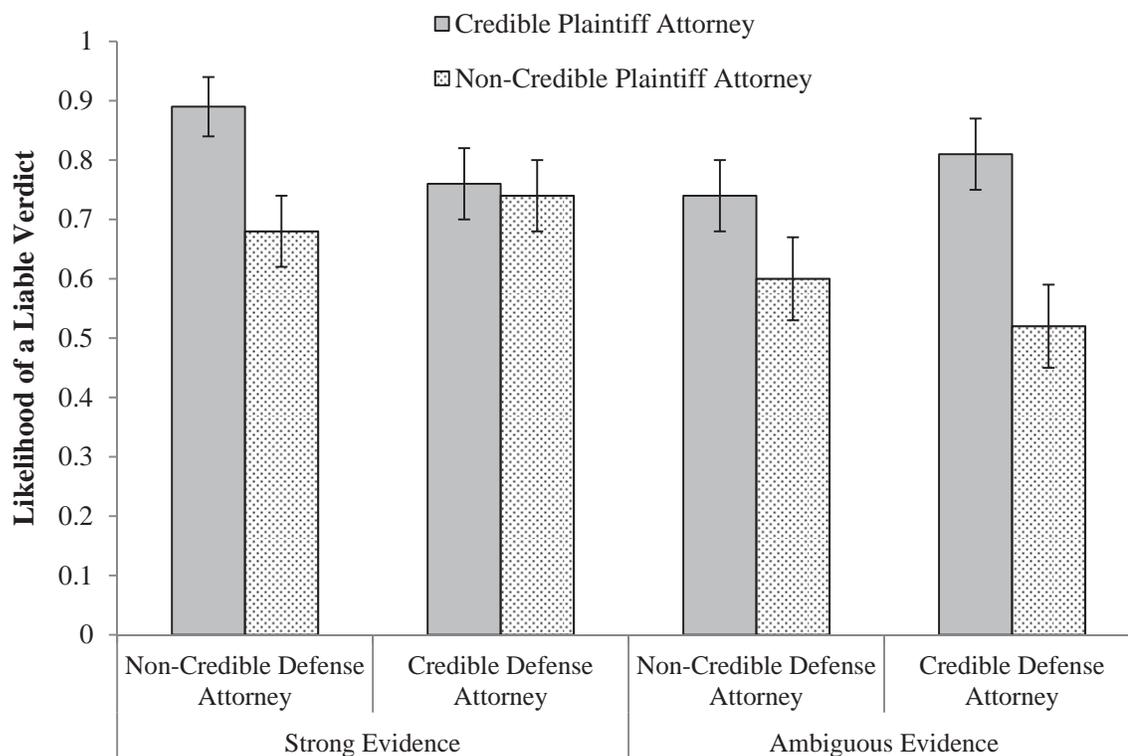


Figure 2. Plaintiff Attorney Credibility x Defense Attorney Credibility Interaction by Evidence on Liability Verdict

In the ambiguous evidence condition, a significant difference was found between plaintiff attorney credibility when the defense attorney was credible,  $p = .001$ , but not when the defense attorney was non-credible,  $p = .11$ . Participants who were exposed to ambiguous evidence and a credible defense attorney had a higher likelihood of a liable verdict when the plaintiff attorney was credible ( $M = .81$ ) versus non-credible ( $M = .52$ ).

A significant Plaintiff Attorney Credibility x NFC interaction was also found,  $\chi^2(1, N = 446) = 10.96, p = .001$ . For high NFC,  $p < .001$ , but not low NFC participants,  $p = .79$ , the likelihood of a liable verdict was higher for a credible plaintiff attorney than a non-credible plaintiff attorney ( $M = .88$  vs.  $M = .59$ ). Although it was hypothesized that Plaintiff Attorney Credibility and NFC would interact, the current pattern was not

expected and thus does not support Hypotheses 4a and 4c. The non-significant main effects and interactions do not support all other hypotheses and answer each research question in the negative. See Appendix A for a concise table of all indications of support/non-support and affirmative/negative responses.

### **Likelihood of Causation**

On average, participants estimated the likelihood that the defendant is responsible for the plaintiff's injuries to be 61.39% ( $SD = 26.77$ ). All research questions and hypotheses pertaining to likelihood of causation were examined using a 2 (Plaintiff Attorney Credibility) x 2 (Defense Attorney Credibility) x 2 (Plaintiff Evidence Strength) General Linear Model (GLM) with NFC as continuous predictor.

An initial main effect,  $F(1, 430) = 8.51, p = .004, \eta_p^2 = .02$ , revealed that likelihood estimates were higher for the credible plaintiff attorney ( $M = 64.93, SD = 25.59$ ) than the non-credible plaintiff attorney ( $M = 57.66, SD = 27.52$ ), supporting Hypothesis 2a. This main effect was qualified by a Plaintiff Attorney Credibility x NFC interaction,  $F(1, 430) = 7.10, p = .008, \eta_p^2 = .02$  (see Figure 3). For high NFC participants, the likelihood of causation estimates were higher for a credible plaintiff attorney ( $M = 69.12, SD = 37.68$ ) than a non-credible plaintiff attorney ( $M = 54.94, SD = 37.71, p < .001$ ). Yet, for low NFC participants, likelihood of causation estimates did not differ between credible and non-credible plaintiff attorneys,  $p = .88$ . This relationship was counter to what was expected for high and low NFC participants and does not support Hypotheses 4a and 4c. The results imply that participants who habitually engage in effortful thinking seemed to rely on the credibility of the plaintiff attorney as a valuable piece of information, which supported their conclusion that the

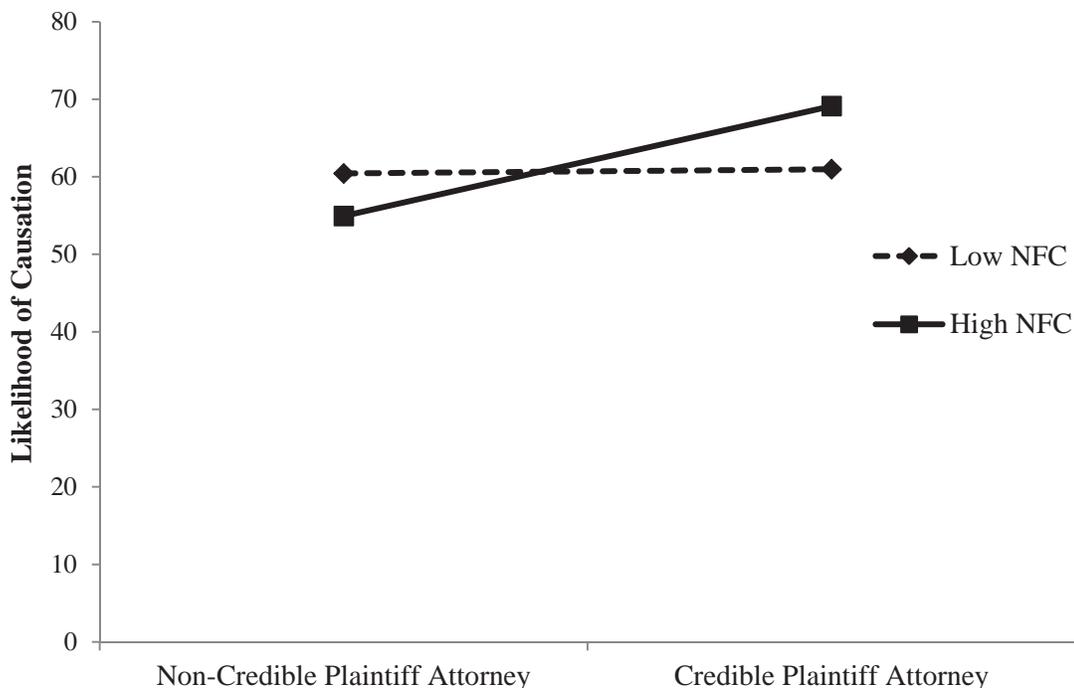


Figure 3. Plaintiff Attorney Credibility x NFC Interaction on Likelihood of Causation

defendant was responsible. All remaining research questions were answered in the negative and all other hypotheses were not supported.

### Compensatory Damages

Of the 313<sup>2</sup> participants who allocated compensatory damage awards, the average award was \$916,759.42 ( $SD = \$3,533,335.46$ ) and the median award was \$500,000, but the distribution was highly skewed and kurtotic. Due to concerns about the distribution of the compensatory damage awards, three groups were created: “less than amount asked,” “amount asked for,” and “more than amount asked.” The “less than amount asked” group ( $n = 106$ ) contained all damage awards less than \$500,000—the amount the plaintiff was asking for. The “amount asked for” group ( $n = 147$ ) contained all damage awards of

<sup>2</sup> Four participants indicated the defense was liable for the plaintiff’s injuries, but did not provide a concrete damage award. These individuals were excluded from analysis.

\$500,000. The “more than amount asked” group ( $n = 60$ ) contained all damage awards higher than \$500,000. This grouping variable was then treated as an ordinal variable in all analyses.

An ordered logistic regression model was used to analyze this tri-categorical outcome measure, with Plaintiff Attorney Credibility, Defense Attorney Credibility, Plaintiff Evidence Strength as categorical predictors, and NFC as continuous predictor. The model included all relevant main effect and interaction terms to examine all research questions and hypotheses pertaining to compensatory damage awards. Preliminary examination confirmed that the parallel lines regression assumption had been met with the chi-square from the Brant test being non-significant,  $\chi^2(15, N = 313) = 16.17, p = .37$ .

A significant main effect for Plaintiff Attorney Credibility,  $b = 1.03, se = .45, p = .02$ , indicated that plaintiff attorney credibility translates into the amount of compensatory damages awarded to the plaintiff and a credible plaintiff attorney is able to secure more money for his client than a non-credible plaintiff attorney. This finding supports Hypothesis 2a. As indicated in Figure 4, the probability of being in the “less than amount asked” group was lower for a credible plaintiff attorney (.24) than a non-credible plaintiff attorney (.47). The probability of being in the “amount asked for” was higher for a credible plaintiff attorney (.50) than a non-credible plaintiff attorney (.42). The probability of being in the “more than amount asked” groups was higher for a credible plaintiff attorney (.26) than a non-credible plaintiff attorney (.11). All other main

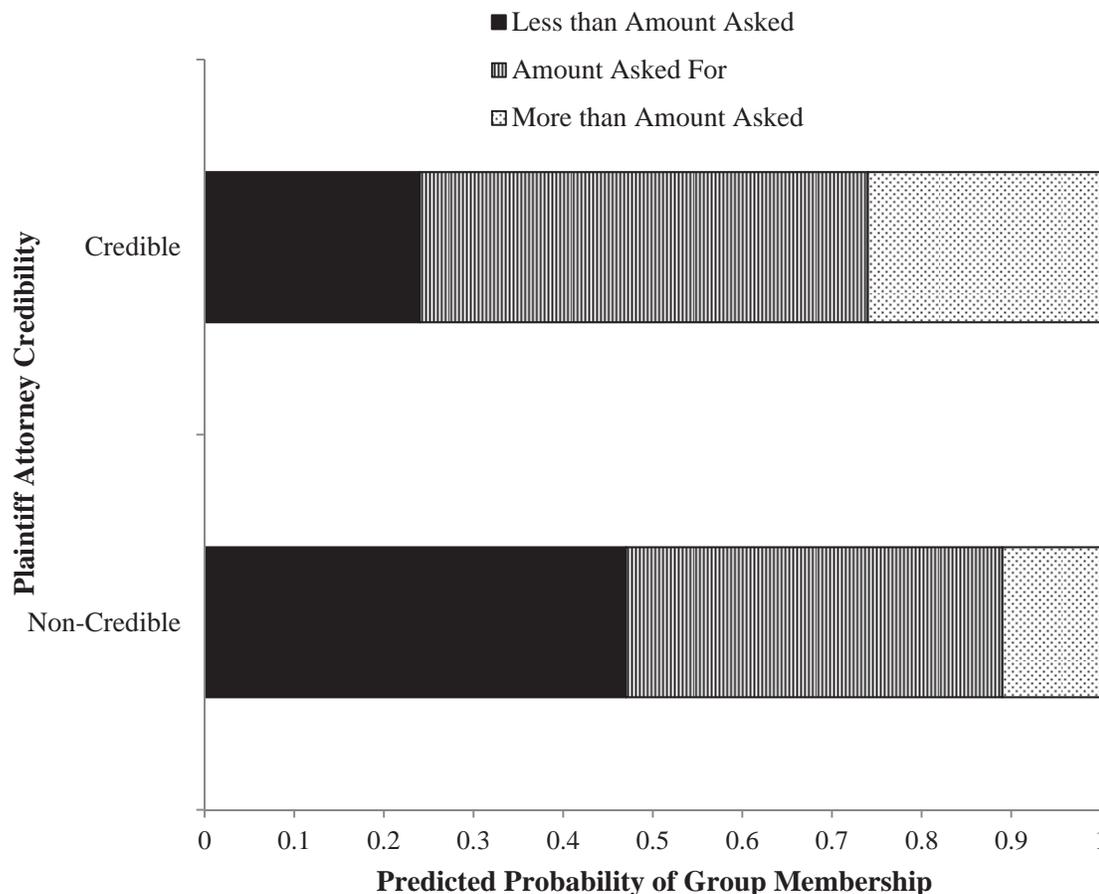


Figure 4. Predicted Probabilities of Compensatory Damage Award Groups by Plaintiff Attorney Credibility

effects and interactions were not significant,  $ps > .05$ , thereby offering non-support for the remaining hypotheses and answering all research questions in the negative.

### Examining Additional Variables

The additional measured variables (plaintiff expert witness credibility, defense expert witness credibility, positive emotions, and negative emotions) were analyzed to further inform the experimental findings. A 2 (Plaintiff Attorney Credibility) x 2 (Defense Attorney Credibility) x 2 (Plaintiff Evidence Strength) GLM with NFC as continuous predictor was used to carry about these analyses.

## Evaluation of Expert Witnesses

**Plaintiff Witness.** Six responses were identified as outliers based on standardized residuals greater than 3. The pattern of results did not look similar with and without the outliers (see footnote). As a result, the presented results are from the reduced sample with  $N = 440$ .

There was a main effect for Plaintiff Attorney Credibility,  $F(1, 424) = 4.20, p = .04, \eta_p^2 = .01$ .<sup>3</sup> Participants rated the plaintiff expert witness's credibility higher when the plaintiff attorney was credible compared to non-credible ( $M = 5.90$  vs.  $M = 5.71$ ).

**Defense Witness.** The expert witness of the defense was evaluated as more credible when the attorney for the defense was credible compared to non-credible ( $M = 4.89$  vs.  $M = 4.56$ ),  $F(1, 430) = 7.72, p = .006, \eta_p^2 = .02$ . In addition, a Plaintiff Attorney Credibility x Evidence Strength x NFC interaction,  $F(1, 430) = 4.08, p = .04, \eta_p^2 = .01$  revealed that for low NFC participants, when the plaintiff attorney was non-credible, the defense expert witness was rated as more credible when the evidence was ambiguous compared to strong ( $M = 4.99$  vs.  $M = 4.37$ ),  $p = .01$ . However, for low NFC participants, the defense expert witness credibility ratings did not differ when the plaintiff attorney was credible,  $p = .88$ . Likewise, for high NFC participants the defense expert witness credibility ratings were similar across levels of Plaintiff Attorney Credibility and Evidence Strength, all  $ps > .05$ .

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<sup>3</sup> The model with the outliers produced a consistent main effect for Plaintiff Attorney Credibility,  $F(1, 430) = 4.85, p = .03, \eta_p^2 = .01$ . However, the model with the outliers also produced a significant Plaintiff Attorney Credibility x Defense Attorney Credibility x Evidence x NFC four-way interaction,  $F(2, 430) = 3.61, p = .03, \eta_p^2 = .02$ , that was not present in the model without the outliers,  $p = .11$ . To be consistent with the outlier removal criteria used for the evidence-related thoughts, the model without outliers was retained.

### Participant Emotion

**Positive emotions.** Higher levels of NFC were related to higher levels of positive emotion,  $F(1, 429) = 16.08, p < .001, \eta_p^2 = .04$ , though this main effect was qualified by a significant Evidence Strength x NFC interaction,  $F(1, 429) = 3.77, p = .05, \eta_p^2 = .01$ . High NFC participants reported more positive emotion when the evidence was strong compared to when it was ambiguous ( $M = 2.75$  vs.  $M = 2.59$ ),  $p = .05$ ; yet, for low NFC participants there was no difference,  $p = .40$ .

**Negative Emotion.** The only significant term was a main effect for plaintiff attorney credibility,  $F(1, 429) = 12.21, p = .001, \eta_p^2 = .03$ , indicating that participants experienced more negative emotions when the plaintiff attorney was credible ( $M = 2.29$ ) compared to non-credible ( $M = 2.01$ ).

A final set of analyses examined the correlations between these additional variables and the verdict decisions. As indicated in Table 4, several of these variables were significantly correlated. Across all dependent measures, negative emotion and plaintiff expert witness's credibility were positively correlated with verdict decisions in favor of the plaintiff, all  $ps < .01$ . Positive emotion was positively correlated the compensatory damage award group,  $p = .04$ , and negative thoughts about the defense attorney was positively correlated with liability verdict,  $p = .03$ . Therefore, the more positive and negative emotion experienced by participants, the more credible they viewed the plaintiff expert witness, and the more negatively they viewed the defense attorney, the more likely they were to side with the plaintiff.

Conversely, positive thoughts about the defense attorney and ratings of the defense expert witness's credibility were negatively related to liability verdicts and

likelihood of causation estimates, all  $ps < .01$ . As could be expected, when participants were viewing the defense attorney and defense expert witness positively, they were more likely to side with the defense.

Table 4

*Zero-Order Correlations between Verdict Decisions, Thoughts, and Expert Witness Ratings*

	Liability Verdict	Likelihood of Causation	Damage Awards Group
Likelihood of Causation	.79**	-----	.37**
Damage Awards Group	.13*	.37**	-----
Thoughts about Evidence	.05	.03	.13*
Thoughts about Attorneys	-.04	-.04	-.09
Plaintiff Attorney			
Negative Thoughts	-.07	-.08	-.04
Positive Thoughts	.07	.01	-.02
Defense Attorney			
Negative Thoughts	.11*	.08	-.02
Positive Thoughts	-.15**	-.15**	-.06
Emotion			
Negative	.25**	.32**	.21**
Positive	.01	.06	.12*
Plaintiff Expert Witness	.36**	.37**	.23**
Defense Expert Witness	-.30**	-.33**	-.08

*Note:* \*\* $p < .01$ ; \* $p < .05$

## Chapter 8: Discussion and Limitations

The purpose of the current study was to develop a better understanding of the interplay between juror cognitive processing, attorney credibility, and evidence strength on decision-making in civil litigation. The findings across the three outcome measures (liability, likelihood of causation, and compensatory damages) help to inform the NFC, attorney credibility, HSM, and strength of evidence literature.

### **NFC and Thought Listing Task**

The relationship between NFC and the thought listing task was examined across the number of thoughts listed about the evidence and the attorneys. The valence of thoughts about the attorneys was also examined.

#### **Thoughts about Attorneys**

It was hypothesized that low NFC individuals would be more affected by the credibility manipulations than high NFC individuals and would list more thoughts about the attorneys. This hypothesis was not supported. The number of thoughts about the attorneys occurred independent of participants' level of NFC, as indicated by a lack of significance for NFC in main effects or interaction effects.

The credibility of the plaintiff and defense attorneys interacted with one another to influence the number of thoughts about the attorneys. When the plaintiff attorney was credible and the defense attorney was non-credible, more thoughts were listed about the attorneys than when both attorneys were credible. When the plaintiff attorney was non-credible, there was no difference in the number of thoughts listed about the attorneys across either defense attorney credibility condition.

This lack of interaction with NFC occurred because when the plaintiff attorney was non-credible, participants were listing a high number of thoughts about the attorneys. Therefore, the plaintiff attorney appears to be the catalyst for participants thinking more intensely about the attorneys. When the plaintiff attorney is credible, jurors are not thinking much about the attorneys.

This finding has implications for plaintiff and defense attorneys. For plaintiff attorneys, jurors appear to be focusing on whether the attorneys are portraying credibility. Being perceived as credible can lead jurors to focus on other aspects of the trial, such as the evidence. However, being perceived as non-credible will cause jurors to shift their focus and begin to attend to peripheral factors of the case, at the expense of the case evidence. Therefore, it is imperative for plaintiff attorneys to portray credibility or risk distracting jurors away from the case evidence.

For defense attorneys, these findings offer positive and negative implications. On the positive side, it appears that the onus is on the plaintiff attorney and not the defense attorney to portray credibility. Therefore, defense attorneys may not need to be as concerned about their courtroom performance. There is a caveat to this implication, however, and it will be discussed later. On the negative side, it appears that jurors focus on the defense attorneys through no fault of their own. Regardless of whether the defense attorney is credible or non-credible, simply facing a non-credible plaintiff attorney places the defense attorney under the jurors' microscope.

The thought listing task revealed additional information regarding the influence of attorney credibility on jurors. Not only does the credibility of the attorneys relate to the number of thoughts listed about the attorneys, it also relates to the valence of these

thoughts. When the defense attorney was non-credible, more positive thoughts were listed about the credible plaintiff attorney than the non-credible plaintiff attorney. In addition, more negative thoughts were listed about the non-credible defense attorney when the plaintiff attorney was credible versus non-credible. When the defense attorney was credible, however, there was no difference in the number of positive thoughts listed about the plaintiff attorney across credibility conditions and there was no difference in the number of negative thoughts listed about the defense attorney across the plaintiff attorney credibility conditions.

Similarly, when the plaintiff attorney was non-credible, more positive thoughts were listed about a credible defense attorney than a non-credible defense attorney. More negative thoughts were listed about the non-credible plaintiff attorney when the defense attorney was credible versus non-credible. When the plaintiff attorney was credible, however, there was no difference in the number of negative thoughts listed about him across defense attorney credibility conditions and there was no difference in the number of positive thoughts listed about the defense attorney across credibility conditions.

Across these scenarios, the credibility of the attorneys appears to lead jurors to think positively or negatively these individuals. A non-credible attorney attracts negative attention from jurors when contrasted against a credible attorney. This occurs for plaintiff *and* defense attorneys. In addition, a credible attorney who is facing a non-credible attorney will be viewed positively. What is interesting is that two non-credible attorneys do not elicit the highest number of attorney-related thoughts, nor do they evoke the most negative thoughts. It is the contrast between a non-credible attorney and a credible one

that leads to the highest number of thoughts and the most negative thoughts about the non-credible attorney.

### **Thoughts about Evidence**

It was hypothesized that high NFC individuals would be more influenced by the evidence manipulation than low NFC individuals, as indicated by a higher number of thoughts about the evidence. The hypothesis was confirmed. Higher levels of NFC were associated with a higher number of evidence-related thoughts. This conforms to prior literature and supports the idea that high NFC individuals tend to process more systematically than low NFC individuals (e.g., Cacioppo et al., 1983; see Cacioppo et al., 1996).

The results also indicated that participants who saw a credible plaintiff attorney indicated more evidence-related thoughts when the defense attorney was credible, versus non-credible. This finding occurred independently from participants' level of NFC. This finding is counter to previous research that has found that low NFC participants will utilize peripheral cues (e.g., source credibility) to make a decision, while ignoring the strength of the argument (see Cacioppo et al., 1996 for a review). However, this finding can be explained using HSM's sufficiency principle which posits cognitive processing should continue when the actual confidence level is below the sufficiency threshold (Eagly & Chaiken, 1993).

Extending these findings and concepts to the current study, it is possible that similarity in credibility between the plaintiff and defense attorneys undermined the credibility heuristic. Therefore, when both attorneys were credible, low NFC participants may have believed that they did not have enough information to make a decision. The

peripheral cues of attorney credibility may not have been enough because the two credible attorneys essentially counteracted one another. As a result, low NFC participants may have required more information to have confidence in their decision. In this instance, one of the only remaining courtroom elements that participants could use was the strength of the evidence. Prior literature supports this contention by finding that low NFC individuals engage in systematic processing when a heuristic cue fails to provide sufficient judgmental confidence (Maheswaran & Chaiken, 1991).

Overall, these findings lend conflicting support to the notion that NFC is a motivational factor that helps to induce systematic or heuristic processing. In some instances, NFC's predictions were supported, but often they were not. One explanation for the discrepant findings that can likely be ruled out is the level of NFC of the participants. In the current study, the mean of the total NFC score was 63.22. This is similar to the level in previous studies (e.g., Smith, Kerr, Markus, & Stasson, 2001: 62.4; Leippe, Eisenstadt, Rauch, & Seib, 2004, Experiment 1: 62.9; Leippe et al., 2004, Experiment 2: 63.6). Therefore, the discrepant findings are likely not attributable to variations in NFC scores that would classify "low NFC" participants in the current study as "high NFC" participants in another sample.

A possible explanation for the current findings is that NFC may not be a good indicator of processing state. This could be due to the fact that NFC is a trait and the thought listing task is designed to assess participants' processing state. Despite prior research to suggest that NFC and HSM's tenants of heuristic and systematic processing may be congruent (e.g., Chaiken, 1987; Griffin et al., 2002), there is other literature to suggest that states and traits are not always strongly correlated. For example, Miller,

Wood, and Chomos (2014) found that NFC and a measure of participants' processing state (logic problems) were significantly correlated, but this correlation was weak,  $r = -.17$ . Therefore, the findings of the current study imply that caution should be taken when trying to extrapolate from an individual's NFC score to making predictions about the likelihood of processing systematically.

Another possible explanation is that the way in which individuals are processing at a given moment (i.e., during a thought listing task) may not be indicative of the way in which they are processing during the encoding or retrieving of a persuasive message. It seems possible that a low NFC individual may not have the motivation to list all of his or her thoughts. This does not necessarily mean that these individuals were not paying attention to the evidence while they were watching the video or during their verdict decisions. Conversely, the thought listing task suggests high NFC participants were the only ones attending to the evidence; however, the findings suggest that high NFC individuals were also focusing on and using the credibility of the attorneys when making their verdict decisions. Instead of thought listing, a better option may be to use instruments that capture participants' thought processes throughout the entirety of a persuasive message, not one that measures it before or after. One suggestion would be to use functional magnetic resonance imaging (fMRI) procedures to examine which areas of the brain are being activated at a given moment throughout the trial. Another suggestion would be to use a moment-to-moment response system that records participants' attitudes about the case at any given point in time.

## **Liability**

It was hypothesized that NFC, attorney credibility, and evidence strength would interact with one another to influence liability verdicts. The findings suggest that the relationship between these variables is not straightforward.

A three-way interaction was found between Plaintiff Attorney Credibility, Defense Attorney Credibility, and Evidence Strength. The likelihood of a liable verdict was higher for participants who were exposed to strong evidence, a non-credible defense attorney, and a credible plaintiff attorney than participants who saw strong evidence, a non-credible defense attorney, and a non-credible plaintiff attorney. Such a relationship did not exist when the defense attorney was credible. This finding has implications for defense attorneys in that a non-credible defense attorney can help to further strengthen a plaintiff's case when the plaintiff attorney is credible. However, if the defense attorney can be perceived as credible by jurors in the face of strong evidence against his or her client, the defense attorney can neutralize the additional influence of a credible plaintiff attorney. If the plaintiff's case is strong, the defense attorney may already be at a disadvantage and may still lose the case. Increasing his or her perceived credibility can help to reduce the chances of a loss, assuming the defense attorney decided to take the case to trial and not settle out of court.

This finding also suggests that plaintiff attorneys who have a strong case, are able to portray credibility to jurors, and know that they are facing a non-credible attorney, may not want to settle the case out of court; they may want to decide to proceed to trial because the additive effect of strong evidence and a credible plaintiff attorney may create a situation in which a courtroom victory is highly likely. At the very least, a plaintiff

attorney could use the knowledge that he or she would likely be victorious at trial to pressure the defense attorney to offer a settlement that is higher than the defense attorney may initially be comfortable with.

When the case evidence is ambiguous though, the influence of the plaintiff and defense attorneys' credibility on liability verdicts differs. Participants who were exposed to ambiguous evidence and a credible defense attorney had a higher likelihood of a liable verdict when the plaintiff attorney was credible versus non-credible. This suggests that in instances of ambiguous evidence, a credible defense attorney can place the onus on the plaintiff attorney to ensure that he or she is seen by jurors as a credible source. If the plaintiff attorney cannot do this, the likelihood of a favorable verdict decreases. Although she was examining criminal trials, this is similar to Shinall's (2010) findings and her comment that "the jury will make clumsy prosecutors pay" (p. 296). Integrating this with the current findings, what it seems to suggest is that jurors will make those individuals who possess the burden of proof pay for their perceived non-credibility. This finding has more realistic implications for attorneys because a strong case will more than likely be settled out of court. Therefore, this highlights the discrepancy in the likelihood of a liable verdict when a non-credible plaintiff attorney tries a case against a credible defense attorney versus when a credible plaintiff attorney tries a case against a credible defense attorney.

A significant interaction between Plaintiff Attorney Credibility and NFC was also found. For high, but not low, NFC participants, plaintiff credibility was related to the likelihood of a liable verdict. The likelihood was higher for a credible plaintiff attorney than a non-credible plaintiff attorney. This finding is counter to prior literature that

suggests source credibility is not a factor used by high NFC individuals in decision-making contexts (see Cacioppo et al., 1996).

A possible explanation for this discrepant finding may be due to the medium that was used. The current study used videotapes, while prior NFC research has commonly used written text (e.g., Kaufman et al., 1999; Nan, 2009; Priester & Petty, 1995). Hearing and seeing an attorney perform credibly is more noticeable than reading about an individual being an expert or being trustworthy. Prior research supports this notion, indicating that participants engage in more processing of communicator cues when the stimulus material is presented via videotape compared to written messages (Chaiken & Eagly, 1983).

Mode of presentation is also related to perceptions of credibility and honesty. Heath, Grannemann, and Peacock (2004) found that a defendant was perceived as more honest in an audio condition than a video condition. They also found that the level of emotion expressed by the defendant had a stronger influence on credibility ratings in the video condition than the audio condition. Other research has found that trustworthy sources are more persuasive than untrustworthy sources when a persuasive message is delivered via television rather than radio or written text (Andreoli & Worchel, 1978). Future research should look into this topic more. If a difference is found between attorney credibility, NFC, and medium, researchers may have to consider the way in which they conduct their studies could be unintentionally influencing the results.

Another explanation for this finding is that the source credibility was more salient in the current study because of the extent of the experimental manipulation. In the current study, there were consistent behaviors performed by the attorneys that allowed inferences

into their credibility. For example, the credible attorneys freely gestured with their hands and made eye contact with the jury throughout their opening and closing statements. Conversely, the non-credible attorneys did not gesture and made poor eye contact with the jury throughout the mock trial. In prior studies, there are brief references to the credibility of the source. For example, in Kaufman et al.'s (1999) study, participants read an article that was attributed to the *Washington Post* or the *National Enquirer*. While the manipulation checks indicated that participants perceived the *Washington Post* to be significantly more credible than the *National Enquirer*, it seems plausible that this brief mention of the source could be overlooked or underutilized easier than repeated behaviors and comments. An experiment that would be more similar to the current study would be to attribute an article to the *National Enquirer* and also have it contain spelling and grammatical errors. The results from this type of experiment may look different from Kaufman et al.'s.

In the context of the current study, high NFC participants may have utilized the attorneys' credibility in their decisions because they could not avoid attending to the credibility of the attorneys. This also suggests that there may be value in replicating past studies that have examined NFC in the context of manipulated credibility factors and evidence strength via written text. It may be possible that the results of prior studies have occurred due to high NFC individuals ignoring the source credibility because it was not strong enough to divert their attention away from the strength of the arguments. Had the manipulations been stronger, the results may look different. Cacioppo et al. (1996) reiterate this notion by indicating that findings for the interaction between NFC and source credibility are not as consistent as they are for NFC and argument quality.

What is also interesting is that there was no significant interaction between NFC and Evidence Strength. Therefore, high and low NFC individuals were similarly using the strength of the evidence when making liability judgments. This may be due to the decision-making task leading low NFC participants to process systematically because of a belief that their judgments were consequential for themselves (Chaiken, 1980), the task was of high importance (Chaiken & Maheswaran, 1994), or the task was of high personal relevance (Petty, Cacioppo, & Goldman, 1981). Additionally, HSM's sufficiency principle posits that cognitive processing should continue when the actual confidence level is below the sufficiency threshold (Eagly & Chaiken, 1993). Since Amazon M-Turk workers are primarily paid based upon completing assignments accurately, all participants, including those who are dispositionally inclined to process information at a shallow level, had motivation to pay attention to the materials. If workers complete assignments inaccurately, they risk having their work rejected, which leads to non-payment and possibly limiting their ability to complete future assignments. While the reason behind low NFC participants' behavior may not be clear, the notion that they were behaving similar to high NFC participants was generally supported across the verdict decisions.

The interaction between NFC and source credibility is counter to what is expected. It is also counter to the findings from the thought listing task that indicated high NFC participants were processing more systematically than low NFC participants, as evidenced by the higher number of evidence-related thoughts. One explanation for this finding is that high NFC individuals viewed the attorney credibility as an additional piece of information and were integrating it into their decision-making in order to pass their

sufficiency threshold. There was no interaction because there was no difference between the strong and ambiguous evidence conditions. In both conditions, high NFC individuals may have been utilizing the credibility of the plaintiff attorney; however, they may also have been using the evidence.

### **Likelihood of Causation**

Like liability verdicts, it was hypothesized that NFC, attorney credibility, and evidence strength would interact with one another to influence likelihood of causation estimates. The likelihood of causation estimates were used as a conceptual representation of the preponderance of the evidence standard. These estimates can also be viewed as a juror's confidence in their liability verdict, with higher likelihood of causation estimates indicating a higher level of confidence in a liable verdict. It was hypothesized that there would be a complex relationship between NFC, the credibility of a given attorney, and evidence strength.

The findings indicate that the relationship between these variables and likelihood of causation estimates is not as complex as hypothesized. The primary factors used when making this verdict decision was a combination of plaintiff attorney credibility and participants' NFC. When high NFC participants viewed a credible plaintiff, their likelihood of causation estimates were higher than when they viewed a non-credible plaintiff attorney. The likelihood of causation estimates of low NFC participants were not influenced by the credibility of the plaintiff attorney. This finding is counter to previous NFC literature that suggests that high NFC participants tend to ignore peripheral cues when evaluating a persuasive message (e.g., see Cacioppo et al. 1996 for review; Chaiken, Axsom, Hicks, Yates, & Wilson, 1985, as cited in Chaiken, 1987). Moreover,

this finding is counter to prior HSM literature that suggests that systematic processors will utilize argument strength and not peripheral cues (e.g., Chaiken, 1980; Todorov et al., 2002)—aside from HSM’s attenuation, additivity, and bias hypotheses. For low NFC participants, likelihood of causation estimates did not differ between credible and non-credible plaintiff attorneys. These findings are counter to previous NFC literature that indicates low NFC participants tend to use source credibility over argument strength when making attitude judgments (see Cacioppo et al. 1996 for review).

The findings for likelihood of causation estimates differed from those of liability verdict. This difference may be due to the fact that participants did not have any guidance on what number should be used for the likelihood of causation. Unlike liability and compensatory damage awards, participants did not receive a recommendation from either attorney on the percentage for the likelihood of causation. Prior research has shown that jurors are influenced by the suggestions of attorneys (Hastie, Schkade, & Payne, 1999). Without the suggestion of attorneys, jurors were tasked with coming up with a number on their own (although participants were told in the instructions that any number above 50 meant the defendant was more likely than not to have caused the plaintiff’s injuries). It appears that low NFC participants were using self-generated estimates, while high NFC participants were attempting to use additional pieces of courtroom information to come to their estimates. This interpretation makes sense since high NFC participants also used the credibility of the plaintiff attorney to come to their liability verdict, so it is likely that this information was carried over into the likelihood of causation estimates. Since liability verdict and likelihood of causation are conceptually similar in that higher likelihood of causation estimates (above 50) equate to a liable verdict, these findings suggest that high

NFC jurors are cognizant of the plaintiff attorneys' credibility and will integrate this information into their liability verdict decisions. It should be noted, however, that low NFC participant did not completely ignore the credibility of the plaintiff attorney. Significant main effects and interactions were found for liability verdict and compensatory damage awards that were independent of participants' levels of NFC. Therefore, it is imperative for plaintiff attorneys to portray credibility to all jurors, but especially those who are high in NFC, if they wish to reach the next portion of the verdict form, compensatory damages.

### **Compensatory Damages**

A final series of analyses examined whether NFC, attorney credibility, and evidence strength were related to compensatory damage award group membership. Similar to liability verdict and likelihood of causation estimates, it was hypothesized that a complex relationship would exist between cognitive processing style, attorney credibility, and evidence strength. Unlike the liability verdicts and likelihood of causation estimates, plaintiff attorney credibility was the only significant predictor of compensatory damage awards. The probability of being in the "amount asked for" and the "more than amount asked" groups was higher for a credible plaintiff attorney than a non-credible plaintiff attorney. Alternatively, the probability of being in the "less than amount asked" group was lower for a credible plaintiff attorney than a non-credible plaintiff attorney.

The explanation for the plaintiff attorney's ability to influence compensatory damages may lie in the nature of the awards. Compensatory damage awards include economic and non-economic losses. Economic losses include past and future medical bills, lost wages, and lost future income (Buckley & Okrent, 2003) and they can be easily

proven through things such as medical bills and prior salary earnings. Moreover, these are concrete numbers that do not allow for individual interpretation. Non-economic losses, on the other hand, include pain and suffering, loss of society, and loss of consortium. These losses cannot be as easily proven and have no objective dollar amount (Buckley & Okrent, 2003). It is in these objective non-economic loss numbers that a credible plaintiff attorney may be able to influence the amount awarded by jurors. A credible plaintiff attorney may be able to evoke more anger toward the defendant than a non-credible plaintiff attorney, as highlighted by the higher level of negative emotion expressed by participants in the credible versus non-credible plaintiff attorney condition. The credibility of the plaintiff attorney may also add additional persuasiveness to the arguments that leads jurors to believe the plaintiff is deserving of more money than the attorney is requesting. This notion is supported by an analysis of the mean evidence ratings by evidence condition. In both the strong and ambiguous evidence conditions, the mean evidence ratings were significantly higher for a credible plaintiff attorney than a non-credible plaintiff attorney.

The current study did not examine punitive damages (i.e., money given to the plaintiff to punish the defendant and deter future bad behavior, Buckley & Okrent, 2003), but these are also subjective verdict decisions. It may be possible for the credibility of plaintiff attorneys to increase the amount of punitive damages awarded as well. This is an area of research that would be fruitful for the civil justice system.

The finding for compensatory damages differs from those of liability verdict and likelihood of causation estimates. A plausible explanation for these discrepant findings regards the nature of the decision-making task. Liability verdict and likelihood of

causation estimates are a way to evaluate the strength of the case. A stronger case leads to more liable verdicts and higher likelihood of causation estimates—an assertion supported by the current data. Compensatory damage awards, on the other hand, are a mixture of facts (e.g., past medical bills) and independent, individual judgments (e.g., pain and suffering). Although damage awards are suggested, jurors are told that they can award any amount they see fit. Therefore, this type of decision allows for more ambiguity in the decision-making factors used to reach a conclusion. If it was completely fact based, jurors would likely give only the amount asked by the plaintiff attorney. However, as the results indicate, compensatory damage amounts were higher and lower than what was requested.

For compensatory damages, however, higher numbers are not necessarily an indication of a stronger case. Looking at the current data, a juror who gave a \$58,000,000 damage award indicated the likelihood of causation was 60%. Conversely, a juror who awarded the plaintiff \$500,000 indicated the likelihood of causation was 100%. The correlation between mean evidence and compensatory damage awards was not strong either,  $r = .08$ .

Another possible explanation for the discrepant results is that jurors tend to be skeptical of attorneys' award requests. Greene, Goodman, and Loftus (1991) found that only 23% of their respondents (experienced or potential jurors) indicated that they would trust the damage awards presented by attorneys. In addition, only 40% of these individuals indicated that they would use the attorneys' figures in their award decisions. The current findings mirror those of Greene et al. In the current study, 46% of participants awarded the amount requested by the plaintiff attorney. However, 19% of

participants in the current study awarded an amount *higher* than requested. A credible plaintiff attorney led to a higher likelihood of being in a higher compensatory damage award group. This may be because a credible attorney is able to overcome jurors' skepticism about the damage award numbers. If the attorney presents himself as someone who is trustworthy (one component of credibility) then jurors may believe that the amount is justified and accurate. Receiving an amount that is higher than what is requested is over and above the plaintiff attorney's expectations. This larger amount may be due to several factors, such as sympathy toward the plaintiff, a general desire to award large monetary damages, or punitiveness toward the defendant. What it may also be is a way to reward credible plaintiff attorneys for being perceived as honest and skilled. The current study cannot identify the rationale for the damage awards, but this is an area of future research that may be fruitful and would help provide insight into the decision-making process of damage award allocation.

Jurors may have also been using the credibility to assess the accuracy or adequacy of the plaintiff's damage award request. The anchoring and adjustment literature indicates that individuals will anchor on a value by making it their conceptual reference point and will adjust upward or downward to reach their desired estimate (Tversky & Kahneman, 1974). It appears that the credibility of the plaintiff attorney is assisting jurors in two ways: (1) whether to accept the amount being requested as their conceptual reference point and (2) whether to adjustments are warranted. When the plaintiff attorney is credible, jurors are more likely to accept the requested amount as the reference point, as indicated by the main effect for plaintiff attorney credibility and the higher predicted probability of group membership in the "amount asked for" group for participants who

viewed a credible versus non-credible plaintiff attorney. In addition, when the plaintiff attorney is credible, jurors are more likely to believe that an upwards adjustment is warranted, also indicated by the main effect for plaintiff attorney credibility and the higher predicted probability of group membership in the “more than amount asked” group for participants who viewed a credible versus non-credible plaintiff attorney.

This finding has value for plaintiff attorneys. What it suggests is that since jurors are using the requested damage awards, credible plaintiff attorneys may be able to value their cases higher. For example, if a plaintiff attorney assesses a case at \$500,000, he or she may be able to request \$600,000 instead if the attorney believes that he or she can be perceived by jurors as credible. A plaintiff attorney should be careful to not overreach though because jurors will react negatively to amounts that they view are too high (Marti & Wissler, 2000). Future research could test this notion by holding the case facts and the attorney’s credibility constant and adjusting the compensatory damage award requests. Research findings that indicate a credible attorney can inflate the damage awards could potentially create ethical dilemmas regarding an amount that adequately and fairly compensates plaintiffs for their injuries and an amount that may be seen as an additional ‘cash grab’ by plaintiff attorneys.

### **General Verdict Discussion**

Overall, these findings suggest that the interplay between NFC, attorney credibility, and strength of evidence differs depending on the decision-making task. When the task is a dichotomous liable/not liable verdict, the relationship between these variables looks different than the relationship when the task is a more variable damage award or estimate on the likelihood of causation. Moreover, it may have something to do

with the fact that liable decisions are made using the preponderance of evidence burden of proof. Jurors make their liable/not liable decisions based upon whether the “more likely than not” threshold has been passed. Compensatory damages are based upon an individual’s assessment of what amount of money is appropriate to compensate the plaintiff for his or her losses. Likelihood of causation estimates are another way in which jurors can indicate their perception of evidence strength.

These findings suggest that the rules for decision-making may differ depending on whether individuals have guidance in their decisions. Future studies could be conducted to examine how NFC, source credibility, and argument strength interact with one another across decision-making tasks with a varying range of response options (e.g., two point, three point, four point, etc. scales) and decision-making parameters (e.g., no guidance, little guidance and a lot of guidance). Results from these studies may help researchers better understand the situations in which NFC, source credibility, and argument strength may influence decisions. For example, in advertising, they may influence the attitudes toward a product or the intent to buy the product (measured on a 7-item scale), but they may not influence the behaviors of purchasing the product (purchase/not purchase).

A final take-away from the analyses of verdict decisions is that participants appear to be using the credibility of the plaintiff attorney more than the credibility of the defense attorney when making verdict decisions. To expand this point further, participants may only be considering the credibility of the defense attorney when contrasting it against the plaintiff attorney. Across all models, the credibility of the defense attorney was not a significant predictor of verdict in and of itself (i.e., no main

effect). Plaintiff attorney credibility, on the other hand, showed a significant main effect across all models. It was not until these two variables were interacted with one another than the relationship between defense attorney credibility and verdicts appeared. And it was only with regard to liability verdict that a significant plaintiff attorney credibility and defense attorney credibility interaction was found. This finding further supports the previous discussion regarding the plaintiff attorney's credibility creating an expectation (positive or negative) of the defense attorney's credibility.

From the perspective of defense attorneys, this finding is not positive because it appears there is little they can do to weaken the plaintiff's case. However, these findings should not be taken as a recommendation for defense attorneys to not attend to their perceive credibility. Instead, these findings should be seen as indicating that it is more important for defense attorneys to build a strong case and not place themselves in a position in which their credibility may work against them.

### **Low NFC Participants and Case Evidence**

An additional question that the current study attempted to answer was whether low NFC jurors would utilize the evidence when both attorneys were credible or non-credible. Non-significant four-way interactions across the verdict decisions indicate that congruency between the attorneys' credibility does not lead low NFC individuals to use the evidence more in their decision-making. When both attorneys were credible, the likelihood of a liable verdict, the likelihood of causation estimates, and the probability of being in a higher compensatory damage award group were similar for strong and ambiguous evidence. Similarly, when both attorneys were non-credible, there was no difference between the evidence conditions on the three verdict decisions. These findings

support previous research that has found that low NFC participants will tend to utilize peripheral cues (e.g., source credibility) to make a decision, while minimizing their use of argument strength (see Cacioppo et al., 1996 for a review). However, as the findings show, low NFC participants were not the only ones attending to the credibility of the sources. More often than not, it was high NFC participants and not low NFC participants who were attending more to the credibility of the source. This suggests that, unlike the ability of an untrustworthy source to initiate systematic processing (Priester & Petty, 1995), similar source credibility will not result in a similar effect.

### **Additional Variables**

Each of the additional variables was examined for their relationship between verdict decisions and perceptions of evidence strength and attorney credibility. The findings from these analyses provide additional insight into the current study and highlight areas for future research. They also help to corroborate the notion that the experimental results found for verdict decisions are not merely an artifact of expert evaluations or affect.

### **Plaintiff Expert Witnesses**

The plaintiff expert witness's credibility rating was higher for a credible plaintiff attorney than a non-credible plaintiff attorney. This finding is interesting because it suggests that the perceptions of the plaintiff attorney and the plaintiff's expert witness are intertwined with one another. When the plaintiff attorney is perceived as credible, the expert witness is perceived as credible. When the plaintiff attorney is perceived as non-credible, the expert witness, through no fault of his own, is perceived as non-credible.

This finding is both intuitive and counterintuitive. Intuitively, it makes sense that jurors may be vicariously inferring the credibility of the plaintiff's expert witness through the credibility of the plaintiff attorney. If the plaintiff attorney is credible, jurors may assume that the attorney would be knowledgeable enough to know which expert witness to use and would rate the expert witness's credibility in such a way as to confirm this assertion. If the plaintiff attorney is non-credible, jurors may question why the expert witness agreed to assist with the case. Jurors may also question the expertise of the plaintiff attorney and assume that he obtained one of the first expert witnesses he could find without thoroughly vetting the individual. Prior research on the spreading attitude effect supports this notion and indicates that the perceptions of a (dis)liked target can be transferred to other individuals associated with the target (Walther, 2002).

The notion that jurors were utilizing the credibility of the plaintiff attorney when making their plaintiff expert witness ratings becomes clear when examining the plaintiff expert witness's testimony. The plaintiff's expert witness always reported identical results—which is likely why there was no difference in his perceived credibility across evidence conditions—and offered testimony that was almost identical in inflection, tone, and pacing. There were only minor deviations in the non-credible conditions that were used to highlight the non-credibility of the plaintiff attorney, such as asking the attorney to repeat the question. It seems unlikely that such minor deviations would lead to a significant difference in credibility perceptions of the expert witness.

The findings are counterintuitive though because one would not expect an attorney to be able to have a detrimental impact on the credibility of the expert witness. If an expert witness had graduated from a prestigious institution, held several degrees, and

was published in several reputable journals, this expert would still have these credentials regardless of the credibility of the attorney for whom the expert was testifying for.

This finding has implications for attorneys and expert witnesses alike. For attorneys, this finding suggests that they could undermine the credibility of their expert witness through their own behaviors. This is important because prior literature has shown that the credibility of an expert witness is related to verdicts (Cramer et al., 2009). If attorneys undermine their expert witnesses, and their expert witnesses' credibility may be influential to the verdict, then the attorneys are inadvertently weakening their cases. For expert witnesses, this finding suggests their credibility is not perceived independently from the attorney. Regardless of whether expert witnesses portray themselves as credible, if the attorney for the side they are testifying for is non-credible, jurors may ignore the witness's credibility. These implications are speculative, but future studies could be conducted to examine whether a causal path exists between attorney credibility, expert witness credibility, and verdict.

### **Defense Expert Witness**

The defense expert witness was rated as more credible when the defense attorney was credible versus non-credible. These findings are similar to those of the plaintiff attorney and the plaintiff expert witness. They also provide the same implications for defense attorneys and the individuals they may use to testify on behalf of their clients.

The credibility of the plaintiff attorney, evidence strength, and participants' NFC also interacted with one another to influence the defense expert witness's credibility. For low NFC participants, when the plaintiff attorney was non-credible, the defense expert witness was rated as more credible when the evidence was ambiguous compared to

strong. The defense expert witness credibility ratings did not differ for low NFC individuals when the plaintiff attorney was credible. For high NFC participants, the defense expert witness credibility ratings did not differ as a function of plaintiff attorney credibility or evidence strength.

This finding implies that a non-credible plaintiff attorney leads low NFC jurors to begin to pay attention to the credibility of all trial participants. Providing a higher credibility rating for the defense expert in the ambiguous condition makes sense when considering the fact that jurors are attending to credibility. In the ambiguous evidence condition, the defense expert witness testified that he found the presence of a second chemical in the water. In the strong evidence condition, he indicated that he did not find any other chemicals in the water. This additional piece of information may have been enough to increase participants' perceptions of the defense expert witness's credibility. This finding implies that in addition to decreasing a plaintiff's chance of winning the case, a non-credible plaintiff attorney can inadvertently increase the perceived credibility of the opposing side's expert. This is problematic when considering that the defense expert witness's credibility score was significantly and negatively correlated with the mean evidence ratings,  $r(446) = -.37, p < .001$ . The higher the participants' perceptions of the defense expert witnesses credibility, the lower the overall evaluation of the case evidence.

When the plaintiff attorney was credible, the piece of information regarding additional chemicals in the water did not increase the defense expert witness's credibility rating. This finding re-iterates how important it is for plaintiff attorneys to be portrayed as credible. When plaintiff attorneys are credible, they can increase the credibility of the

plaintiff expert witnesses, while ensuring that the defense expert witness's credibility remains similar regardless of the information they may be presenting.

### **Emotions**

**Negative emotion.** Participants indicated more negative emotions when the plaintiff attorney was credible compared to non-credible. Participants were told to indicate feelings that best described how they felt in response to the case they viewed. The negative emotions were collapsed in the current study; however, if they are separated out into angry (angry, disgusted, frustrated, furious, upset, and shocked) and sad emotions (sad, disturbed, discouraged, and helpless), the results look similar. In both instances, higher angry or sad emotions are listed for a credible plaintiff attorney than a non-credible plaintiff attorney.

These findings suggest that the credibility of the plaintiff attorney is able to influence the level of negative emotion experienced by jurors. This finding is in contrast to the aforementioned discussion on negative thoughts about the plaintiff attorney being related to the credibility of the attorneys. It is likely that these negative emotions are a result of the case evidence and not the reactions to the attorneys, based upon the significant correlation between negative emotions and thoughts about the evidence,  $r(445) = .21, p < .001$ . This also suggests that participants were able to keep their case-related emotions and their attorney-related emotions separate. On the whole, these findings suggest that a credible plaintiff attorney can be viewed positively by jurors (as indicated by positive thoughts) and can evoke negative emotions against the defendant.

This has implications for attorneys. For plaintiff attorneys, it suggests that increasing credibility can also increase negative emotions. As indicated by the current

data, this increase in negative emotion helps to increase the plaintiff attorneys' chances of being successful in court. Negative emotion was significantly and positively correlated with all three dependent measures, all  $ps < .001$ . For defense attorneys, the implication is that their credibility does not influence jurors' emotion levels. Therefore, it seems that the best thing they can do is to present the case in a way that minimizes the probability jurors will experience negative emotions.

**Positive emotion.** NFC interacted with evidence strength on the reported level of positive emotion experienced by participants as they viewed the mock trial. More positive emotions (e.g., interested, happy, and excited) were reported when the evidence was strong versus when it was ambiguous; however, this only occurred for high NFC participants. This may be due to the fact that the thought listing task indicated high NFC participants were thinking about the evidence more than low NFC participants. Additionally, positive emotion was significantly correlated with number of thoughts about the evidence,  $r(445) = .18, p < .001$ . The more positive emotions experienced by participants, the more they thought about the evidence. This conforms to prior literature that has found happy moods can induce systematic processing (Briñol, Petty, & Barden, 2007).

An alternative interpretation of this correlation is that the more individuals thought about the evidence, the more they indicated positive emotions. Integrating this explanation with that of negative emotions, it becomes clearer that emotion may not only be a precursor to cognitive processing, it may also be an *outcome* of cognitive processing. In other words, instead of predicting whether individuals will process systematically or heuristically based on their pre-existing emotions, individuals may express emotions as a

result of the attorney credibility and evidence strength. Rather than explain the reliance on source credibility as a result of the negative emotion, the results can be explained by suggesting that the source credibility lead to the negative emotion. Similarly, rather than assume that positive emotions lead to a reliance on argument quality, the argument quality likely lead to positive emotions.

This thinking is different from much of the emotion literature that primes participants for a given emotion and then examines the participants' thought processing approach (e.g., Bodenhausen et al., 1994; Briñol et al., 2007; Park & Banaji, 2000). The current study did not prime a given emotion; rather, the emotion was self-generated by participants. Allowing the emotions to occur naturally is more generalizable and realistic to the courtroom because it would be difficult for attorneys to induce moods prior to or after the message presentation like previous studies have (e.g., mood induction before message presentation: Bodenhausen et al., 1994; mood induction after message presentation: Briñol et al., 2007).

### **HSM's Hypotheses**

The current study examined HSM's additivity, bias, and attenuation hypotheses when there were one and two sources of information (i.e., two attorneys). The additivity hypothesis suggests that heuristic and systematic processing can individually and directly influence decision-making by creating an additive effect with one another (Chen & Chaiken, 1999). According to the bias hypothesis, systematic and heuristic processing can exert an *interdependent* influence such that heuristic processing may influence systematic processing indirectly by altering the valence of thoughts (Chen & Chaiken,

1999). The attenuation hypothesis suggests that systematic processing may reduce the influence of heuristic processing (Chen & Chaiken, 1999).

It was hypothesized that additivity, attenuation, and bias hypotheses would be supported for each attorney when examined individually (e.g., plaintiff attorney credibility, NFC, and evidence strength without the inclusion of the defense attorney credibility). The expectations for confirmation of the hypotheses when a second source was included were less clear. The findings of the current study indicate that none of HSM's hypotheses were supported for the plaintiff or defense attorney across any of the dependent measures. This is counter to the findings of prior researchers who have found repeated support for these hypotheses (e.g. Chaiken & Maheswaran, 1994; Maheswaran & Chaiken, 1991). A possible explanation for the discrepant findings may be due to the difference in the decision-making tasks between the current study and prior ones. In the current study, there was a dichotomous liable/not liable verdict, a likelihood of causation estimate that ranged from 0 to 100, and a compensatory damage award verdict that ranged from \$0 to any number the participants believed was appropriate—a number that was later separated into three groups. In prior studies examining HSM's hypotheses, the decision-making task often involves an attitudinal decision that is recorded on a 9-point scale (Chaiken & Maheswaran, 1994; Maheswaran & Chaiken, 1991; Maheswaran et al., 1992). The lack of variability in the current study's outcome measures (liability and damage awards), or the large amount of variability (likelihood of causation), may not have provided the sensitivity required to highlight the effects of the additivity, bias, or attenuation hypotheses. Despite the levels of variation in the current study's outcome measures, however, they reflect a realistic representation of the verdict decisions made by

jurors in civil cases. In other decision-making contexts, HSM's hypotheses may be supported.

### **Theoretical Implications**

A goal of the current dissertation was to test prior theoretical assumptions and to provide additional insight into various areas of research. To this end, this dissertation was successful and the results provide several theoretical implications.

#### **Implications for Attorneys**

The first implication is that jurors are attending to the credibility of the attorneys and that this credibility is related to liable verdict decisions. This supports the findings of other researchers, such as Shinall (2010), Wood and Miller (2014), and Abrams and Yoon (2007). These findings also contradict those of researchers, such as Diamond et al. (1996), Kalven and Zeisel (1966), and Nardulli et al. (1988). For example, Diamond et al. found that only four comments were made about attorneys during deliberations. In the current study, 21% of the comments, an average of 1.54 per participant, made during the thought listing task were related to the attorneys. Therefore, the findings of the current study indicate that jurors are indeed thinking about the attorneys' credibility. Whether comments would be made during deliberations is something the current study cannot examine. Diamond et al. do concede that the four comments per deliberation could be an underestimate of the attorney's influence. The current findings suggest that it is. And, unlike Diamond et al. who found that the few comments were related to personal reactions of the attorneys and most were about substantive points, the comments in the current study were almost exclusively related to personal reactions of the attorneys. For example, participants indicated "[the] plaintiff attorney was rude when cross examining,"

“the defendant's attorney made errors in his speech,” “[the] plaintiff attorney didn't seem prepared,” and “this lawyer is annoying me.”

In addition, Diamond et al. (1996) suggest that their results may be due to both attorneys being active and articulate. This may be true. In the current study the mean number of comments about the attorneys when both were credible was .64. This author proposes that it may be the case that only unskilled attorneys draw attention from jurors. The current findings suggest this is true. When both attorneys were non-credible, the mean number of comments about the attorneys was 2.19.

### **Implications for HSM**

The implication for the null findings of HSM's hypotheses is that the tenants of HSM may be context dependent. The current study attempted to extend the hypotheses to the legal domain, but this may be an inappropriate area. Prior research by Wood (2006) and Wood and Libkuman (2009) partially supports this notion as neither of these studies indicated results indicative of HSM's hypotheses. These studies, however, did not assess systematic or heuristic processing, so it remains unclear whether HSM's hypotheses can be extended to the legal domain. Future research should be conducted on this topic to help inform the legal psychology and HSM literature.

It should be noted that HSM was originally conceptualized as examining how systematic and heuristic processors dealt with a single source of information (Chaiken, 1980). This author is not aware of any studies that have used HSM within the context of two sources. One of the goals of the current study was to expand HSM into a new context, but the results indicate that this was not successful. This should not be seen as a weakness of HSM, however. Rather, it should be seen as an area that is ripe for future

research and the current study may help to initiate a new line of HSM research that identifies a context in which HSM *can* inform a decision-making task using two competing sources.

### **Implications for Source Credibility**

The current findings offer multiple implications for the source credibility literature and areas of future research of source credibility scholars. First, the results of the compensatory damage awards analysis support research that has found a main effect for source credibility (e.g., Hovland & Weiss, 1951; Kelman & Hovland, 1953; see Pornpitakpan, 2004). Second, the results from the liability verdict and likelihood of causation estimates support the prior literature that indicates an interaction with source credibility and other variables, such as cognitive processing (see Pornpitakapan, 2004) and evidence strength (e.g., Chaiken & Maheswaran, 1994).

Third, the results expand the source credibility literature with regard to the number of variables that interact with source credibility. Prior literature indicates main effects (e.g., Hovland & Weiss, 1951; Kelman & Hovland, 1953) and interactive effects between source credibility and other factors, such as physical attractiveness, timing of source identification, and gender (see Pornpitakpan, 2004 for a review). However, the current findings suggest that the relationship between source credibility and courtroom verdicts involves more than one additional variable. The number of potential factors is unknown, but the current study suggests it is at least two other variables: a second source of information and evidence strength of evidence.

Finally, there are implications involving the interplay between the credibility of trial participants (i.e., attorneys and expert witnesses). In the current study, variations of

attorney credibility (plaintiff and defense) interacted with one another and resulted in different verdict decision. The verdict decisions looked different when both attorneys were credible, both attorneys were non-credible, or one attorney was credible and the other attorney was non-credible. In addition, variations in attorney credibility influenced perceptions of the expert witnesses' credibility, the valence of thoughts listed about both attorneys, the total number of thoughts listed about the both attorneys, the total number of thoughts listed about the evidence, and the emotions experienced by participants as they viewed the trial. Researchers should therefore be cognizant of other potential sources of credibility, aside from the ones they are explicitly testing, because an additional source has the potential of unduly influencing the findings. Without being aware of these factors, the research findings could be misleading.

### **Implications for Need for Cognition**

The current findings offer implications for the NFC literature. A consistent finding from NFC research is that high NFC individuals tend to focus on argument strength and not peripheral cues, such as attorney credibility (see Cacioppo et al., 1996 for a review). Low NFC individuals, on the other hand, tend to focus on the credibility of the source and not the argument strength—although there are exceptions (see Priester & Petty, 1995). The current study indicates that high NFC individuals pay attention to the source, as indicated by significant interactions in the liability verdict and likelihood of causation estimates and a significant main effect for damage awards. These findings add to the NFC literature by providing a study in which the NFC and source credibility interaction is consistent across two of the three dependent measures. In addition, it may also support Cacioppo et al.'s (1996) assertion that a main effect can be observed for a

variable such as source credibility because it could influence the attitudes of high and low NFC individual, but for different reasons. What it shows is that a voluminous amount of studies have been conducted on NFC (see Cacioppo et al., 1996 for a review), but new and inconsistent findings continue to emerge. Therefore, NFC is an area that should continue to be researched across various domains and outcome measures.

### **Practical Implications**

The current findings have a few practical and applied implications. The first implication regards using the BATA instrument as an attorney training tool. Prior studies have found the BATA instrument is reliable and valid (Libkuman, Kimble et al., 2004; Libkuman, Wood et al., 2004). Although the BATA scores were not used as predictor variables in any of the current models, the BATA instrument was used to develop the credible and non-credible manipulations. The manipulation checks indicated that a credible attorney (plaintiff or defense) had a higher BATA score than a non-credible attorney. In addition, the BATA scores were highly correlated with a single item measure of attorney credibility. Therefore, law firms could use the BATA instrument to assess the perceived credibility of their attorneys. This assessment could be done in the form of post-trial questionnaires with jurors, shadow juries (a group of mock jurors that follow along with the courtroom proceedings), or participants who are recruited to watch videotaped versions of the trials. The law firms could then use the BATA scores to help attorneys hone the aspects of their performance that are lower than others.

The second implication involves attorney behaviors. Attending to one's courtroom behaviors and perceptions may not be something that all attorneys concern themselves with. They may believe that they have a good understanding of their

perceived credibility. However, prior research has shown that defense attorneys rate their own performance more favorably than jurors (Linz et al., 1986). Attorneys may also believe that the strength of the case will “carry the day” and how they perform is of little consequence to the outcome. The findings of the current study do not support this notion. How attorneys are being perceived by jurors could be the difference between a win and a loss, as well as a difference in the amount of damages awarded.

The third implication involves jury selection. The common notion is to select high NFC jurors because they will utilize the evidence and peripheral factors (when necessary) and to avoid low NFC jurors because will only utilize peripheral factors (McAuliff et al., 2011). The findings of the current study, however, do not support this assertion. Of the interactions that were found, few involved NFC. And of those interactions that did include NFC, the findings were counter to previous literature by indicating that it was high NFC individuals, and not low NFC ones, who were using the credibility of the plaintiff attorney.

Using this information, jurors’ level of NFC should not be of the utmost concern to plaintiff or defense attorneys. Instead, there should be a focus on building a strong case (for plaintiff), or one that creates a higher level of ambiguity in jurors’ minds (for defense). The attorneys should also focus on assessing and increasing the perceived level of credibility. Regarding liability verdict, a credible defense attorney can place the onus on the plaintiff attorney to be credible or the plaintiff attorney risks having a detrimental impact on the case. Likewise, a credible plaintiff attorney can also place a defense attorney in a position in which he must be perceived credibly or increase his risk of losing the case. Therefore, the take away message for jury selection is for an attorney is to be

aware of the NFC of the jurors, his/her perceived credibility, the perceived credibility of the opposing counsel, and the strength of the evidence. With this information, an attorney should be able to better strategize because he should have a better understanding of the way in which all of these factors will interact with one another.

The current findings also have practical implications for the courtroom. It appears that the strength of the case is not always the deciding factor in verdict decisions. Credible plaintiff attorneys can be successful when the evidence is strongly in their favor or when the evidence favors neither side. This creates a conundrum from the civil justice system because the current study indicates that jurors are not always attending to just the evidence. Taking this argument a step further, the current findings appear to imply that there are times when jurors are making verdict decisions based solely on whether they perceive the plaintiff attorney to be credible.

Making decisions based upon these peripheral factors is disconcerting because the facts of the case are the facts of the case. Attorneys may be able to frame the facts to their advantage and interpret them differently from their opponent, but losing their place during their direct or cross examinations, wearing a flashy gold watch, or badgering a witness during cross examination does not change the facts. These behaviors should be peripheral factors that jurors ignore. The current findings, however, suggest that these behaviors are noticed by jurors and are being integrated into several facets of case-related decisions. Therefore, the courts may need to consider adding an admonition to jury instructions that instructs jurors to ignore characteristics and behaviors of the attorney when making their verdict decisions. This may not be sufficient though, because it presumes that jurors are able to separate the attorney credibility from the facts of the case.

It also presumes that jurors' perceptions of the case evidence are independent of the attorney credibility when they may partially be a product of the attorney's credibility. This argument is bolstered when examining the results of a 2 (plaintiff attorney credibility) x 2 (defense attorney credibility) x 2 (evidence strength) x 1 (NFC) GLM analysis that indicates only a main effect of plaintiff attorney credibility on mean evidence ratings, with higher evidence ratings for a credible plaintiff attorney than a non-credible plaintiff attorney.

### **Limitations and Future Directions**

The current study, like many other studies, has some limitations. The first limitation is that it only examines one type of civil case—toxic tort. There are several other types of torts, such as defamation, negligence, fraud, and product liability. Each of these types of torts has differing definitions and the onus on the plaintiffs varies. For example, a plaintiff needs to prove three steps (statement was false, statement caused harm, and the statement was made without adequate research into the truthfulness of the statement) in order to prove libel against a defendant (*New York Times Co. v. Sullivan*, 1964). Conversely, negligence requires that the plaintiff prove, among other things, that the defendant failed “to exercise the standard of care that a reasonably prudent person would have exercised in a similar situation” (Garner, 2004, p. 1061). The difference in the amount and type of evidence required, as well as the defendants involved (e.g., large corporations and medical professionals), in these cases could lead to differences in verdicts.

Along similar lines, future research could benefit by conducting a similar study using a criminal trial. It is unclear how attorney credibility may be related to criminal

verdicts. With the burden of proof being higher in criminal trials than civil trials, jurors may not allow the credibility of the attorney to influence their criminal verdicts because they know that the prosecution must present enough evidence to meet their burden of “beyond a reasonable doubt.” According to HSM, the sufficiency threshold should be higher in criminal trials than civil trials. Having to be surer of their verdict, jurors in criminal trials may be processing more systematically and therefore placing a large premium on the evidence and paying little attention to the credibility of the attorney. In civil trials, the sufficiency threshold is likely lower and this may allow multiple factors to influence verdicts because jurors do not need to be as convinced as they do in criminal trials. However, the credibility of the attorney may play as strong a role in criminal trials as in civil trials. With the sufficiency threshold likely higher in criminal trials, jurors may need to use all available information when making a decision. In some instances, the strength of the evidence may not be strong enough to meet the burden of “beyond a reasonable doubt,” but the credibility of the attorney may provide enough information to do so.

A second limitation is that the trial was highly truncated. On average, the videos were 24 minutes and 49 seconds in length. A trial such as the one presented would likely last days, if not weeks. In addition, the amount of information presented was limited—some participants noted that they would have liked more information. During a real trial, more scientific data would have been produced, study findings would have been discussed at a deeper level, and more witnesses would have been called to testify. Diamond (1997) has raised concerns that jury research using abbreviated trial simulations may magnify the effect size of experimental manipulations. Although the current findings

support prior research that has used real trials (e.g., Abrams & Yoon, 2007; Haire et al., 1999; Shinall, 2010), future studies could benefit by creating a longer mock trial.

However, conducting a study of a larger magnitude would require extensive resource e.g. single day mock trials for actual, pending lawsuits can cost several thousands of dollars.

Conducting a longer mock trial would also be beneficial to examine the influence of attorney credibility. It is unclear whether the credibility of the attorney would continue to influence juror decision-making after several days or whether it would become a background component of the trial. In the current study, jurors noticed the credibility of the attorney, good and bad. In an extended trial, however, jurors may initially note the aptitude or ineptitude of the attorney and, over time, come to overlook it. The opposite could also happen. Participants may become more attuned to the aptitude or ineptitude of the attorney and its influence may become stronger as the trial progresses.

A third limitation is that the study only includes two male attorneys. Prior research (e.g., Hahn & Clayton, 1996; Hodgson & Pryor, 1984; Nelson, 2004) has shown that jurors view male and female attorneys differently. Therefore, the results of the current study may differ if one or both attorneys were female. This is an area for future research and could greatly benefit the field of law.

A fourth limitation is that the study used two Caucasian attorneys. Prior research has indicated conflicting results based upon the race of the attorney, with some finding a pro-White bias (Cohen & Peterson, 1981) and others finding a pro-Hispanic bias (Abrams & Yoon, 2007). Therefore, the results may be different if one or both of the attorneys were a minority. However, regarding the race of the attorney, the study was similar to what most jurors would encounter. As of 2010, 88.1% of attorneys were

Caucasian, not Hispanic (American Bar Association, 2013). Research on attorney race and courtroom outcome is still an area that is in need of additional research.

A fifth limitation of the study is that the credibility of the attorney was manipulated between “credible” and “non-credible.” There was no “moderate” credibility. It would be interesting to see whether a moderately credible attorney would influence civil verdicts. In the current study, participants mentioned the credible and non-credible attorneys in their thought listing task. This is likely due to the fact that the credible attorney was highly credible and the non-credible attorney was highly non-credible. Therefore, their actions were positive and negative enough to draw attention from participants. The actions of a moderate attorney may go unnoticed by jurors. If the evidence is the only factor related to verdicts with a moderate attorney, this would suggest to law firms that a strong case with a credible attorney is best, but a strong case with a moderately credible attorney can be successful as well. Moreover, it may also imply that there is a certain threshold of credibility. As long as an attorney’s credibility does not go below this threshold, the strength of the evidence should be related to verdicts.

A sixth limitation of the study is that there was no jury deliberation. Critics of jury research have suggested that using juries instead of individual verdicts as outcome measures may result in different findings (Nuñez, McCrea, & Culhane, 2011). Once inside the jury room, jurors may influence one another through normative (pressure to conform to other jury members) or informational (changes in opinions based upon facts) influence (Kaplan, 1984). This suggests that there is a possibility that jurors may move from their initial position (i.e., the one that is given on an individual verdict form) to one that is more favorable to the group or one that eliminates or attenuates the use of

cognitive heuristics. However, for the current study, it would be too cost prohibitive to recruit 75 deliberating juries with 6 jurors in each. The other alternative would be to recruit college students, but the literature is divided on whether student samples are equivalent to community samples and whether the results from student samples possess external validity (Bornstein, 1999; see Wiener et al., 2011). Future research should attempt to obtain community members and have them deliberate in small groups.

A seventh limitation is that the study relies on a convenience sample of MTurk workers, rather than a random sample of potential jurors. Although MTurk workers are more diverse than other potential samples, such as students or general internet users (Buhrmester et al., 2011), this sampling method inadvertently excluded some participants (e.g., individuals without a computer, individuals from the Great Plains states, individuals who are not technologically competent, etc.) and therefore limits the generalizability of results to some degree. Future research should consider using a process of random digit dialing to recruit participants (although this process has its own limitations). Another potential option would be to recruit participants the same way potential jurors are selected for jury duty (e.g., voter registration lists). It should be noted, however, that a concern about the generalizability of the results involving NFC should be minimal because the mean NFC score in the current study (63.22) is similar to the levels found in previous studies (e.g., Smith, Kerr, Markus, & Stasson, 2001: 62.4; Leippe, Eisenstadt, Rauch, & Seib, 2004, Experiment 1: 62.9; Leippe et al., 2004, Experiment 2: 63.6).

### **Conclusion**

The current study examined the relationship between juror cognitive processing, attorney credibility, and strength of evidence on civil verdict decisions. Across three

indicators of verdict, a consistent finding was that jurors were attending to and utilizing the credibility of the attorneys in their decision-making process. Participants were especially attuned to the credibility of the plaintiff attorney. This relationship was not straightforward, however. In some instances, the credibility of the attorneys and participants' NFC interacted with one another. For high NFC participants, liability verdict and likelihood of causation estimates were based on plaintiff attorney credibility, regardless of the evidence strength. The same relationship did not occur for low NFC participants. For compensatory damage awards, the credibility of the plaintiff attorney influenced decisions, independent of participants' level of NFC. These findings are surprising when considering the fact that evidence, and not attorney credibility, should be a primary consideration of jurors. Case evidence was a factor in liability verdicts; however, even when the plaintiff had a strong case, participants in the current study utilized the attorney credibility in their decision-making.

In closing, the current study highlights that a courtroom is an environment in which there is a complex interplay between various factors. Some of these factors are within the attorney's control, while others are not. Attorneys must approach each case with a heightened understanding that a strong case will not necessarily carry the day. There will be instances in which the jurors will integrate the attorney's perceived credibility into their decisions. There will also be instances in which the preconceived notions of the way in which a jury should process information will be incorrect. Overlooking any of these aspects could mean the difference between a favorable or unfavorable verdict.

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Appendix A: Hypothesis Table

<b>Hypothesis (H)/Research Question (RQ)</b>	<b>Liability</b>	<b>Likelihood of Causation</b>	<b>Compensatory Damages</b>
<p>H1: NFC will be related to whether participants engage in systematic or heuristic processing, as defined by the total number of evidence and attorney-related thoughts listed by participants.</p> <p>1a: Higher NFC scores will be related to a higher number of evidence-related thoughts, which will be indicative of systematic processing.</p>	<i>Supported</i>		
<p>1b: Lower NFC scores will be related to a higher number of attorney-related thoughts, which will be indicative of heuristic processing.</p>	Not supported		
<p>RQ1: Are participants' NFC scores related to mock-juror decisions (i.e., liability verdicts, likelihood of causation estimates, and compensatory damages)?</p>	<i>Affirmative (Qualified by interaction with plaintiff attorney credibility)</i>	<i>Affirmative (Qualified by interaction with plaintiff attorney credibility)</i>	Negative
<p>H2: The credibility of the attorney will be related to mock-juror decisions.</p> <p>2a: A credible plaintiff attorney will receive more verdicts decisions in his favor than a non-credible plaintiff attorney.</p>	<i>Supported</i>	<i>Supported</i>	<i>Supported</i>
<p>2b: A credible defense attorney will receive more verdicts in his favor than a non-credible defense attorney.</p>	Not Supported	Not Supported	Not Supported

<b>Hypothesis (H)/Research Question (RQ)</b>	<b>Liability</b>	<b>Likelihood of Causation</b>	<b>Compensatory Damages</b>
H3: The strength of the plaintiff's case will be related to mock-juror decisions. Strong evidence will be related to more verdicts in the plaintiff's favor than ambiguous evidence.	<i>Supported</i>	Not Supported	Not Supported
H4: There will be a two-way interaction between participants' NFC scores and the credibility of the attorney.  4a: For low NFC participants (defined as NFC scores one standard deviation below the mean), the credibility of the plaintiff attorney will be related to mock-juror decisions. A credible plaintiff attorney will receive more verdicts in his favor than a non-credible plaintiff attorney.	Not Supported	Not Supported	Not Supported
4b: For low NFC participants, the credibility of the defense attorney will be related to mock-juror decisions. A credible defense attorney will receive more verdicts in his favor than a non-credible defense attorney.	Not Supported	Not Supported	Not Supported
4c: For high NFC participants (defined as NFC scores one standard deviation above the mean), the credibility of the plaintiff attorney will not be related to mock-juror decisions.	Not Supported	Not Supported	Not Supported

<b>Hypothesis (H)/Research Question (RQ)</b>	<b>Liability</b>	<b>Likelihood of Causation</b>	<b>Compensatory Damages</b>
4d: For high NFC participants, the credibility of the defense attorney will not be related to mock-juror decisions.	<i>Supported</i>	<i>Supported</i>	Not Supported
H5: There will be a two-way interaction between participants' NFC scores and the strength of the plaintiff evidence.  5a: For low NFC participants, the strength of the plaintiff evidence will not be related to mock-juror decisions.	Not Supported	Not Supported	Not Supported
5b: For high NFC participants, the strength of the plaintiff evidence will be related to mock-juror decisions. Strong plaintiff evidence will be related to more verdicts in the plaintiff's favor than ambiguous plaintiff evidence.	Not Supported	Not Supported	Not Supported

<b>Hypothesis (H)/Research Question (RQ)</b>	<b>Liability</b>	<b>Likelihood of Causation</b>	<b>Compensatory Damages</b>
<p>H6: There will be a three-way interaction between participants' NFC scores, the credibility of the plaintiff attorney, and the strength of the plaintiff evidence.</p> <p>6a: For low NFC participants, the credibility of the plaintiff attorney will be related to mock-juror decisions, regardless of the strength of the plaintiff evidence. Across both evidence conditions, a credible plaintiff attorney will receive more verdicts in his favor than a non-credible plaintiff attorney.</p>	Not Supported	Not Supported	Not Supported

<b>Hypothesis (H)/Research Question (RQ)</b>	<b>Liability</b>	<b>Likelihood of Causation</b>	<b>Compensatory Damages</b>
<p>6b: For high NFC participants, the credibility of the plaintiff attorney and the strength of the plaintiff evidence will be related to mock-juror decisions, but in a different pattern from low NFC participants. In support of HSM's additivity hypothesis, a credible plaintiff attorney presenting strong evidence will receive the most verdicts in his favor in comparison to all other conditions: credible plaintiff, ambiguous evidence; non-credible plaintiff, strong evidence; and non-credible plaintiff, ambiguous evidence. In support of HSM's bias hypothesis, a credible plaintiff attorney presenting ambiguous evidence will receive more verdicts in his favor than a non-credible plaintiff attorney presenting ambiguous evidence. In support of HSM's attenuation hypothesis, a non-credible plaintiff attorney presenting strong evidence will receive more verdicts in his favor than a non-credible plaintiff attorney presenting ambiguous evidence.</p>	Not Supported	Not Supported	Not Supported

<b>Hypothesis (H)/Research Question (RQ)</b>	<b>Liability</b>	<b>Likelihood of Causation</b>	<b>Compensatory Damages</b>
<p>H7: There will be a three-way interaction between participants' NFC scores, the credibility of the defense attorney, and the strength of the plaintiff evidence.</p> <p>7a: For low NFC participants, the credibility of the defense attorney will be related to mock-juror decisions, regardless of the strength of the plaintiff evidence. Across both evidence conditions, a credible defense attorney will receive more verdicts in his favor than a non-credible defense attorney.</p>	Not Supported	Not Supported	Not Supported

<b>Hypothesis (H)/Research Question (RQ)</b>	<b>Liability</b>	<b>Likelihood of Causation</b>	<b>Compensatory Damages</b>
<p>7b: For high NFC participants, the credibility of the defense attorney and the strength of the plaintiff evidence will be related to juror decisions, but in a different pattern from low NFC participants. In support of HSM's additivity hypothesis, a non-credible defense attorney facing strong plaintiff evidence will receive the fewest verdicts in his favor in comparison to all other conditions: non-credible defense, ambiguous evidence; credible defense, strong plaintiff evidence; and credible defense, ambiguous evidence. In support of HSM's bias hypothesis, a credible defense attorney facing ambiguous plaintiff evidence will receive more verdicts in his favor than a non-credible defense attorney facing ambiguous plaintiff evidence. In support of HSM's attenuation hypothesis, a credible defense attorney facing strong plaintiff evidence will receive fewer verdicts in his favor than a credible defense attorney facing ambiguous plaintiff evidence.</p>	Not Supported	Not Supported	Not Supported

<b>Hypothesis (H)/Research Question (RQ)</b>	<b>Liability</b>	<b>Likelihood of Causation</b>	<b>Compensatory Damages</b>
RQ2: Is there a four way-interaction between participants' NFC scores, the credibility of the plaintiff attorney, the credibility of the defense attorney, and the strength of the plaintiff evidence?	Negative	Negative	Negative
RQ3: For low NFC participants, is the strength of the plaintiff's evidence related to verdicts when the attorneys do not differ on their credibility?  3a: Is the strength of the plaintiff's evidence related to civil litigation decisions when the plaintiff and defense attorneys are both credible?	Negative	Negative	Negative
3b: Is the strength of the plaintiff's evidence related to civil litigation decisions when the plaintiff and defense attorneys are both non-credible?	Negative	Negative	Negative

Hypothesis (H)/Research Question (RQ)	Liability	Likelihood of Causation	Compensatory Damages
<p>RQ4: For high NFC participants, are HSM's hypotheses supported when there are two attorneys? Does the credibility of the attorneys dictate whether this hypothesis would be supported?</p> <p>4a: Is the additivity hypothesis supported when there are two attorneys? Does the credibility of the attorneys dictate whether this hypothesis would be supported?</p>	Negative	Negative	Less than Amount Asked: Negative
			Amount Asked For: Negative
			More than Amount Asked: Negative
<p>4b: Is the bias hypothesis supported when there are two attorneys? Does the credibility of the attorneys dictate whether this hypothesis would be supported?</p>	Negative	Negative	Less than Amount Asked: Negative
Amount Asked For: Negative			

<b>Hypothesis (H)/Research Question (RQ)</b>	<b>Liability</b>	<b>Likelihood of Causation</b>	<b>Compensatory Damages</b>
4b (Continued): Is the bias hypothesis supported when there are two attorneys? Does the credibility of the attorneys dictate whether this hypothesis would be supported?	Negative	Negative	More than Amount Asked: Negative
4c: Is the attenuation hypothesis supported when there are two attorneys? Does the credibility of the attorneys dictate whether this hypothesis would be supported?	Negative	Negative	Less than Amount Asked: Negative
			Amount Asked For: Negative
			More than Amount Asked: Negative

## Appendix B: Jury Instructions

Ladies and gentlemen of the jury, in a moment you will be asked to render your verdict in this case. However, before doing so, I must instruct you on the law.

### **BURDEN OF PROOF:**

The law places the burden of proof on the plaintiff to establish the facts upon which the case is based by the greater weight of the evidence. If, in your judgment, the weight of all the evidence presented tips the scales in favor of the plaintiff, however slightly, then your verdict must be favorable to the plaintiff. If the evidence fails to tip the scales in favor of the plaintiff's case, or even if the scales remain evenly balanced when you place all of the evidence on them, then your verdict must be in favor of the defendant. In other words, the law requires the plaintiff to satisfy you that the facts the plaintiff is trying to prove are more probable than not. It is not the number of witnesses that prove the case; it is the totality of the evidence.

The plaintiff, Kathy Summers, alleges that the defendant's, Chemco Chemicals Inc.'s, Ketamine is the cause of her ovarian cancer and is liable for her injury. The plaintiff has the burden of proving that the defendant's chemical caused harm to the plaintiff.

If you find from your consideration of all the evidence that this has been proved, then your verdict should be for the plaintiff. But if, on the other hand, you find from your consideration of all the evidence that this has not been proved, then your verdict should be for the defendant.

### **DAMAGES:**

My charge to you on the law of damages must not be taken as a suggestion that you should find for the plaintiff. It is for you to decide on the evidence presented and the rules of law I have given you whether the plaintiff is entitled to recover from the defendants. If you decide that the plaintiff is not entitled to recover from the defendants, you need not consider damages. Only if you decide that the plaintiff is entitled to recover will you consider the measure of damages.

**COMPENSATORY DAMAGES:**

If you find that the plaintiff is entitled to recover from the defendants, you must render a verdict in a sum of money that will justly and fairly compensate the plaintiff for all losses resulting from the injuries she sustained. This includes, medical costs, lost income, and pain and suffering,

**MEDICAL COSTS – PAST AND FUTURE:**

Past medical costs are the reasonable cost of necessary hospital charges, doctor charges, prescriptions, and other medical services from the date of injury to the present time. In determining the reasonable cost of necessary charges, you may consider the amount charged, the amount actually paid, or any other evidence of what is reasonable and proper for such medical expense.

Future medical expenses are the present value of reasonable and necessary hospital charges, doctor charges, prescriptions, and other medical services which will be incurred in the future.

**FUTURE LOST INCOME:**

Future lost income is the present value of loss of future earning capacity. Loss of future earning capacity is the reduction in the ability to work and earn money generally, rather than in a particular job.

**PAIN AND SUFFERING:**

Conscious pain and suffering means pain and suffering of which there was some level of awareness by the plaintiff.

**SYMPATHY CANNOT BE A FACTOR:**

You must not allow sympathy or personal preference to influence your verdict on either the question of liability or the amount of damages. You must not allow yourself to be

influenced by the status of the parties in this case. All parties are entitled to equal justice in our courts, rich or poor, individuals or corporations.

## Appendix C: Mock Trial Scripts

**Opening Statements: Credible Plaintiff – Strong Evidence & Credible Plaintiff – Ambiguous Evidence**

**\*\* Use hand gestures to emphasize your points. Give the perception of confidence and sincerity. Keep good eye contact with the jurors as you scan the jury box\*\***

May it please the court? Counsel for the plaintiff, Mrs. Kathy Summers. Hello ladies and gentlemen, of the jury. **(Move away from podium)**. At this point and time, I'm going to give you a roadmap and explain how I'm going to present this case. The case before you is a clear-cut case of a woman, my client, contracting cancer as a result of this. **(Place glass of water on the podium)**. Drinking contaminated water **(put glass back down)**. Here is a picture of my client, Kathy Summers **(show picture)**. Mrs. Summers lived one mile away from a chemical dump owned and operated by the defendant, Chemco Chemicals Inc., for over a 10 year period. You will hear the defendant referred to as Chemco, for short, throughout the case. During this 10 year period, a chemical called Ketamine was seeping into the local water supply. In November, 2010, after years of drinking the local water, Mrs. Summers contracted ovarian cancer. In January 2011, she had to have surgery to remove both ovaries.

The defense does not dispute the fact that Ketamine seeped into the local water. However, they would like you to believe that it is not an unreasonably dangerous substance. This is simply not true. We will present evidence from Dr. Raymond Jones who will testify about his research on Ketamine. Dr. Jones also took wildlife and water samples from a lake next to the dump site and he will talk about the lab results. He is going to tell you that his findings show that Ketamine is anything but safe.

The defense will present their own evidence to try and convince you that Ketamine does not cause cancer. However, I urge you to not allow them to pull the wool over your eyes.

I want to spend the last few minutes explaining the differences between the criminal and civil justice systems. In the criminal justice system, the burden of proof is beyond a reasonable doubt. In the civil justice system, the burden is lower. The burden in the civil justice system is preponderance of the evidence. That means that to prove our case, it just needs to be more likely than not that the defendant caused my client's injuries. If you think about the scales of justice (**put both of your hands up, palms facing the ceiling**), whether we tip the scale in our favor (**raise one hand up much higher than the other**) with the weight of a brick (**bring your hands back down**) or with the weight of a stick of butter (**raise one hand up barely higher than the other**), we have done our job.

Another difference between the criminal and civil justice system is how the defendants are punished. Instead of punishing defendants with jail, prison, or probation sentences like in the criminal justice system, the civil justice system forces defendants to pay for monetary damages. In this case, we are asking for the defendant to pay \$500,000 to my client for medical costs, lost income, and pain and suffering that she incurred as a result of her injury.

At the end of this case, there will be no doubt in your mind that we have met our burden and that Chemco is liable for damages. Thank you.

**Opening Statements: Non-Credible Plaintiff – Strong Evidence & Non-Credible Plaintiff – Ambiguous Evidence**

**\*\*Stay behind podium the whole time. Do not use any hand gestures. Stand stiff.**

**Give the perception of nervousness.\*\***

(**Speak quietly**) May it please the court? Counsel for the Plaintiff, Mrs. Kathy Summers. Hello ladies and gentlemen, **um**, of the jury. (**Judge tells you to speak up**) Sorry (**clear your throat, say “excuse me,” and drink a glass of water**)...Hello ladies and, **um**, gentlemen of the jury. At this point and time, I’m going to **basically** give you a roadmap, **um**, and explain how I’m going to present this case. The case before you is a clear-cut case of a woman, my client, contracting cancer from **consuming** contaminated water. Here is a picture of my client, Kathy Summers (**show picture upside down**). Mrs. Summers, **um**, **resided** one mile away from a chemical dump owned and operated by the defendant, Chemco Chemicals Inc., (**mumble**) for over a 10 year period. You will hear the defendant referred to as Chemco, for short, throughout the case. During this 10 year period, a chemical called Ketamine **were** seeping into the local water supply. In November, 2010, after years of drinking the local water, Mrs. Summers contracted ovarian cancer. In, **um**, January 2011, she had to have a **surgical procedure** to remove both ovaries.

(**Hesitate. Flip through your notes. Go forward a few pages. Then go back a page.**) The defense does not dispute the fact that Ketamine seeped into the local water. However, they would like you to believe that it is not an unreasonably **hazardous** substance. (**snicker**) (**mumble**) This is simply not true. We will present evidence from Dr. Raymond Jones who will testify about his research on Ketamine. Dr. Jones also took

wildlife and water samples from a lake next to the dump site and he will talk about the lab results. He is **gonna** to tell you that his findings show that Ketamine is anything but **innocuous**.

The defense will present their own evidence to try and convince you that Ketamine is not, **um**, an **antecedent** to cancer. **Don't be fooled**.

**(Flip through notes for a few seconds. Make it look like you are looking for something.)** I want to spend the last few minutes explaining the differences between the criminal and civil justice systems. In the criminal justice system, the burden of proof is beyond a reasonable doubt. In the civil justice system, the burden is lower. The burden in the civil justice system is preponderance of the evidence. That means that to prove our case, it just needs to be more likely than not that the defendant caused my client's injuries.

Another difference between the criminal and civil justice system is how the defendants **is** punished. Instead of punishing defendants with jail, prison, or probation sentences like in the criminal justice system, the civil justice system forces defendants to pay for monetary damages. In this case, we are asking for the defendant to pay \$500,000 to my client for medical costs, lost income, and pain and suffering that she incurred as a result of her injury.

At the end of this case, **I don't think you will doubt your mind**, excuse me, there will be no doubt in your mind that we have met our burden and that Chemco is liable for damages. Thank you.

**Opening Statements: Credible Defense – Strong Evidence & Credible Defense –  
Ambiguous Evidence**

**\*\* Use hand gestures to emphasize your points. Give the perception of confidence and sincerity. Keep good eye contact with the jurors as you scan the jury box\*\***

May it please the court, counsel for the defendant, Chemco. **(look in the plaintiff attorney's direction)**. Mr. Williams. Ladies and gentlemen of the jury. I anticipate that in this trial you will hear from the plaintiff's expert, Dr. Jones. I also anticipate that what you will hear from him will be inconclusive arguments regarding whether the chemical, Ketamine, that was manufactured by my client is the cause of Mrs. Summer's ovarian cancer. In addition to this witness, you will hear from the defense's expert, Dr. Mark Davis. Dr. Davis will present evidence that shows that women develop ovarian cancer in the United States, regardless of what chemicals they knowingly or unknowingly ingest. Dr. Davis will also testify about *his* research on Ketamine and how his results differ from those of Dr. Jones. He will tell you that his study shows that Ketamine is not a possible cause of the plaintiff's ovarian cancer.

Ladies and gentlemen of the jury, the plaintiff would like you to believe that this is a **(make quotation marks with fingers)** "clear cut case." I can assure you that this case is anything but clear cut. **(speak in a soft, sincere tone)** What happened to Mrs. Summers is unfortunate and my client is sympathetic to her condition. We don't deny that Ketamine leaked into the water supply. However, there is no proof that Ketamine causes ovarian cancer. After you have heard all of the testimony and weighed all of the case facts, I am confident that you will agree with our positions and find that my client is not liable for Mrs. Summers's injury. Thank you.

**Opening Statements: Non-Credible Defense – Strong Evidence & Non-Credible Defense – Ambiguous Evidence**

**\*\*Stay behind podium the whole time. Do not use hand gestures. Give the perception of arrogance and nervousness.\*\***

**(mumble slightly while looking down)** May it please the court, counsel for the defendant, Chemco. **(look in the plaintiff attorney's direction)**. Mr. Williams. Ladies and gentlemen of the jury. I, **um**, anticipate that in this trial you will hear from the plaintiff's expert, **(look down at the paper and look for the name)** Dr. Jones. I also anticipate that what you will hear from him will be inconclusive arguments regarding whether the chemical, Ketamine, that was manufactured by my client is the **agent** of Mrs. Summer's ovarian cancer. In addition to this witness, you will hear from the defense's expert, Dr. Mark Davis. Dr. Davis will present evidence that **show** that women develop ovarian cancer in the United States, regardless of what chemicals they knowingly or unknowingly ingest. Dr. Davis will also testify about *his* research on Ketamine and how his results differ from those of Dr. Jones. **He will, uh, he will** tell you that his study shows that Ketamine is not a possible cause of the plaintiff's ovarian cancer.

**(look down at paper momentary and scan the pages with your finger)**. Ladies and gentlemen of the jury, the plaintiff would like you to believe that this is a "clear cut case." **(snicker)** I can assure you that this case is anything but clear cut. We don't deny that Ketamine leaked into the water supply. **(arrogance with a facial expression to match)** Leaks happen from chemical companies all of the time. There is no proof that Ketamine causes ovarian cancer, **(slight pause and then really emphasize)** none. And the plaintiff lacks the ability to prove it. Ladies and gentlemen...**(slight pause)** of the

jury...after you have **attended** to all of the testimony and weighted all of the case facts, I am **assured** that you will agree with our positions and find that my client is not liable for Mrs. Summers's injury. Thank you.

**Direct Examination: Credible Plaintiff – Strong Evidence & Credible Plaintiff –  
Ambiguous Evidence**

*A = Attorney*

*D = Dr. Jones*

A: Please state your name for the record.

D: Dr. Raymond Jones...J-O-N-E-S.

A: Dr. Jones, could you please tell the jury about your qualifications.

D: I have a Ph.D. in biochemistry and have published several papers on Ketamine.

A: Could you give the jury a little background on the development of Ketamine.

D: Yes. There is considerable variability among different brands of chemical products.

A: Does this mean that the same chemical may vary from manufacturer to manufacturer?

D: Yes. The federal government sets guidelines, but it leaves companies some leeway in designing their own product.

A: Doctor, were you able to test Mrs. Summer's water for the presence of Ketamine.

D: No I was not.

A: Why is that?

D: After the town learned of the Ketamine seepage, they increased their level of filtration for the local drinking water.

A: So, what testing, if any, were you able to do?

D: I collected wildlife and water samples from a lake next to the dump site.

A: And what did you find in these samples?

D: I found that some of the wildlife had developed abnormally.

A: What do you mean by abnormally?

D: Some of the frogs and fish had grown additional extremities.

A: **(look down and notice that the pictures are not being displayed. Without hesitation, press the correct button).** Allow me to introduce plaintiff's Exhibits 1 and 2. Doctor, can you please tell the jury about these pictures?

D: Yes, these are photographs I have taken of the wildlife around the lake.

A: Doctor, could you please tell the jury what we are looking at.

D: As you can see, the fish has grown an extra fin and the frog has grown a third leg.

A: Did you find anything else besides deformities?

D: Yes, I also found infertility in some of the wildlife.

A: Dr. Jones, did you test the water for Ketamine?

D: Yes I did.

A: And did you find any?

D: Yes

A: Did that Ketamine match the Ketamine manufactured by the defendant?

D: Yes it did.

A: Doctor, did the levels of Ketamine you found in the water cause you any concern?

D: Yes they did.

A: Could you please tell the jury why that is.

D: Yes, the Environmental Protection Agency creates levels of chemicals that can be present in water before being considered potentially hazardous after long-term

consumption. For example, you can have up to 4 parts per million of fluoride in your water before it becomes potentially hazardous. One way to think of it, is if you were to put four drops of ink in one 55-gallon barrel of water and mix it thoroughly, you would have an ink concentration of 1 parts per million.

A: What is the level of Ketamine that is considered potentially dangerous?

D: .10 parts per million.

A: And what were the levels of Ketamine you found in the lake?

D: They were at .11 parts per million.

A: That's a lot lower than the 4 parts per million you gave in your example of fluoride.

D: It depends on the toxicity of the chemical about how much is considered potentially dangerous.

A: Doctor, did you find any other chemicals in the water?

D: Some chemicals are common in water, but no, I did not find any that would cause concern.

A: Doctor, in your professional opinion then, do you believe that the defendant's Ketamine is responsible for the infertility and deformations you found in the wildlife?

D: Yes I do.

A: Dr. Jones, I want to switch gears a little now and focus on your research. You have conducted several studies on Ketamine, but have you conducted research specifically on the defendant's Ketamine?

D: Yes I have.

A: Can you please tell the jury about this research.

D: I conducted a study in which I gave female laboratory rats large doses of Ketamine for one year. After this one year period, I evaluated their health on a variety of measures...tumors, organ functioning, respiratory functioning, etc. I also evaluated these outcomes across different brands of Ketamine.

A: How many different kinds of Ketamine did you examine?

D: We examined five different kinds.

A: And the defendant's Ketamine was one of those?

D: Yes it was.

A: Allow me to introduce plaintiff's Exhibits 3 and 4. Doctor, can you please tell the jury about this picture.

D: Yes. As you can see in this photograph, some rats in the study developed tumors and skin discolorations.

A: What else did your results find?

D: As you can see on this graph, the defendant's Ketamine is represented by the red bar. We found that rats that were exposed to the defendant's Ketamine developed ten times more health complications than the average.

A: And that green line is the average?

D: Yes

A: Was ovarian cancer a common health problem found in the laboratory rats?

D: Ovarian cancer was not a very common type of health problem overall, but it occurred most often in rats that took the defendant's Ketamine.

A: Dr. Jones, in your professional opinion, do you believe that the health problems you found in the laboratory rats, namely ovarian cancer, could lead to similar health problems in humans?

D: Yes I do.

A: Thank you Dr. Jones. No further questions your honor.

**Direct Examination: Non-Credible Plaintiff – Strong Evidence & Non-Credible Plaintiff – Ambiguous Evidence**

*A = Attorney*

*D = Dr. Jones*

A: Please state your name for the record.

D: Dr. Raymond Jones...J-O-N-E-S.

A: Dr. Jones, could you please tell the jury about your qualifications.

D: I have a Ph.D. in biochemistry and have published several papers on Ketamine.

A: Could you give the jury a little background on the development of Ketamine.

D: Yes. There is considerable variability among different brands of chemical products.

A: Does this mean that the same chemical may vary from manufacturer to manufacturer?

D: Yes. The federal government sets guidelines, but it leaves companies some leeway in designing their own product.

**(Flip through your notes in a confused manner. Make it look like you are looking for something, but don't know where it is. Flip forward a few pages. Then flip back a few pages. Cross a few things out. Then flip forward a few pages to where you have your notes.)**

A: Doctor, were you able to test Mrs. Summer's water for the presence of Ketamine.

D: No I was not.

A: Why is that?

D: After the town learned of the Ketamine seepage, they increased their level of filtration for the local drinking water.

A: So, what testing, if any, were you able to do?

D: I collected wildlife and water samples from a lake next to the dump site.

A: And what did you find in these samples?

D: I found that some of the wildlife had developed abnormally.

A: What do you mean by abnormally?

D: Some of the frogs and fish had grown additional extremities.

**A: (look down and notice that the pictures are not being displayed. Press several buttons trying to fix it. Don't get it connected and looked stressed.).** I'm sorry.

Doctor, can you please tell the jury about the pictures you have taken?

D: Yes, I took photographs of the wildlife around the lake.

A: And what did you find?

D: I found a fish that had grown an extra fin and a frog that had grown a third leg.

A: Did you find anything else besides **infertility**?

D: Do you mean deformities?

A: Yes, did you find anything else besides deformities?

D: Yes, I also found infertility in some of the wildlife.

**A: (look down at your notes and mumble, not extremely obvious, but enough to notice)** Dr. Jones, did you test the water for Ketamine?

D: Could you repeat the question.

A: Did you test the water for Ketamine?

D: Yes I did.

A: And did you find any?

D: Yes

A: Did that Ketamine match the Ketamine manufactured by the defendant?

D: Yes it did.

A: Doctor, did the levels of Ketamine you found in the water cause you any concern?

D: Yes they did.

A: Could you please tell the jury why that is.

D: Yes, the Environmental Protection Agency creates levels of chemicals that can be present in water before being considered potentially hazardous after long-term consumption. For example, you can have up to 4 parts per million of fluoride in your water before it becomes potentially hazardous. One way to think of it, is if you were to put four drops of ink in one 55-gallon barrel of water and mix it thoroughly, you would have an ink concentration of 1 parts per million.

A: What is the level of Ketamine that is considered potentially dangerous?

D: .10 parts per million.

A: And what were the levels of Ketamine you found in the lake?

D: They were at .11 parts per million.

A: Doctor, did you find any other chemicals in the water?

D: Some chemicals are common in water, but no, I did not find any that would cause concern.

A: Doctor, in your professional opinion then, do you believe that the defendant's Ketamine is responsible for the infertility and deformations you found in the wildlife?

D: Yes I do.

A: Dr. Jones, I want to gear switch (**correct yourself**), switch gears and focus on your research. You have conducted several studies on Ketamine, but have you conducted research specifically on the defendant's Ketamine?

D: Yes I have.

A: Can you please tell the jury about this research.

D: I conducted a study in which I gave female laboratory rats large doses of Ketamine for one year. After this one year period, I evaluated their health on a variety of measures...tumors, organ functioning, respiratory functioning, etc. I also evaluated these outcomes across different brands of Ketamine.

A: How many different kinds of Ketamine did you examine?

D: We examined five different kinds.

A: And the defendant's Ketamine was one of those?

D: Yes it was.

A: What did you find?

D: Some rats in the study developed tumors and skin discoloration.

A: What else did your results find?

D: We found that rats that were exposed to the defendant's Ketamine developed ten times more health complications than the average.

A: (**look down at your notes and mumble, not extremely obvious, but enough to notice**) Was ovarian cancer a common health problem found in the laboratory rats?

D: I'm sorry, could you repeat the question.

A: Was ovarian cancer a common health problem found in the laboratory rats?

D: Ovarian cancer was not a very common type of health problem overall, but it occurred most often in rats that took the defendant's Ketamine.

A: Dr. Jones, in your professional opinion, do you believe that the health problems you found in the laboratory rats, namely ovarian cancer, could lead to similar health problems in humans?

D: Yes I do.

A: Thank you Dr. Jones. No further questions your honor.

### Direct Examination: Credible Defense – Strong Evidence

*A = Attorney*

*D = Dr. Davis*

*J = Judge*

A: Please state your name for the record.

D: Dr. Mark Davis...D-A-V-I-S.

A: Dr. Davis, could you please tell the jury about your qualifications.

D: I have a Ph.D. in biochemistry and have published several papers on Ketamine.

A: This case is about the development of ovarian cancer. There is national data about the prevalence of ovarian cancer in women, correct.

D: Yes, there is a national survey done each year on households of women.

A: I present defense's Exhibit 1. Doctor, can you tell me what this graph is.

D: Yes, this is a graph representing the results of that survey.

A: What does this graph indicate?

D: As you can see, 3 out of 1,000 women aged 30-40 years of age develop ovarian cancer.

A: Why did you select the 30-40 years of age?

D: Because the plaintiff is 32 years old, so this statistic concerns her.

A: Doctor, this survey just asked about ovarian cancer. It did not take into consideration the cause.

D: Correct.

A: So, this means that the ovarian cancer could have been caused by anything. Diet soda, too much red meat, pesticides.

D: Correct

A: Does this mean that the plaintiff could have developed ovarian cancer that is not linked to the ingestion of Ketamine?

D: Yes, it does.

A: Dr. Davis, have you done research near the dump site.

D: Yes, I have

A: What research did you conduct?

D: I examined the water from a local lake for the presence of other chemicals.

A: Did you find any?

D: No, I only found Ketamine.

A: Dr. Davis, have you done research involving Ketamine?

D: Yes I have.

A: And can you please the jury about this research.

D: I conducted a research study where I compared women who had been unknowingly exposed to high amounts of one of four different chemical products or no chemicals at all.

A: Was Ketamine one of these chemicals?

D: Yes it was.

A: And the cancer rates differed only slightly between the groups, correct.

**(objection your honor...leading)**

A: Excuse me. At this time, I would like to enter defense's Exhibit 2 into evidence.

Doctor, what were the results of this study?

D: As you can see on this graph, the cancer rates were only 10% higher in the Ketamine group than the other groups.

A: Ketamine is represented by the red bar above Chemical 3?

D: Correct.

A: Doctor, in your professional opinion, do you believe that Ketamine is likely to increase the risk of ovarian cancer?

D: No, I do not.

A: Thank you doctor. No further questions your honor.

### Direct Examination: Credible Defense – Ambiguous Evidence

*A = Attorney*

*D = Dr. Davis*

*J = Judge*

A: Please state your name for the record.

D: Dr. Mark Davis...D-A-V-I-S.

A: Dr. Davis, could you please tell the jury about your qualifications.

D: I have a Ph.D. in biochemistry and have published several papers on Ketamine.

A: This case is about the development of ovarian cancer. There is national data about the prevalence of ovarian cancer in women, correct.

D: Yes, there is a national survey done each year on households of women.

A: I present defense's Exhibit 1. Doctor, can you tell me what this graph is.

D: Yes, this is a graph representing the results of that survey.

A: What does this graph indicate?

D: As you can see, 10 out of 1,000 women aged 30-40 years of age develop ovarian cancer.

A: Why did you select the 30-40 years of age?

D: Because the plaintiff is 32 years old, so this statistic concerns her.

A: Doctor, this survey just asked about ovarian cancer. It did not take into consideration the cause.

D: Correct.

A: So, this means that the ovarian cancer could have been caused by anything. Diet soda, too much red meat, pesticides...

D: Correct

A: Does this mean that the plaintiff could have developed ovarian cancer that is not linked to the ingestion of Ketamine?

D: Yes, it does.

A: Dr. Davis, have you done research near the dump site.

D: Yes, I have

A: What research did you conduct?

D: I examined the water from a local lake for the presence of other chemicals.

A: Did you find any?

D: Yes, I found Bromomethane.

A: And what is Bromomethane?

D: It's a chemical that is commonly used as a pesticide.

A: And what were the levels of Bromomethane in the water?

D: They were at 1.2 parts per million.

A: And what is the parts per million that is considered potentially hazardous after long-term consumption?

D: For Bromomethane, it is 1.5 parts per million.

A: That is below what is considered potentially hazardous then, correct?

D: Yes, but each person's or animal's body may react to toxic chemicals differently. Different levels may cause the same problems.

A: Doctor, are you aware that some of the wildlife in that lake was found to have deformations and infertility?

D: Yes I am aware of those issues.

A: Is it possible that the Bromomethane is the cause of those medical issues?

D: Yes, it is possible.

A: Is it also possible that the Bromomethane you found in the lake could have also made its way into the drinking water?

D: Yes

A: Dr. Davis, have you done research involving Ketamine?

D: Yes I have.

A: And can you please tell the jury about this research.

D: I conducted a research study where I compared women who had been unknowingly exposed to high amounts of one of four different chemical products or no chemicals at all.

A: Was Ketamine one of these chemicals?

D: Yes it was.

A: And the cancer rates did not differ between the groups, correct.

**(objection your honor...leading)**

A: Excuse me. At this time, I would like to enter defense's Exhibit 2 into evidence. Doctor, what were the results of this study?

D: As you can see on this graph, the cancer rates did not differ between the Ketamine group and all other groups.

A: Ketamine is represented by the red bar above Chemical 3?

D: Correct.

A: Doctor, in your professional opinion, do you believe that Ketamine is likely to increase the risk of ovarian cancer?

D: No, I do not.

A: Thank you doctor. No further questions your honor.

**Direct Examination: Non-Credible Defense – Strong Evidence**

*A = Attorney*

*D = Dr. Davis*

*J = Judge*

A: Please state your name for the record.

D: Dr. Mark Davis...D-A-V-I-S.

A: Dr. Davis, tell the jury about your qualifications.

D: I have a Ph.D. in biochemistry and have published several papers on Ketamine.

A: This case is about the development of ovarian cancer. There is national data about the prevalence of ovarian cancer in women, correct.

D: Yes, there is a national survey done each year on households of women.

A: Does this survey contain information about women...women...**(Flip through notes. A few pages forward. A few pages backward)**...32 years of age, the same age as the plaintiff?

A: And what are those statistics?

D: Those statistics indicate that 3 out of 1,000 women aged 30-40 years of age develop ovarian cancer.

A: Doctor, this survey just asked about ovarian cancer. It did not take into consideration the cause, correct.

D: Correct.

A: Dr. Davis, **(subtly mumble)** have you done research near the dump site?

D: Could you repeat the question?

A: Have you conducted research near the dump site?

D: Yes, I have.

A: What research did you conduct?

D: I examined the water from a local lake for the presence of other chemicals.

A: Did you find any?

D: No, I only found Ketamine.

A: But this was a different lake than the one the plaintiff's expert examined, correct.

D: No, it was the same one.

A: Doctor, are you...strike that...**(cross off notes. Hesitate for 1 to 3 seconds.)** Dr. Davis, have you done research involving Ketamine?

D: Yes I have.

A: And can you please the jury about this research.

D: I conducted a research study where I compared women who had been unknowingly exposed to high amounts of one of four different chemical products or no chemicals at all.

A: Was Ketamine one of these chemicals?

D: Yes it was.

A: And the cancer rates differed only slightly between the groups, correct.

**(objection your honor...leading)**

**J: Sustained**

**A: (Hesitation) The cancer rates differed between the groups.**

**(objection your honor!!)**

**J: Sustained. Counsel rephrase your question.**

**A: (Act flustered and confused. Hesitate for approximately 3 seconds).** Doctor, tell me about the results of this study.

D: I found that the cancer rates were only 10% higher in the Ketamine group than the other groups.

A: Doctor, in your professional opinion, do you believe that Ketamine is likely to increase the risk of ovarian cancer?

D: No, I do not.

A: No further questions your honor.

### Direct Examination: Non-Credible Defense – Ambiguous Evidence

*A = Attorney*

*D = Dr. Davis*

*J = Judge*

A: Please state your name for the record.

D: Dr. Mark Davis...D-A-V-I-S.

A: Dr. Davis, tell the jury about your qualifications.

D: I have a Ph.D. in biochemistry and have published several papers on Ketamine.

A: This case is about the development of ovarian cancer. There is national data about the prevalence of ovarian cancer in women, correct.

D: Yes, there is a national survey done each year on households of women.

A: Does this survey contain information about women...women...**(Flip through notes. A few pages forward. A few pages backward)**...32 years of age, the same age as the plaintiff?

A: And what are those statistics?

D: Those statistics indicate that 10 out of 1,000 women aged 30-40 years of age develop ovarian cancer.

A: Doctor, this survey just asked about ovarian cancer. It did not take into consideration the cause, correct.

D: Correct.

A: Dr. Davis, **(subtly mumble)** have you done research near the dump site?

D: Could you repeat the question?

A: Have you conducted research near the dump site?

D: Yes, I have.

A: What research did you conduct?

D: I examined the water from a local lake for the presence of other chemicals.

A: Did you find any?

D: Yes, I found Bromomethane.

A: And what is Bromomethane?

D: It's a chemical that is commonly used as a pesticide.

A: And what were the levels of Bromomethane in the water?

D: They were at 1.2 parts per million.

A: And what is the parts per million that is considered potentially hazardous after long-term consumption?

D: For Bromomethane, it is 1.5 parts per million.

A: That is below what is considered potentially hazardous then, correct?

D: Yes, but each person's or animal's body may react to toxic chemicals differently. Different levels may cause the same problems.

A: Doctor, are you aware that some of the wildlife in that lake was found to have deformations and infertility?

D: Yes, I am aware of those issues.

A: Is it possible that the Bromomethane is the cause of those medical issues?

D: Yes, it is possible.

A: Is it also possible that the Bromomethane you found in the lake could have also made its way into the drinking water?

D: Yes

A: Dr. Davis, have you done research involving Ketamine?

D: Yes I have.

A: Tell the jury about this research.

D: I conducted a research study where I compared women who had been unknowingly exposed to high amounts of one of four different chemical products or no chemicals at all.

A: Was Ketamine one of these chemicals?

D: Yes it was.

A: And the cancer rates did not differ between the groups, correct.

**(objection your honor...leading)**

**J: Sustained**

**A: (Hesitation) The cancer rates were the same between the groups.**

**(objection your honor!!)**

**J: Sustained. Counsel rephrase your question.**

**A: (Act flustered and confused. Hesitate for approximately 3 seconds).** Doctor, tell me about the results of this study.

D: I found that the cancer rates did not differ between the Ketamine group and all other groups.

A: Doctor, in your professional opinion, do you believe that Ketamine is likely to increase the risk of ovarian cancer?

D: No, I do not.

A: No further questions your honor.

**Cross-Examination: Credible Plaintiff – Strong Evidence**

*A = Attorney*

*D = Dr. Davis*

A: Dr. Davis, in your research, did you compare the different types of Ketamine?

D: No, I did not.

A: Why is that?

D: At the time of the study, we were not concerned with differences within types of Ketamine. We were just interested in differences between chemicals.

A: Have you done additional research to look at differences within types of Ketamine?

D: No, I have not.

A: Is it possible, then, that had you compared the **(raise one hand)** defendant's Ketamine to **(raise other hand)** the other types of Ketamine and the other chemicals, your results could have been different?

D: It is possible.

**(put hands down)**

A: And is it possible, then, that there may actually be a larger difference than 10% between the defendant's Ketamine and the other chemicals?

D: It is possible, but not likely.

A: But you don't know that for sure because you never tested the defendant's Ketamine by itself.

D: That is correct.

A: Thank you Dr. Davis. No further questions your honor.

**Cross-Examination: Credible Plaintiff – Ambiguous Evidence**

*A = Attorney*

*D = Dr. Davis*

A: Dr. Davis, in your research, did you compare the different types of Ketamine?

D: No, I did not.

A: Why is that?

D: At the time of the study, we were not concerned with differences within types of Ketamine. We were just interested in differences between chemicals.

A: Have you done additional research to look at differences within types of Ketamine?

D: No, I have not.

A: Is it possible, then, that had you compared the **(raise one hand)** defendant's Ketamine to **(raise other hand)** the other types of Ketamine and the other chemicals, your results could have been different?

D: It is possible.

**(put hands down)**

A: And is possible, then, that there may actually be a difference between the defendant's Ketamine and the other chemicals?

D: It is possible, but not likely.

A: But you don't know that for sure because you never tested the defendant's Ketamine by itself.

D: That is correct.

A: Doctor, I also want to ask about the Bromomethane you found in the lake. Isn't it true that the effect of ingestion of Bromomethane in animals is not related to reproductive issues?

D: Early studies showed that, yes. But newer studies suggest that Bromomethane may cause issues.

A: But the issues that were specifically seen in the wildlife samples that Dr. Jones took?

D: In some instances, yes.

A: But not all instances?

D: No.

A: So it is plausible then that the Ketamine, and not the Bromomethane, could be responsible for the animal deformations and infertility.

D: I guess it's plausible.

A: And Dr. Davis, you speculate that the Bromomethane could have seeped into the local water. Why is that?

D: With the lake being adjacent to the dump site, it is likely that the same chemicals that were present in the lake were in the drinking water.

A: But that is just your opinion. Correct. Tests were never able to be done on Mrs. Summers's drinking water to confirm what you are saying.

D: Correct. That is my opinion based on my years of experience.

A: Thank you Dr. Davis. No further questions your honor.

**Cross-Examination: Non-Credible Plaintiff – Strong Evidence**

*A = Attorney*

*D = Dr. Davis*

A: Dr. Davis, in your research, did you compare the different types of Ketamine?

D: No, I did not.

A: Why is that?

D: At the time of the study, we were not concerned with differences within types of Ketamine. We were just interested in differences between chemicals.

A: Is it possible, then, that had you compared the defendant's Ketamine to the other types of Ketamine and the other chemicals, your results could have been different?

D: It is possible.

A: And is it possible, then, that there may actually be a larger difference than **20%** between the defendant's Ketamine and the other chemicals?

D: It's a 10% difference, not 20%.

A: Excuse me. There may actually be a larger difference than 10%.

D: It is possible, but not likely.

A: **(say with condescending tone)** Doctor, I didn't ask you your opinion about the likelihood of it. I asked you if it was possible.

D: Yes, it's possible.

A: Thank you doctor, that wasn't so hard was it?

**(objection your honor...counsel is badgering the witness)**

A: But you don't know that for sure because you never tested the defendant's Ketamine by itself.

D: That is correct.

A: Do you always conduct such poor research doctor?

**(objection your honor)**

A: I withdraw the question. No further questions your honor.

### Cross-Examination: Non-Credible Plaintiff – Ambiguous Evidence

*A = Attorney*

*D = Dr. Davis*

A: Dr. Davis, in your research, did you compare the different types of Ketamine?

D: No, I did not.

A: Why is that?

D: At the time of the study, we were not concerned with differences within types of Ketamine. We were just interested in differences between chemicals.

A: Is it possible, then, that had you compared the defendant's Ketamine to the other types of Ketamine and the other chemicals, your results could have been different?

D: It is possible.

A: And is possible, then, that there may actually be a **larger** difference between the defendant's Ketamine and the other chemicals?

D: There was no difference between the chemicals.

A: Excuse me. There may have actually been a difference

D: It is possible, but not likely.

A: (**say with condescending tone**) Doctor, I didn't ask you your opinion about the likelihood of it. I asked you if it was possible.

D: Yes, it's possible.

A: Thank you doctor, that wasn't so hard was it?

**(objection your honor...counsel is badgering the witness)**

A: But you don't know that for sure, do you, because you never tested the defendant's Ketamine by itself.

D: That is correct.

A: Do you always conduct such poor research doctor?

**(objection your honor)**

A: I withdraw the question. Doctor, I also want to ask about the Bromomethane you found in the lake. Isn't it true that the effect of ingestion of Bromomethane in animals is not related to reproductive issues?

D: Early studies showed that, yes. But newer studies suggest that Bromomethane may cause issues.

A: But the issues that were specifically seen in the wildlife samples that Dr. Jones took?

D: In some instances, yes.

A: But not all instances?

D: No.

A: So it is plausible then that the Ketamine, and not the Bromomethane, could be responsible for the animal deformations and infertility.

D: I guess it's plausible.

A: And Dr. Davis, you speculate that the Bromomethane could have seeped into the local water. Why is that?

D: With the lake being adjacent to the dump site, it is likely that the same chemicals that were present in the lake were in the drinking water.

A: But that is just your opinion. Correct. Tests were never able to be done on Mrs. Summers's drinking water to confirm what you are saying.

D: Correct. That is my opinion based on my years of experience.

A: No further questions your honor.

**Cross-Examination: Credible Defense – Strong Evidence**

*A = Attorney*

*D = Dr. Jones*

A: Hello Doctor.

D: Hello

A: Dr. Jones, you found deformations and infertility in the wildlife around the dump site.

D: Correct

A: Are you sure that the Ketamine was the cause of these issues?

D: I'm not sure, no. I could be natural occurrences. However, based upon my experience and years of research, I would say the chances are very high that the Ketamine caused the issues.

A: But you cannot be 100% certain.

D: No

A: Are there any studies you could do to be 100% certain?

D: No

A: Doctor, your study found that the rats who had taken my client's Ketamine had 10 times more health complications than the average.

D: Correct

A: And you said that ovarian cancer was not a common problem.

D: It was not common, no, but the rates were higher in the rats that took the defendant's Ketamine.

A: But you cannot definitively link the increased rate of ovarian cancer to my client's Ketamine can you?

D: Not definitively, no. But the health complications were much higher in the rats who took the defendant's Ketamine.

A: That may be true. The health complications may be caused by the chemical, but the ovarian cancer findings, the findings of most importance to this case (**point down with your finger**), could be purely by chance, correct?

D: Possibly

A: Doctor, is it possible that the findings were purely by chance? Yes or No?

D: Yes

A: Thank you doctor. No further questions your honor.

**Cross-Examination: Credible Defense – Ambiguous Evidence**

*A = Attorney*

*D = Dr. Jones*

A: Hello Doctor.

D: Hello

A: Dr. Jones, you found deformations and infertility in the wildlife around the dump site.

D: Correct

A: Are you sure that the Ketamine was the cause of these issues?

D: I'm not sure, no. I could be natural occurrences. However, based upon my experience and years of research, I would say the chances are very high that the Ketamine caused the issues.

A: But you cannot be 100% certain.

D: No

A: Are there any studies you could do to be 100% certain?

D: No

A: Doctor, you tested the water for other chemicals, correct?

D: Yes

A: And you said that there were no other chemicals that caused you concern?

D: Correct

A: But what about the presence of Bromomethane in the water?

D: Based upon my experience and prior research, I did not believe that the levels of Bromomethane were a cause for concern.

A: Do you believe that the Bromomethane could be the cause behind the deformations and infertility found in the wildlife?

D: Possibly, but it is more likely that the Ketamine is responsible.

A: Doctor, your study found that the rats who had taken my client's Ketamine had 10 times more health complications than the average.

D: Correct

A: And you said that ovarian cancer was not a common problem.

D: It was not common, no, but the rates were higher in the rats that took the defendant's Ketamine.

A: But you cannot definitively link the increased rate of ovarian cancer to my client's Ketamine can you?

D: Not definitively, no. But the health complications were much higher in the rats who took the defendant's Ketamine.

A: That may be true. The health complications may be caused by the chemical, but the ovarian cancer findings, the findings of most importance to this case (**point down with your finger**), could be purely by chance, correct?

D: Possibly

A: Doctor, is it possible that the findings were purely by chance? Yes or No?

D: Yes

A: Thank you doctor. No further questions your honor.

**Cross-Examination: Non-Credible Defense – Strong Evidence**

*A = Attorney*

*D = Dr. Jones*

*J = Judge*

A: Dr. Jones, you found deformations and infertility in the wildlife around the dump site.

D: Correct

A: Are you sure that the Ketamine was the cause of these issues?

D: I'm not sure, no. I could be natural occurrences. However, based upon my experience and years of research, I would say the chances are very high that the Ketamine caused the issues.

A: But you cannot be 100% certain.

D: No

A: Doctor, your study found that the rats who had taken my client's Ketamine had 8 times more health complications than the average.

D: It was 10 times more health complications.

A: Excuse me, (**emphasize 10, but do so with attitude**) 10 times more health complications.

D: Correct

A: And you said that ovarian cancer was not a common problem.

D: It was not common, no, but the rates were higher in the rats that took the defendant's Ketamine.

A: But you cannot definitively link the increased rate of ovarian cancer to my client's Ketamine can you?

D: Not definitively, no. But the health complications were much higher in the rats who took the defendant's Ketamine.

A: That may be true. The health complications may be caused by the chemical, but the ovarian cancer findings, the findings of most importance to this case, could be purely by chance, correct?

D: Possibly

A: (**pause and look slightly annoyed**). Doctor, is it possible that the findings were purely by chance? (**aggressive tone**) I just want a yes or no answer. No more, no less.

D: Yes

A: No further questions your honor.

### Cross-Examination: Non-Credible Defense – Ambiguous Evidence

*A = Attorney*

*D = Dr. Jones*

*J = Judge*

A: Dr. Jones, you found deformations and infertility in the wildlife around the dump site.

D: Correct

A: Are you sure that the Ketamine was the cause of these issues?

D: I'm not sure, no. I could be natural occurrences. However, based upon my experience and years of research, I would say the chances are very high that the Ketamine caused the issues.

A: But you cannot be 100% certain.

D: No

A: Doctor, you tested the water for other chemicals, correct?

D: Yes

A: And you said that there were no other chemicals that caused you concern?

D: Correct

A: But what about the presence of Bromomethane in the water?

D: Based upon my experience and prior research, I did not believe that the levels of Bromomethane were a cause for concern

A: Do you believe that the Bromomethane could be the cause behind the deformations and infertility found in the wildlife?

D: Possibly, but it is more likely that the Ketamine is responsible.

A: Doctor, your study found that the rats who had taken my client's Ketamine had 8 times more health complications than the average.

D: It was 10 times more health complications.

A: Excuse me, (**emphasize 10, but do so with attitude**) 10 times more health complications.

D: Correct

A: And you said that ovarian cancer was not a common problem.

D: It was not common, no, but the rates were higher in the rats that took the defendant's Ketamine.

A: But you cannot definitively link the increased rate of ovarian cancer to my client's Ketamine can you?

D: Not definitively, no. But the health complications were much higher in the rats who took the defendant's Ketamine.

A: That may be true. The health complications may be caused by the chemical, but the ovarian cancer findings, the findings of most importance to this case, could be purely by chance, correct?

D: Possibly

A: (**pause and look slightly annoyed**). Doctor, is it possible that the findings were purely by chance? (**aggressive tone**) I just want a yes or no answer. No more, no less.

D: Yes

A: No further questions your honor.

### **Closing Statements: Credible Plaintiff – Strong Evidence**

**\*\* Use hand gestures to emphasize your points. Give the perception of confidence and sincerity. Keep good eye contact with the jurors as you scan the jury box\*\***

At the beginning of this trial, you were informed that the burden of proof rests on the plaintiff. You were also told that we must prove our case by a preponderance of the evidence. To these statements I can confidently say that we have done our job. And why am I so confident? Well, let's take a minute to review the facts once again. We have a doctor who took wildlife samples from a lake nearby the dump site and found that the animals had developed deformations and infertility. The only chemical he found in the water that could be responsible for this was Ketamine. The exact chemical the defendant stores at the site. Does this show that Ketamine causes ovarian cancer? Not necessarily. But what it does show is that Ketamine is an unreasonably dangerous chemical and can have harmful effects on living things.

To take the evidence of Ketamine's harmfulness one step further, Dr. Jones conducted a year-long study with laboratory rats on the effects of Ketamine. What did he find? Rats that were administered the defendant's Ketamine had significantly more health problems than the other rats. The defense would like you to believe that this is all a coincidence. Coincidence? I think not. The defense introduced their own evidence to show that a study done with women who had unknowingly taken Ketamine differed by 10% in their cancer rates from women who had taken other chemicals. The defense would like to downplay the 10% number, but we believe that 10% is not something that should be disregarded as small. In addition, **(gently pound on the podium)** even by the defense expert's own admission, he did not test for differences within the various types of

Ketamine. Why not? Because he knew that he would find that the defendant's Ketamine would produce different results? Maybe the 10% number would be even larger. We don't know. But we do know is that the evidence the defense presented to support their claims is questionable at best.

Ladies and gentlemen, my client had her life destroyed as a result of this injury. She had to spend a week in the hospital after having her ovaries removed. She now walks around with a big, red scar (**run your finger up your stomach**) running the length of her stomach, which serves as a constant reminder of this incident. In addition, she and her husband wanted to start a family, something they will no longer be able to do.

Since Kathy's cancer was detected late, her prognosis is poor. The cancer has spread to other parts of her body and since the surgery and she is constantly in pain. Even more tragic is the fact that doctors do not expect her to survive beyond a few more months.

Mrs. Summers is not the only victim in this case. Her husband has also been negatively affected by this event. The stress has become too much for him and he has moved out of their home and has left Kathy to battle her illness all by herself.

Ladies and gentlemen of the jury, (**point to the jury**) you have the opportunity to help ease (**point to the plaintiff**) some of my client's pain. I ask that you find the defendant, Chemco, liable for Mrs. Summer's injuries. I also ask that you award her the full amount of \$500,000 to help offset the medical bills and to help provide her with a comfortable life. I would like to thank you for your attention and dedication.

### **Closing Statements: Credible Plaintiff – Ambiguous Evidence**

**\*\* Use hand gestures to emphasize your points. Give the perception of confidence and sincerity. Keep good eye contact with the jurors as you scan the jury box\*\***

At the beginning of this trial, you were informed that the burden of proof rests on the plaintiff. You were also told that we must prove our case by a preponderance of the evidence. To these statements I can confidently say that we have done our job. And why am I so confident? Well, let's take a minute to review the facts once again. We have a doctor who took wildlife samples from a lake nearby the dump site and found that the animals had developed deformations and infertility. The only chemical he found in the water that could be responsible for this was Ketamine. The exact chemical the defendant stores at the site. Does this show that Ketamine causes ovarian cancer? Not necessarily. But what it does show is that Ketamine is an unreasonably dangerous chemical and can have harmful effects on living things.

To take the evidence of Ketamine's harmfulness one step further, Dr. Jones conducted a year-long study with laboratory rats on the effects of Ketamine. What did he find? Rats that were administered the defendant's Ketamine had significantly more health problems than the other rats. The defense would like you to believe that this is all a coincidence. Coincidence? I think not. The defense introduced their own evidence to show that a study done with women who had unknowingly taken Ketamine did not differ in their cancer rates from women who had taken other chemicals. However, (**gently pound on the podium**) even by the defense expert's own admission, he did not test for differences within the various types of Ketamine. Why not? Because he knew that he would find that the defendant's Ketamine would produce different results? Maybe there

was a difference that went undetected. We don't know. But we do know is that the evidence the defense presented to support their claims is questionable at best.

The defense also presented questionable testimony concerning Dr. Davis's water tests on the lake next to the dump site. Dr. Davis said that, in addition to Ketamine, he found Bromomethane in the water. However, it is unclear whether Bromomethane would cause the same problems Dr. Jones found in the wildlife. Early studies showed no issues with Bromomethane and animals, but later studies did. So what are you supposed to believe? That is for you to decide. But we would argue that it was the defendant's Ketamine that was responsible for the deformations and infertility in the wildlife. And as far as the Bromomethane possibly seeping into the local water, that is a red herring. I urge you not to allow that to distract you from the facts of the case which prove that the defendant's Ketamine caused my client's injuries.

Ladies and gentlemen, my client had her life destroyed as a result of this injury. She had to spend a week in the hospital after having her ovaries removed. She now walks around with a big, red scar (**run your finger up your stomach**) running the length of her stomach, which serves as a constant reminder of this incident. In addition, she and her husband wanted to start a family, something they will no longer be able to do.

Since Kathy's cancer was detected late, her prognosis is poor. The cancer has spread to other parts of her body and since the surgery and she is constantly in pain. Even more tragic is the fact that doctors do not expect her to survive beyond a few more months.

Mrs. Summers is not the only victim in this case. Her husband has also been negatively affected by this event. The stress has become too much for him and he has moved out of their home and has left Kathy to battle her illness all by herself.

Ladies and gentlemen of the jury, **(point to the jury)** you have the opportunity to help ease **(point to the plaintiff)** some of my client's pain. I ask that you find the defendant, Chemco, liable for Mrs. Summer's injuries. I also ask that you award her the full amount of \$500,000 to help offset the medical bills and to help provide her with a comfortable life. I would like to thank you for your attention and dedication.

### **Closing Statements: Non-Credible Plaintiff – Strong Evidence**

**\*\*Stay behind podium the whole time. Do not use hand gestures. Give the perception of arrogance and nervousness.\*\***

At the beginning of this trial, you were informed that the burden of proof rests on the plaintiff. You were also told that we must prove our case by a preponderance of the evidence. To these statements I can confidently say that we have done our job. And why am I so confident? Well, let's take a minute to review the facts once again. We have a doctor who took wildlife samples from a lake nearby the dump site and found that the animals had developed **formations**, deformations and infertility. The only chemical he found in the water that could be responsible for this was Ketamine. The exact chemical the defendant stores at the site. Does this show that Ketamine causes ovarian cancer? Not necessarily. But what it does, **um**, show is that Ketamine is a dangerous chemical and can have **deleterious** effects on living things.

The defense introduced their own evidence to show that a study done with women who had unknowingly taken Ketamine differed by 10% in their cancer rates from women who had taken other chemicals. However, even by the defense expert's own admission, he did not test for differences within the various types of Ketamine. Why not? Because he knew that he would find that the defendant's Ketamine would produce higher results? **Because he was incompetent?** We don't know. But we do know is that the evidence the defense presented to support their claims is **weak**.

Going back to Dr. Jones's research, he conducted, **um**, a year-long study with laboratory rats on the effects of Ketamine. **Whadhe** find? Rats that **was** administered the

defendant's Ketamine had significantly more health problems than the other rats. The defense would like you to believe that this is all a coincidence. **(smirk) I don't think so.**

Ladies and gentlemen of the jury, I ask that you find the defendant, Chemco, liable for Mrs. Summer's injuries. I also ask that you award her the full amount of \$500,000. Thank you.

### **Closing Statements: Non-Credible Plaintiff – Ambiguous Evidence**

**\*\*Stay behind podium the whole time. Do not use hand gestures. Give the perception of arrogance and nervousness.\*\***

At the beginning of this trial, you were informed that the burden of proof rests on the plaintiff. You were also told that we must prove our case by a preponderance of the evidence. To these statements I can confidently say that we have done our job. And why am I so confident? Well, let's take a minute to review the facts once again. We have a doctor who took wildlife samples from a lake nearby the dump site and found that the animals had developed **formations**, deformations and infertility. The only chemical he found in the water that could be responsible for this was Ketamine. The exact chemical the defendant stores at the site. Does this show that Ketamine causes ovarian cancer? Not necessarily. But what it does, **um**, show is that Ketamine is a dangerous chemical and can have **deleterious** effects on living things.

The defense introduced their own evidence to show that a study done with women who had unknowingly taken Ketamine did not differ in their cancer rates from women who had taken other chemicals. However, even by the defense expert's own admission, he did not test for differences within the various types of Ketamine. Why not? Because he knew that he would find that the defendant's Ketamine would produce different results? **Because he was incompetent?** We don't know. But we do know is that the evidence the defense presented to support their claims is **weak**.

The defense also presented questionable testimony concerning Dr. Davis's water tests on the lake next to the dump site. Dr. Davis said that, in addition to Ketamine, he found Bromomethane in the water. However, it is unclear whether Bromomethane would

cause the same problems Dr. Jones found in the wildlife. Early studies, **um**, showed no issues with Bromomethane and animals, but later studies did. So what are you supposed to believe? That is for you to decide. But we would argue that it was the defendant's Ketamine that was responsible for the deformations and infertility in the wildlife. And as far as the Bromomethane possibly seeping into the local water, that is a red herring. Don't let that distract you from the facts of the case which prove that the defendant's Ketamine caused my client's injuries.

Going back to Dr. Jones's research, he conducted, **um**, a year-long study with laboratory rats on the effects of Ketamine. **Whadhe** find? Rats that **was** administered the defendant's Ketamine had significantly more health problems than the other rats. The defense would like you to believe that this is all a coincidence. **(smirk) I don't think so.**

Ladies and gentlemen of the jury, I ask that you find the defendant, Chemco, liable for Mrs. Summer's injuries. I also ask that you award her the full amount of \$500,000. Thank you.

### **Closing Statements: Credible Defense – Strong Evidence**

**\*\* Use hand gestures to emphasize your points. Give the perception of confidence and sincerity. Keep good eye contact with the jurors as you scan the jury box\*\***

Ladies and gentlemen of the jury, we have said it from the beginning of this trial that our client does not deny the fact that their Ketamine seeped into the local water supply. We accept that. However, we do not believe that the Ketamine caused the plaintiff's ovarian cancer. We do not believe that the evidence in this case proves a connection between my client's Ketamine and the plaintiff's injuries either. Why don't we believe this? Let's walk through the evidence.

Our expert, Dr. Davis, presented evidence that shows that 3 out of 1000 women ages 30-40 develop ovarian cancer. This is independent of whether they have been exposed to Ketamine. This means that there is a possibility that the plaintiff's cancer came from some other **(use your fingers to count out each of these)** chemical, food, or a genetic predisposition. In addition, Dr. Davis's research showed that cancer rates were only 10% higher for women in the Ketamine group compared to all other groups. **(emphasize)** 10%. That is not a significant increase. That's 1 out of 10. Also, remember that Dr. Davis did not test for specific kinds of Ketamine. It's possible that some other manufacturer's Ketamine is responsible for this 10% increase.

To both of these points, **(use one hand to push on the fingers of your other hand)** the development of ovarian cancer in the nation and the 10% increase in cancer in the study, we can concede that we don't know what caused them. However, we don't have to be sure. It's **(point to the plaintiff's table)** the plaintiff's responsibility to prove that our client's Ketamine is responsible. And to that, I say that they have not done so.

**(Adopt a sincere tone).** Ladies and gentlemen of the jury, what happened to Mrs. Summers is unfortunate and we can sympathize with her. We don't deny that having to have your ovaries removed is upsetting. However, it is just not clear that my client is responsible. The evidence is just not there. And because of that, I ask that you find my client not liable for Mrs. Summers's injuries and return a damage award of \$0. Thank you, I appreciate your attention and dedication to your role as a juror.

### **Closing Statements: Credible Defense – Ambiguous Evidence**

**\*\* Use hand gestures to emphasize your points. Give the perception of confidence and sincerity. Keep good eye contact with the jurors as you scan the jury box\*\***

Ladies and gentlemen of the jury, we have said it from the beginning of this trial that our client does not deny the fact that their Ketamine seeped into the local water supply. We accept that. However, we do not believe that the Ketamine caused the plaintiff's ovarian cancer. We do not believe that the evidence in this case proves a connection between my client's Ketamine and the plaintiff's injuries either. Why don't we believe this? Let's walk through the evidence.

Our expert, Dr. Davis, presented evidence that shows that 10 out of 1000 women ages 30-40 develop ovarian cancer. This is independent of whether they have been exposed to Ketamine. This means that there is a possibility that the plaintiff's cancer came from some other **(use your fingers to count out each of these)** chemical, food, or a genetic predisposition. In addition, Dr. Davis's research showed that cancer rates were no different for the women in the Ketamine group compared to all other groups. **(Make a 0 with your hand)**. No different. Dr. Davis didn't test for differences within brands of Ketamine, but what would this have shown? That the **(lift one hand up above your shoulder)** high cancer rates produced by my client's Ketamine and the low **(drop one hand to your stomach area)** cancer rates of some other brand of Ketamine somehow **(bring your hands to be level with each other)** leveled each other out? This doesn't seem likely. What seems more likely is that my client's Ketamine does not cause ovarian cancer.

As a final piece of evidence, Dr. Davis tested the water in the lake next to the dump site. In addition to my client's Ketamine, he also found Bromomethane. The plaintiff would like you to believe that Chemco's Ketamine is responsible for the deformities and infertility found in the wildlife, but it is also possible that the Bromomethane is responsible. Current research on Bromomethane shows it can have harmful effects on wildlife. In addition, Dr. Davis mentioned how it was possible that the Bromomethane could have made its way into the drinking water as well. This creates the possibility that it was Bromomethane, and not my client's Ketamine, that caused Mrs. Summers's ovarian cancer.

To all of these points, **(use one hand to push on the fingers of your other hand)** the development of ovarian cancer in the nation, the lack of a difference in cancer in the study, and the issues found in the wildlife, we can concede that we don't know what caused them. However, we don't have to be sure. It's **(point to the plaintiff's table)** the plaintiff's responsibility to prove that our client's Ketamine is responsible. And to that, I say that they have not done so.

**(Adopt a sincere tone)**. Ladies and gentlemen of the jury, what happened to Mrs. Summers is unfortunate and we can sympathize with her. We don't deny that having to have your ovaries removed is upsetting. However, it is just not clear that my client is responsible. The evidence is just not there. And because of that, I ask that you find my client not liable for Mrs. Summers's injuries and return a damage award of \$0. Thank you, I appreciate your attention and dedication to your role as a juror.

### **Closing Statements: Non-Credible Defense – Strong Evidence**

**\*\*Stay behind podium the whole time. Do not use hand gestures. Give the perception of arrogance and nervousness.\*\***

Ladies and gentlemen of the jury, we have said it from the beginning of this trial that our client does not deny the fact that their Ketamine seeped into the local water supply. However, we do not believe that the Ketamine caused the plaintiff's ovarian cancer. We do not believe that the evidence in this case proves a connection between my client's Ketamine and the plaintiff's injuries either. Let's walk through the evidence.

Our expert, Dr. Davis, presented, **um**, evidence that shows that 3 out of 1000 women ages 30-40 develop ovarian cancer. In addition, **um**, Dr. Davis's research showed that cancer rates were only 10% higher for women in the Ketamine group compared to all other groups. **(make a arrogant face)**. That is not a significant increase. That's 1 out of 10. Also, remember that Dr. Davis did not test for specific kinds of Ketamine. It's possible that some other manufacturer's Ketamine is responsible for this 10% increase.

Going back to the national survey on ovarian cancer, the findings were independent of whether the women were exposed to Ketamine. This means that there is a possibility that the plaintiff's cancer came from some other chemical, food, or a genetic predisposition.

To both of these points, the development of ovarian cancer in the nation and the 10% increase in cancer in the study, we can concede that we are unable to determine the **genesis** of them. However, we don't have to be sure. It's the plaintiff's responsibility to prove that our client's Ketamine is responsible. And to that, I say that they have not done

so. And because of that, I ask that you find my client not liable for Mrs. Summers's injuries and return a damage award of \$0. Thank you.

**Closing Statements: Non-Credible Defense – Ambiguous Evidence**

**\*\*Stay behind podium the whole time. Do not use hand gestures. Give the perception of arrogance and nervousness.\*\***

Ladies and gentlemen of the jury, we have said it from the beginning of this trial that our client does not deny the fact that their Ketamine seeped into the local water supply. However, we do not believe that the Ketamine caused the plaintiff's ovarian cancer. We do not believe that the evidence in this case proves a connection between my client's Ketamine and the plaintiff's injuries either. Let's walk through the evidence.

Our expert, Dr. Davis, presented, **um**, evidence that shows that 10 out of 1000 women ages 30-40 develop ovarian cancer. In addition, **um**, Dr. Davis's research showed that cancer rates were no different for the women in the Ketamine group compared to all other groups. Dr. Davis didn't test for differences within brands of Ketamine, but what would this have shown? That the high cancer rates produced by my client's Ketamine and the low cancer rates of some other brand of Ketamine somehow leveled each other out? **(smirk)**. C'mon, this doesn't seem likely. What seems more likely is that my client's Ketamine does not cause ovarian cancer.

Going back to the national survey on ovarian cancer, the findings were independent of whether they have been exposed to Ketamine. This means that there is a possibility that the plaintiff's cancer came from some other chemical, food, or a genetic predisposition.

As a final piece of evidence, Dr. Davis tested the water in the lake next to the dump site. In addition to my client's Ketamine, he also found Bromomethane. The plaintiff would like you to believe that Chemco's Ketamine is responsible for the deformities and infertility found in the wildlife, but it is also possible that the Bromomethane is responsible. Current research on Bromomethane shows it can have **deleterious** effects on wildlife. In addition, Dr. Davis mentioned how it was possible that the Bromomethane could have made its way into the drinking water as well. This creates the possibility that it was Bromomethane, and not my client's Ketamine, that **cause** Mrs. Summers's ovarian cancer.

To all of these points, the development of ovarian cancer in the nation, the lack of a difference in cancer in the study, and the issues found in the wildlife, we can concede that we are unable to determine the **genesis** of them. However, we don't have to be sure. It's the plaintiff's responsibility to prove that our client's Ketamine is responsible. And to that, I say that they have not done so. And because of that, I ask that you find my client not liable for Mrs. Summers's injuries and return a damage award of \$0. Thank you.

## Appendix D: Credible Plaintiff and Defense Attorney Ties



## Appendix E: 'Gaudy' Ties and 'Flashy' Watches



## Appendix F: Attorney Credibility Scenarios

**Credible Plaintiff Attorney**

**Mrs. Kathy Summers – Plaintiff**  
**Chemco Chemicals Inc. – Defendant**  
**Dr. Raymond Jones – Plaintiff expert witness**  
**Dr. Mark Davis – Defense expert witness**

**Opening Statements:**

The plaintiff attorney approached the podium wearing a dark suit and red tie (*physical presence*). He began his opening statements by introducing his client, Kathy Summers, to the jury by showing them a picture of her (*persuasion*). During his opening statements, he laid out the facts of the case in a clear and persuasive manner (*organization*). He spoke in an articulate manner (*speech clarity*), projected his voice (*oral expression*), used proper grammar (*speech clarity*), and used easily understandable language (*oral expression*) while he presented his case against the defendant, Chemco Chemicals Inc. While maintaining good eye contact and posture (*physical presence*), he stated his client had developed ovarian cancer from drinking water that was contaminated with the defendant's chemical, Ketamine. He placed a glass of water on the podium to emphasize his point (*persuasion*). The plaintiff attorney discussed how he will be presenting evidence from an expert witness. He indicated that the expert witness has done research that will show a causal link between the defendant's Ketamine and ovarian cancer.

**Direct Examination:**

During his direct examination of the plaintiff's expert, Dr. Jones, the attorney spoke clearly, listened carefully to what the witness said, and asked pertinent follow-up questions (*critical listening*). At one point during his questioning, the plaintiff attorney noticed that the video equipment that he was trying to use to display his exhibits was not working properly. When he noticed the issue, he quickly corrected it and, without missing a beat, continued with his questioning (*adaptability*). The attorney showed the jury photographs of a three-legged frog, a fish with an extra fin, and a laboratory rat with tumors and skin discolorations on its paws (*synthesis*). These photographs were used to show how dangerous Ketamine is. The plaintiff attorney also showed the jury a graph that indicated the number of health complications found in rats that had taken the defendant's Ketamine (*synthesis*).

**Cross-Examination:**

During his cross-examination of the defense's expert, Dr. Davis, the attorney spoke clearly, listened carefully to what the witness said, and asked pertinent follow-up questions (*critical listening*). He also interacted with the witness in a non-threatening way (*interpersonal interaction*).

**Closing Statements:**

During his closing statements, the attorney reiterated the arguments that he made during his opening statements and summarized the testimony of Dr. Jones. He emphasized his major points by freely gesturing with his hands and by gently knocking on the podium (*physical presence*). He spoke very candidly to the jury in an attempt to gain sympathy for Mrs. Summers (*persuasion*). He informed them that his client had to have her ovaries removed. As a result, she can no longer have children, even though she and her husband wanted to start a family. He also told the jury that Mrs. Summers's prognosis is poor and doctors believe that she will likely live for only a few more months. The attorney closed by telling the jury that Mr. Summers has had a difficult time with his wife's injuries and has subsequently moved out of the house. When he was finished, he thanked the jury for their hard work and dedication and asked them to return a liable verdict and award monetary damages to his client (*social perceptiveness*).

## Non-Credible Plaintiff Attorney

**Mrs. Kathy Summers – Plaintiff**  
**Chemco Chemicals Inc. – Defendant**  
**Dr. Raymond Jones – Plaintiff expert witness**  
**Dr. Mark Davis – Defense expert witness**

### Opening Statements:

The plaintiff attorney approached the podium wearing a dark suit; wrinkled white dress shirt; bright red, black, and grey tie; and a ‘flashy’ black and gold watch (*physical presence*). He began his opening statements by introducing his client, Kathy Summers, to the jury by showing them a picture of her. However, the picture was presented upside down (*persuasion*). The attorney attempted to present the facts of the case in a clear and persuasive manner. However, while doing so, he often lost his place, which caused him to hesitate (*organization*). He often mumbled when he spoke (*speech clarity*), failed to project his voice (*oral expression*), used improper grammar (*speech clarity*), and used complicated language (*oral expression*) while he presented his case against the defendant, Chemco Chemicals Inc. While maintaining poor eye contact and posture (*physical presence*), he stated his client had developed ovarian cancer from drinking water that was contaminated with the defendant’s chemical, Ketamine. The plaintiff attorney discussed how he will be presenting evidence from an expert witness. He indicated that the expert witness has done research that will show a causal link between the defendant’s Ketamine and ovarian cancer.

### Direct Examination:

During his direct examination of the plaintiff’s expert, Dr. Jones, the attorney did not speak clearly and was often asked to repeat himself (*speech clarity*). He also failed at times to attend to what the witness was saying and failed to ask pertinent follow-up questions (*critical listening*). At one point during his questioning, the plaintiff attorney noticed that the video equipment that he was trying to use to display his exhibits was not working properly. After taking a moment to notice the issue, he became anxious and tried to fix the problem himself (*adaptability*). After unsuccessfully correcting the issue, he asked the witness to explain to the jury what was in the pictures (*synthesis*).

### Cross-Examination:

During his cross-examination of the defense’s expert, Dr. Davis, the attorney did not listen carefully to what the witness said and failed to ask pertinent follow-up questions (*critical listening*). At one point, the defense’s expert had to correct the attorney because the attorney had made an incorrect statement about the expert’s testimony (*critical listening*). He also harassed the witness at some points during the cross-examination (*interpersonal interaction*).

### Closing Statements:

During his closing statements, the attorney reiterated the arguments that he made during his opening statements. He tried to summarize the testimony of Dr. Jones, but confused the jury by jumping around from argument to argument. He attempted to emphasize his major points, but did not use any hand gestures and did not make good eye contact with the jury (*physical presence*). When he was finished, he asked them to return a liable verdict and award monetary damages to his client (*social perceptiveness*).

## Credible Defense Attorney

**Mrs. Kathy Summers – Plaintiff**  
**Chemco Chemicals Inc. – Defendant**  
**Dr. Raymond Jones – Plaintiff expert witness**  
**Dr. Mark Davis – Defense expert witness**

### Opening Statements:

The defense attorney approached the podium wearing a dark suit and gold tie (*physical presence*). During his opening statements, he laid out the facts of the case in a clear and persuasive manner (*organization*). He spoke in an articulate manner (*speech clarity*), projected his voice (*oral expression*), and used easily understandable language (*oral expression*) while he presented his theory of what he proposed really happened. While maintaining good eye contact and posture (*physical presence*), he stated his client, Chemco Chemicals Inc., concedes that their chemical, Ketamine, seeped into the town's water supply (*persuasion*). However, he passionately argued that his client's chemical did not cause the plaintiff's, Kathy Summers's, ovarian cancer (*persuasion*). He empathized with the plaintiff regarding her injuries (*social perceptiveness*), but he indicated that he will be presenting evidence from an expert witness who has done research on Ketamine. The research will show there is no causal link between Ketamine and ovarian cancer.

### Direct Examination:

During his direct examination of the defense's expert, Dr. Davis, the attorney spoke clearly, listened carefully to what the witness said, and asked pertinent follow-up questions (*critical listening*). At one point during his questioning, the plaintiff attorney objected to one of the questions. The judge accepted the objection. Without any hesitation, the defense attorney rephrased his question and moved on (*adaptability*). The attorney showed the jury two graphs. The first graph indicated the percentage of women age 30-40 that develop ovarian cancer. The second graph was research findings from the expert witness regarding ovarian cancer rates between women who took Ketamine and other chemicals (*synthesis*).

### Cross-Examination:

During his cross-examination of the plaintiff's expert, Dr. Jones, the attorney spoke clearly, listened carefully to what the witness said, and asked pertinent follow-up questions (*critical listening*). He also interacted with the witness in a non-threatening way (*interpersonal interaction*).

### Closing Statements:

During his closing statements, the attorney reiterated the arguments that he made during his opening statements and summarized the testimony of Dr. Davis. He emphasized his major points by freely gesturing with his hands and maintaining good eye

contact with the jury (*physical presence*). He empathized once again with the plaintiff (*social perceptiveness*), but passionately indicated that the evidence did not show his client is liable for her injuries. When he was finished, he thanked the jury for their hard work and dedication and asked them to return a not liable verdict (*social perceptiveness*).

### Non-Credible Defense Attorney#

**Mrs. Kathy Summers – Plaintiff**  
**Chemco Chemicals Inc. – Defendant**  
**Dr. Raymond Jones – Plaintiff expert witness**  
**Dr. Mark Davis – Defense expert witness**

#### **Opening Statements:**

The defense attorney approached the podium wearing a dark suit; wrinkled white dress shirt; bright pink and black tie; and a ‘flashy’ gold watch (*physical presence*). During his opening statements, he attempted to present the facts of the case in a clear and persuasive manner. However, while doing so, he often lost his place which caused him to hesitate (*organization*). He often mumbled when he spoke (*speech clarity*), failed to project his voice, and used complicated language (*oral expression*) while he presented his theory of what he proposed really happened. While maintaining poor eye contact and posture (*physical presence*), he stated his client, Chemco Chemicals Inc., begrudgingly (*oral expression*) concedes that their chemical, Ketamine, seeped into the town’s water supply (*persuasion*). However, he unemotionally argued that his client’s chemical did not cause the plaintiff’s, Kathy Summers’s, ovarian cancer (*persuasion*). The defense attorney discussed how he will be presenting evidence from an expert witness who has done research on Ketamine. The research will show there is no causal link between Ketamine and ovarian cancer.

#### **Direct Examination:**

During his direct examination of the defense’s expert, Dr. Davis, the attorney did not speak clearly and was often asked to repeat himself (*speech clarity*). He also failed at times to attend to what the witness was saying and failed to ask pertinent follow-up questions (*critical listening*). At one point during his questioning, the plaintiff attorney objected to one of the questions. The judge accepted the objection. The attorney attempted to rephrase the question, but the plaintiff attorney objected again. The judge accepted the objection and told the attorney to rephrase the question. The defense attorney became confused and took a moment before he successfully phrased the question (*adaptability*). The attorney concluded his direct examination without presenting the jury any exhibits (e.g., charts or graphs) to support his case (*synthesis*).

#### **Cross-Examination:**

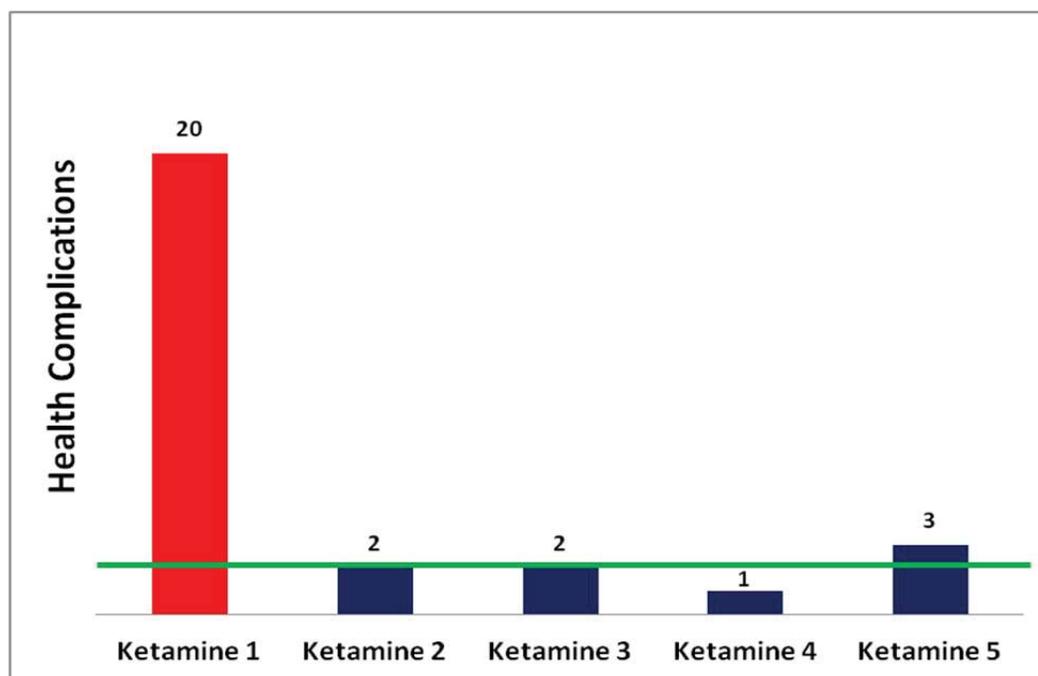
During his cross-examination of the plaintiff’s expert, Dr. Jones, the attorney did not listen carefully to what the witness said and failed to ask pertinent follow-up questions (*critical listening*). At one point, the plaintiff’s expert had to correct the attorney because the attorney had made an incorrect statement about the expert’s testimony (*critical listening*). He also harassed the witness at some points during the cross-examination (*interpersonal interaction*).

**Closing Statements:**

During his closing statements, the attorney reiterated the arguments that he made during his opening statements. He tried to summarize the testimony of Dr. Davis, but confused the jury by jumping around from argument to argument. He attempted to emphasize his major points, but did so while staying behind the podium, using no hand gestures, and keeping poor eye contact with the jury (*physical presence*). He unemotionally argued that the evidence did not show his client is liable for the plaintiff's injuries. When he was finished, he asked them to return a not liable verdict (*social perceptiveness*).

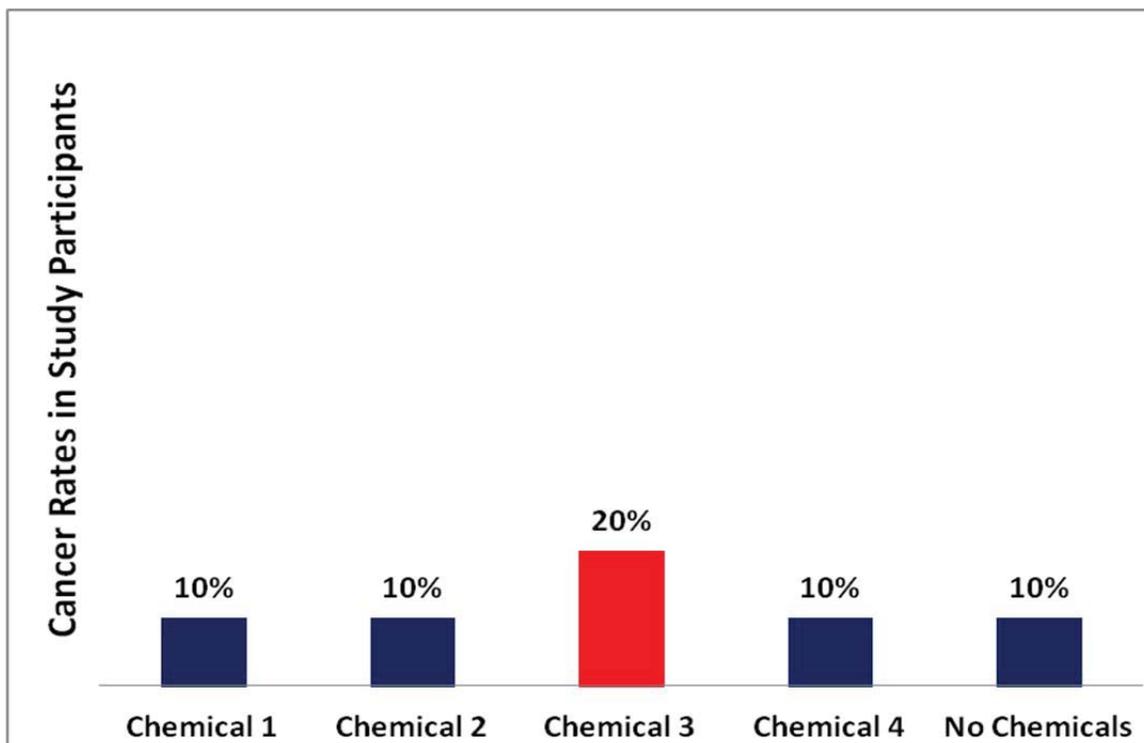
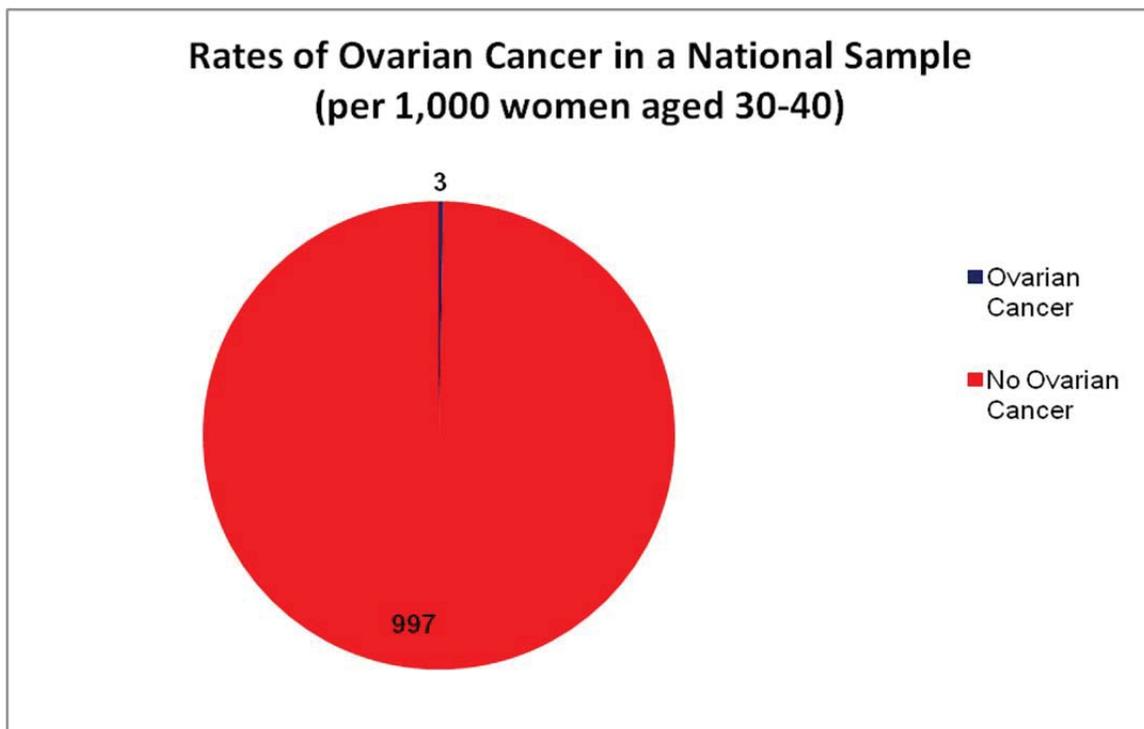
Appendix G: Plaintiff Exhibits



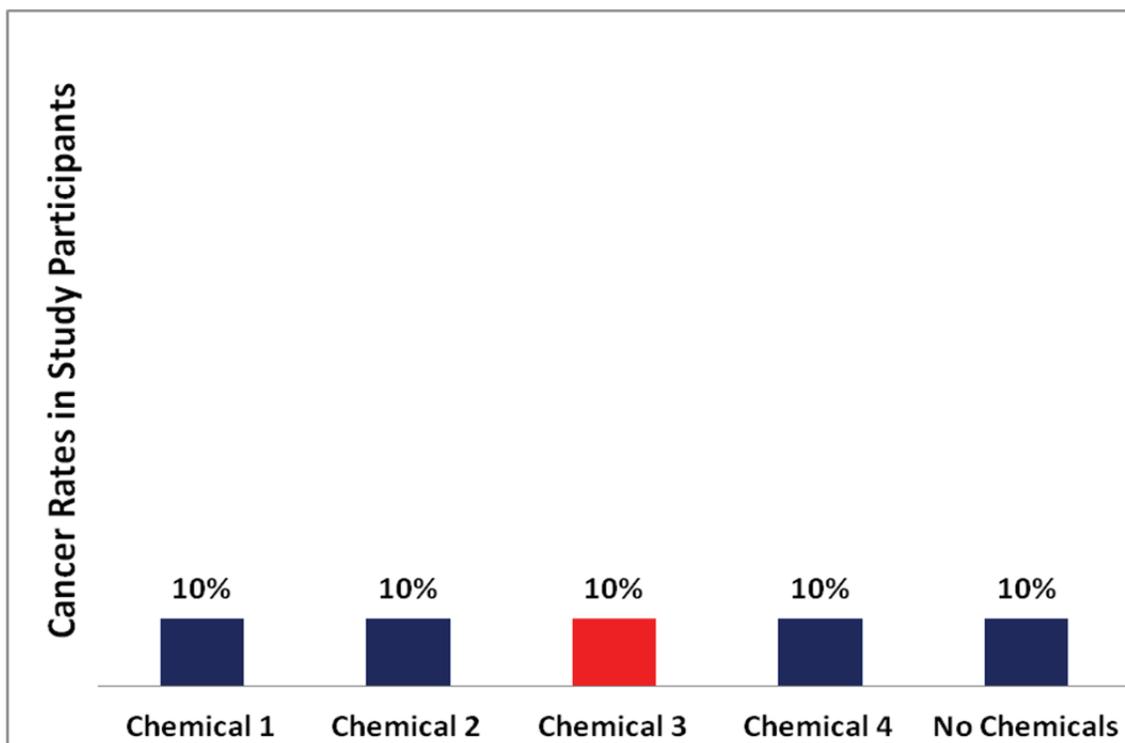
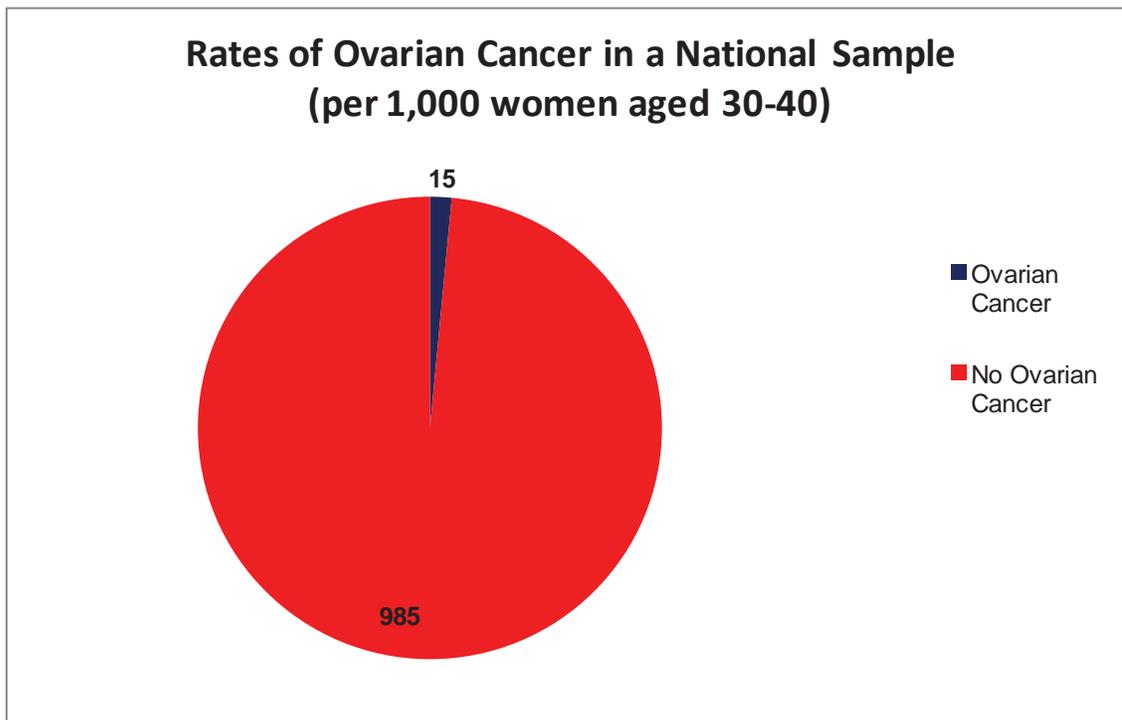


Appendix H: Defense Exhibits

Strong Evidence



## Ambiguous Evidence



## Appendix I: Trial Summary (Adapted from Bornstein et al., 2002)

**Strong Evidence Condition**

**Mrs. Kathy Summers – Plaintiff**  
**Chemco Chemicals Inc. – Defendant**  
**Dr. Raymond Jones – Plaintiff expert witness**  
**Dr. Mark Davis – Defense expert witness**

**THE PLAINTIFF:** Kathy, age 32, had ovarian cancer. Since it was detected late, doctors had to remove both ovaries. The operation involved major surgery that required a week-long stay in the hospital, and it left a large red scar. Because both ovaries were removed, Kathy is consequently unable to have children. Although they did not yet have any, she and her husband really wanted to have children. They were planning to start a large family around the time that Kathy was diagnosed.

Late detection also means that Kathy's prognosis is poor. The cancer has spread since the surgery, which was two years ago. She has not been able to return to her job as a marketing consultant. Kathy is almost constantly in pain, and her life expectancy is very short. Doctors do not expect her to survive beyond a few more months. Her husband has had a hard time dealing with her illness, to the extent that he has moved out of their house and left Kathy all alone.

**THE DEFENDANT:** Kathy is suing a large chemical manufacturing company named Chemco Chemicals Inc., or Chemco. She claims that some of the chemicals that Chemco has stored at a dump one mile from her house have seeped into the neighborhood's water supply, and that regularly drinking the contaminated water caused her cancer. She had lived near the dump for approximately 10 years, without any previous problems.

**ISSUE AT TRIAL:** A major issue at trial is whether or not a particular chemical, called Ketamine, causes cancer. If so, then the chemical company is liable for damages, since both parties accept that high levels of Ketamine leaked from the dump into the neighborhood's water supply; if not, then the chemical company is not liable.

**Kathy is asking for compensatory damages in the amount of \$500,000 for medical costs, lost income, pain and suffering.**

**EVIDENCE PRESENTED AT TRIAL:** The plaintiff's expert witness, Dr. Jones, testifies that there is considerable variability among different brands of chemical products. Although the federal government sets guidelines, it leaves companies some leeway in designing their own products. He gave female laboratory rats large doses of

Ketamine manufactured by one of five different companies, for a period of one year. He then evaluated their health on a variety of measures and compared across different brands. Rats exposed to the defendant's chemical developed 10 times more health complications than the average. For example, some of the rats developed tumors and skin discolorations on their paws. Ovarian cancer was not a very common type of health problem overall, but it occurred most often in rats that took the defendant's Ketamine. He concludes that the defendant's chemical could lead to similar health problems in humans.

Dr. Jones also conducted field tests on the water and wildlife found in a lake located next to the dump site. He found that some species of animals had developed deformities. For example, several fish had grown extra fins and several frogs had grown an extra leg. He also found that some of the wildlife was infertile. Dr. Jones tested the water and found the defendant's Ketamine to be present. The Environmental Protection Agency creates levels of chemicals that can be present in water before being considered potentially hazardous after long-term consumption. Each chemical has its own preferred maximum value based upon the level of toxicity. The maximum level for Ketamine is .10 parts per million. Dr. Jones found the Ketamine concentration in the lake to be .11 parts per million. He did not find any other chemicals that led him to believe that the animal deformities and infertility could be caused by anything other than the defendant's Ketamine. Dr. Jones could not test the actual water that Mrs. Summers had drunk because the town increased its level of filtration for drinking water once the problem was noticed.

The defendant's expert witness, Dr. Davis, testifies that Ketamine in general does not increase the risk of cancer. A national survey of women showed that 3 out of every 1,000 women age 30-40 develop ovarian cancer, regardless of what kind of chemicals they are exposed to. Dr. Davis also conducted a study in which he compared women who had been unknowingly exposed to high amounts of one of four different chemical products, one of which was Ketamine, or no chemicals at all. Cancer rates were 10% higher for women in the Ketamine group compared to all other groups. Although he did not specifically compare different brands of Ketamine, he concludes that the defendant's chemical, one of many brands that women in the study had been exposed to, is unlikely to increase the risk of ovarian cancer.

Dr. Davis also conducted field tests on the water in the lake located next to the dump site. Besides Ketamine, he did not find any other chemicals present in the water.

### Ambiguous Evidence Condition

**Mrs. Kathy Summers – Plaintiff**  
**Chemco Chemicals Inc. – Defendant**  
**Dr. Raymond Jones – Plaintiff expert witness**  
**Dr. Mark Davis – Defense expert witness**

**THE PLAINTIFF:** Kathy, age 32, had ovarian cancer. Since it was detected late, doctors had to remove both ovaries. The operation involved major surgery that required a week-long stay in the hospital, and it left a large red scar. Because both ovaries were removed, Kathy is consequently unable to have children. Although they did not yet have any, she and her husband really wanted to have children. They were planning to start a large family around the time that Kathy was diagnosed.

Late detection also means that Kathy's prognosis is poor. The cancer has spread since the surgery, which was two years ago. She has not been able to return to her job as a marketing consultant. Kathy is almost constantly in pain, and her life expectancy is very short. Doctors do not expect her to survive beyond a few more months. Her husband has had a hard time dealing with her illness, to the extent that he has moved out of their house and left Kathy all alone.

**THE DEFENDANT:** Kathy is suing a large chemical manufacturing company named Chemco Chemicals Inc., or Chemco. She claims that some of the chemicals that Chemco has stored at a dump one mile from her house have seeped into the neighborhood's water supply, and that regularly drinking the contaminated water caused her cancer. She had lived near the dump for approximately 10 years, without any previous problems.

**ISSUE AT TRIAL:** A major issue at trial is whether or not a particular chemical, called Ketamine, causes cancer. If so, then the chemical company is liable for damages, since both parties accept that high levels of Ketamine leaked from the dump into the neighborhood's water supply; if not, then the chemical company is not liable.

**Kathy is asking for compensatory damages in the amount of \$500,000 for medical costs, lost income, pain and suffering.**

**EVIDENCE PRESENTED AT TRIAL:** The plaintiff's expert witness, Dr. Jones, testifies that there is considerable variability among different brands of chemical products. Although the federal government sets guidelines, it leaves companies some leeway in designing their own products. He gave female laboratory rats large doses of Ketamine manufactured by one of five different companies, for a period of one year. He

then evaluated their health on a variety of measures and compared across different brands. Rats exposed to the defendant's chemical developed 10 times more health complications than the average. For example, some of the rats developed tumors and skin discolorations on their paws. Ovarian cancer was not a very common type of health problem overall, but it occurred most often in rats that took the defendant's Ketamine. He concludes that the defendant's chemical could lead to similar health problems in humans.

Dr. Jones also conducted field tests on the water and wildlife found in a lake located next to the dump site. He found that some species of animals had developed deformities. For example, several fish had grown extra fins and several frogs had grown an extra leg. He also found that some of the wildlife was infertile. Dr. Jones tested the water and found the defendant's Ketamine to be present. The Environmental Protection Agency creates levels of chemicals that can be present in water before being considered potentially hazardous after long-term consumption. Each chemical has its own preferred maximum value based upon the level of toxicity. The maximum level for Ketamine is .10 parts per million. Dr. Jones found the Ketamine concentration in the lake to be .11 parts per million. He did not find any other chemicals that led him to believe that the animal deformities and infertility could be caused by anything other than the defendant's Ketamine. Dr. Jones could not test the actual water that Mrs. Summers had drunk because the town increased its level of filtration for drinking water once the problem was noticed.

The defendant's expert witness, Dr. Davis, testifies that Ketamine in general does not increase the risk of cancer. A national survey of women showed that 10 out of every 1,000 women age 30-40 develop ovarian cancer, regardless of what kind of chemicals they are exposed to. Dr. Davis also conducted a study in which he compared women who had been unknowingly exposed to high amounts of one of four different chemical products, one of which was Ketamine, or no chemicals at all. Cancer rates did not differ for women in the different groups. Although he did not specifically compare different brands of Ketamine, he concludes that the defendant's chemical, one of many brands that women in the study had been exposed to, is unlikely to increase the risk of ovarian cancer.

Dr. Davis also conducted field tests on the water in the lake located next to the dump site. Besides Ketamine, he found that there was one other chemical present, Bromomethane. Bromomethane is commonly used as a pesticide. The level of Bromomethane was 1.2 parts per million. This was below the 1.5 parts per million that is considered potentially dangerous after long-term consumption. However, Dr. Davis indicates that each organism (e.g., animal, human, etc.) reacts differently to levels of dangerous chemicals. Dr. Davis testified that it was possible that the Bromomethane could be the explanation for the

animal deformities and infertility. He also indicated that it is possible that the Bromomethane could have gotten into the local drinking water.

## Appendix J: Measures

**18-item Need for Cognition Scale  
(Cacioppo, Petty, & Kao, 1984)**

Please indicate your level of agreement with each statement, using the following scale:

- 1 – extremely uncharacteristic of me  
 2 – somewhat uncharacteristic of me  
 3 – uncertain  
 4 – somewhat characteristic of me  
 5 – extremely characteristic of me

1. I would prefer complex to simple problem.....	1	2	3	4	5
2. I like to have the responsibility of handling a situation that requires a lot of thinking .....	1	2	3	4	5
3. Thinking is not my idea of fun.....	1	2	3	4	5
4. I would rather do something that requires little thought than something that is sure to challenge my thinking abilities.....	1	2	3	4	5
5. I try to anticipate and avoid situations where there is a likely chance I will have to think in depth about something.....	1	2	3	4	5
6. I find satisfaction in deliberating hard and for long hours .....	1	2	3	4	5
7. I only think as hard as I have to .....	1	2	3	4	5
8. I prefer to think about small, daily projects to long-term ones ..	1	2	3	4	5
9. I like tasks that require little thought once I've learned them....	1	2	3	4	5
10. The idea of relying on thought to make my way to the top Appeals to me .....	1	2	3	4	5
11. I really enjoy a task that involves coming up with new solutions to problems.....	1	2	3	4	5
12. Learning new ways to think doesn't excite me very much.....	1	2	3	4	5
13. I prefer my life to be filled with puzzles that I must solve .....	1	2	3	4	5
14. The notion of thinking abstractly is appealing to me.....	1	2	3	4	5
15. I would prefer a task that is intellectual, difficult, and important to one that is somewhat important but does not require much thought .....	1	2	3	4	5
16. I feel relief rather than satisfaction after completing a task that requires a lot of mental effort.....	1	2	3	4	5
17. It's enough for me that something gets the job done; I don't Care how or why it works .....	1	2	3	4	5
18. I usually end up deliberating about issues even when they do not affect me personally.....	1	2	3	4	5

**Psychological Entitlement Scale**  
**(Campbell, Bonacci, Shelton, Exline, & Bushman, 2004)**

Please respond to the following items using the number that best reflects your own beliefs. Please use the following 7-point scale:

- 1 = strong disagreement
- 2 = moderate disagreement
- 3 = slight disagreement
- 4 = neither agreement nor disagreement
- 5 = slight agreement
- 6 = moderate agreement
- 7 = strong agreement

1. I honestly feel I'm just more deserving than others ..... 1 2 3 4 5 6 7
2. Great things should come to me..... 1 2 3 4 5 6 7
3. If I were on the Titanic, I would deserve to be on the first lifeboat! .. 1 2 3 4 5 6 7
4. I demand the best because I'm worth it ..... 1 2 3 4 5 6 7
5. I do not necessarily deserve special treatment ..... 1 2 3 4 5 6 7
6. I deserve more things in my life ..... 1 2 3 4 5 6 7
7. People like me deserve an extra break now and then ..... 1 2 3 4 5 6 7
8. Things should go my way ..... 1 2 3 4 5 6 7
9. I feel entitled to more of everything ..... 1 2 3 4 5 6 7

**Litigation Crisis Scale**  
**(Hans & Lofquist, 1994)**

Please respond to the following items using the number that best reflects your own beliefs. Please use the following 5-point scale :

1 = Strongly Disagree

2 = Disagree

3 = Neither Agree nor Disagree

4 = Agree

5 = Strongly Agree

1. There are far too many frivolous lawsuits today .....1 2 3 4 5
2. People are too quick to sue, rather than trying to solve  
disputes in some way .....1 2 3 4 5
3. The large number of lawsuits show that our society is  
breaking down .....1 2 3 4 5
4. The money awards that juries are awarding in civil cases  
are too large .....1 2 3 4 5
5. Most people who sue others in court have legitimate grievances.....1 2 3 4 5
6. By making it easier to sue, the courts have made this a safer society ....1 2 3 4 5
7. Juries do a good job determining the outcomes of lawsuits and  
assessing damages .....1 2 3 4 5

**Demographics/Distracter Task**

1. What is your sex?

Male

Female

2. What is your age, in years? \_\_\_\_\_

3. What is the highest level of education that you have achieved?

Some high school or less

High school graduate/GED

Trade/technical school

Some college

Associate's degree (2 year)

Bachelor's degree (4 year)

Some graduate school

Graduate degree/post grad study

4. What is your race/ethnicity (Please check all that apply)

African-American/Black

Asian

Hispanic/Latino

Native American

White/Caucasian

Other (please specify) \_\_\_\_\_

### Thought-Listing Task

Please use the next 3 minutes to list all of the thoughts you had while watching the video. These thoughts may include your perceptions of the evidence, witnesses, attorneys, or any other aspect of the trial. Separate each thought into an individual idea and place each one in the numbered spaces.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. \_\_\_\_\_
10. \_\_\_\_\_
11. \_\_\_\_\_
12. \_\_\_\_\_
13. \_\_\_\_\_
14. \_\_\_\_\_
15. \_\_\_\_\_
16. \_\_\_\_\_
17. \_\_\_\_\_
18. \_\_\_\_\_
19. \_\_\_\_\_
20. \_\_\_\_\_

**Altered JUNAS (Bright & Goodman-Delahunty, 2006)  
and PANAS-X (Watson & Clark, 1994)**

Below is a list of words that describe feelings people have. Please read each one carefully. Then circle the response that best describes how you feel in RESPONSE to the CASE you just viewed.

1. Angry	not at all	a little	moderately	quite a bit	extremely
2. Disgusted	not at all	a little	moderately	quite a bit	extremely
3. Frustrated	not at all	a little	moderately	quite a bit	extremely
4. Interested	not at all	a little	moderately	quite a bit	extremely
5. Sad	not at all	a little	moderately	quite a bit	extremely
6. Disturbed	not at all	a little	moderately	quite a bit	extremely
7. Happy	not at all	a little	moderately	quite a bit	extremely
8. Shocked	not at all	a little	moderately	quite a bit	extremely
9. Discouraged	not at all	a little	moderately	quite a bit	extremely
10. Excited	not at all	a little	moderately	quite a bit	extremely
11. Helpless	not at all	a little	moderately	quite a bit	extremely
12. Furious	not at all	a little	moderately	quite a bit	extremely
13. Concentrating	not at all	a little	moderately	quite a bit	extremely
14. Upset	not at all	a little	moderately	quite a bit	extremely

**Behavioral Assessment of Trial Attorney Instrument  
(Libkuman, Stensrud, Lang, & Pfeiffelmann, 2003)**

**1. *Persuasion*- The ability to convince a jury to adopt the attorney's point of view using factual knowledge or emotional connections.**

---

- 7 Attorney combines the facts of the case, uses theory, outlines and explains the evidence, and integrates visuals and technology into their presentations so that the information is easily understood.
- 6
- 5
- 4 Attorney presents the facts in a manner that is somewhat understood and organized, and makes few connections between the facts, theory and evidence of the case. Attorney has little integration of visuals and technology into presentation.
- 3
- 2
- 1 Attorney makes an unclear presentation that is not easily understood and not very convincing. Attorney does not utilize any visuals or technology into his presentation and does not make connections between the facts, theory and evidence of the case.
- 

**2. *Critical Listening*- The ability to listen to what other people are saying, retain that information, and ask appropriate questions.**

---

- 7 Attorney asks relevant and important questions during cross-examination and asks appropriate follow-up questions. Attorney also has excellent listener/speaker interaction with witnesses by anticipating responses of witnesses and paying attention to witnesses and clients.
- 6
- 5
- 4 Attorney listens to all aspects of the trial and elicits basic information from witnesses and has an acceptable level of listener/speaker interaction. However, attorney may not ask all the appropriate follow-up questions that are necessary.
- 3
- 2
- 1 Attorney ignores previous information, does not pay attention, does not follow the sequence of events, and may even ask unusual questions. Therefore, the attorney does not anticipate the responses of witnesses and also does not ask important cross-examination or follow-up questions.
-

**3. Oral Expression-** The ability to communicate information and ideas orally so others will understand.

---

7 Attorney makes understandable points by speaking clearly and using everyday language that everyone can understand without insulting individuals. Attorney connects evidence and facts of the case from each phase of the trial.

6

5

4 Attorney speaks in proper English that is understandable to all witnesses and the jury. Attorney uses some jargon that is difficult for others to understand and may not connect all evidence and facts during each phase of the trial.

3

2

1 Attorney does not cover all points of the trial, rambles, uses complicated language, and speaks so low that people have a hard time hearing.

---

**4. Physical Presence-** The quality of self-assurance and sincerity that permits the attorney to achieve rapport with jury and judge.

---

7 Attorney expresses confidence by using open body language that is non-threatening and has good eye contact. Attorney has a sincere tone of voice and a professional appearance.

6

5

4 Attorney is dressed appropriately, is pleasant, and displays some confidence.

3

2

1 Attorney does not display confidence, is poorly dressed and is unprofessional.

---

**5. *Interpersonal Interaction*- The ability to establish effective exchanges with witness(es).**

---

- 7 Attorney establishes excellent rapport with witnesses that involves trust, and also elicits excellent cooperation from witnesses. Attorney asks relevant questions of witnesses that elicits any relevant personal information.
- 6
- 5
- 4 Attorney interacts with a witness that elicits un-hostile communication and cooperation by answering all questions. Attorney only has good rapport, which may lead to less voluntary information given by witnesses.
- 3
- 2
- 1 Attorney elicits hostile reactions from witnesses, asks confusing and poor questions, leading to uncooperative witnesses. Attorney may also argue with witnesses and demonstrate a lack of practice and preparation that leads to wasted time and confusion.
- 

**6. *Speech Clarity*- The ability to pronounce and enunciate speech so that it is understandable to a listener.**

---

- 7 Attorney uses proper English at all times, pronounces all words in an easily understandable manner and speaks loud enough in order for everyone to hear.
- 6
- 5
- 4 Attorney uses proper English, pronounces most words correctly and generally speaks loud enough for everyone to hear.
- 3
- 2
- 1 Attorney mumbles, uses improper grammar, and cannot be heard or understood very well most of the time.
-

**7. Organization-** The ability to classify multiple pieces of information and/or ideas.

---

- 7 Attorney organizes important aspects of the case through the use of opening and closing arguments that emphasize the important points of the case, and uses graphics, which lists or presents the important facts visually. Attorney also has all files organized and knows where important papers are at all times.
- 6
- 5
- 4 Attorney knows the basic facts of the case and is generally organized through minimal preparations. Attorney uses some graphics to present important points visually and has most files organized.
- 3
- 2
- 1 Attorney fails to tie important evidence to the facts of the case, and is unprepared and does not know where all papers are. Attorney does not have any visuals to show the important facts of the case.
- 

**8. Adaptability-** The ability to “switch gears” from phase to phase of a trial without loss of efficiency or composure.

---

- 7 Attorney is prepared for unexpected events that may occur during the trial and deals with them appropriately without losing composure. Attorney thinks ahead during the trial, is overly prepared, and knows exactly what comes next.
- 6
- 5
- 4 Attorney has a general knowledge of the stages of the trial and what may happen next. Attorney has the ability to deal with most unexpected situations, but may not be as prepared as an excellent attorney.
- 3
- 2
- 1 Attorney is confused and unprepared when confronted with unexpected events in court. Attorney is caught off guard, and may lose control in the courtroom because he is unprepared for the next phase of the trial.
-

**9. *Synthesis*- The ability to make varied information coherent and to reorganize it for different approaches.**

---

- 7 Attorney easily handles unexpected rulings or information and reorganizes arguments appropriately. Attorney has an exceptional knowledge of case law and presents facts favorably for their client, including the use of graphics.
- 6
- 5
- 4 Attorney handles unexpected rulings appropriately and generally knows when and how to use various pieces of information. Attorney has acceptable knowledge level of case law and uses some graphics when presenting his case.
- 3
- 2
- 1 Attorney does not have the ability to handle unexpected rulings, may not understand all information that is presented to him, and may misuse material for his client. Attorney does not incorporate any graphics into his presentation.
- 

**10. *Social Perceptiveness*- Being aware of others' reactions and understanding why and how people react to certain situations.**

---

- 7 Attorney has the ability to bring important information out of a witness, can read how the jury is reacting to the testimony and then use these responses appropriately. Attorney knows how to deal with witnesses to elicit the necessary testimony.
- 6
- 5
- 4 Attorney recognizes some of the emotions that witnesses and juries exhibit and can sometimes use these responses appropriately. Attorney can sometimes bring important information out of witnesses.
- 3
- 2
- 1 Attorney does not read others' emotions and therefore does not ask appropriate follow-up questions, and may even push the witness because of the inability to understand their emotions.
-

**Additional Attorney Related Questions**

Overall, how credible or non-credible is the plaintiff (defense) attorney?

1	2	3	4	5	6	7
Very Non-Credible	Non-Credible	Somewhat Non-Credible	Neutral	Somewhat Credible	Credible	Very Credible

How attractive or unattractive is the plaintiff (defense) attorney?

1	2	3	4	5	6	7
Very Unattractive	Unattractive	Somewhat Unattractive	Neutral	Somewhat Attractive	Attractive	Very Attractive

### Expert Witness Related Questions

How credible or non-credible are the expert witnesses?

- 1 = Very Non-Credible
- 2 = Non-Credible
- 3 = Somewhat Non-Credible
- 4 = Neutral
- 5 = Somewhat Credible
- 6 = Credible
- 7 = Very Credible

Plaintiff expert witness, Dr. Jones .....	1	2	3	4	5	6	7
Defense expert witness, Dr. Davis.....	1	2	3	4	5	6	7

### Strength of Evidence Ratings

**Directions:** Please indicate how strong or weak each piece of evidence is.

1. Dr. Jones's (plaintiff's expert witness) testimony about the deformations and infertility in the animal samples taken from the lake beside the dump.

1	2	3	4	5	6	7
Very Weak	Weak	Somewhat Weak	Neutral	Somewhat Strong	Strong	Very Strong

2. Dr. Jones's testimony about the presence of Ketamine in the water samples taken from the lake beside the dump.

1	2	3	4	5	6	7
Very Weak	Weak	Somewhat Weak	Neutral	Somewhat Strong	Strong	Very Strong

3. Dr. Jones's testimony about his laboratory tests involving rats.

1	2	3	4	5	6	7
Very Weak	Weak	Somewhat Weak	Neutral	Somewhat Strong	Strong	Very Strong

4. Dr. Davis's (defense's expert witness) testimony about the national prevalence of ovarian cancer in women.

1	2	3	4	5	6	7
Very Weak	Weak	Somewhat Weak	Neutral	Somewhat Strong	Strong	Very Strong

5. Dr. Davis's testimony about whether there were other chemicals in the water.

1	2	3	4	5	6	7
Very Weak	Weak	Somewhat Weak	Neutral	Somewhat Strong	Strong	Very Strong

6. Dr. Davis's testimony about his research with women who had unknowingly ingested different chemicals.

1	2	3	4	5	6	7
Very Weak	Weak	Somewhat Weak	Neutral	Somewhat Strong	Strong	Very Strong

7. Overall, how strong or weak do you believe the plaintiff's case is?

1	2	3	4	5	6	7
Very Weak	Weak	Somewhat Weak	Neutral	Somewhat Strong	Strong	Very Strong

## Verdict Form

**Directions:** Based upon the video you watched, please indicate your verdict.

1. Is the defendant, the Chemco Chemicals Inc., liable for the plaintiff's, Kathy's, injury?

The defendant is legally liable if it is more likely than not that the defendant caused the plaintiff's injury. Please circle YES or NO.

Defendant liable?                      YES                      NO

2. How likely is it that the defendant caused the plaintiff's injury?

Give any number from 0 to 100, where 0 means the plaintiff's injury was not in any way caused by the defendant, and 100 means the defendant definitely caused the plaintiff's injury. Any number above 50 means that the defendant was more likely than not to have caused the harm.

Likelihood of causation? (0-100) \_\_\_\_\_

3. If you indicated that Chemco was liable for the plaintiff's injuries, please answer this question. If you indicated that Chemco was NOT liable for the plaintiff's injuries, please skip to the next page.

How much money (if any) should the plaintiff receive in compensatory damages from the defendant?

Your response to this question should be a dollar amount, ranging from \$0 to whatever amount you feel is appropriate. The amount of money you award is for compensation only.

Compensation for plaintiff? (\$0 - ) \_\_\_\_\_

Prior Jury Experience and Comprehension Check

1. Have you ever served on a jury?

- No
- Yes, civil
- Yes, criminal
- Yes, civil & criminal
- Yes, unsure of whether it was civil or criminal

2. If you have served on a jury, was this a positive experience?

- Yes
- No

I have not served on a jury

3. What number was briefly displayed on the screen during the video?

- 14
- 8
- 12
- 6
- 3

### Appendix K: Thought Listing Task Coding Scheme

Must be complete thoughts, in that, you can at least get a sense for what they are saying or mentions something related to an aspect. A half sentence that mentions attorneys, evidence, or an “other” aspect counts if you can get a sense of the thought.

- Attorney (**Keep track of the valence, whether negative or positive. Also, keep track if it is about the plaintiff or defense attorney.**)
  - Behaviors
  - Appearance
  - Acting
  - Speech
- Evidence/Case
  - Ketamine
  - Ovarian cancer
  - Bromomethane
  - Wildlife
    - Deformations
    - Infertility
    - 3 legs
    - Extra fins
  - Expert testimony
  - “both sides have interesting arguments”
  - “not a convincing case”
  - “plaintiff didn’t prove their case”
  - Comments related to expert witness testimony
    - “the defendant doctors research stated...”
  - Damage award amount
  - “Did other women in town develop cancer”
  - Comments about chemical company’s practices
    - “chemical company should have better control of their waste”
  - Witnesses
    - “more witnesses”
  - “Plaintiff deserves to win this case”
  - “case should not have gone to trial”
- Other
  - Any discussion aside from the case
    - E.g.,
      - “video kept cutting”
      - “the video was boring”
  - Any discussion of experts not related to their testimony
    - E.g.,

- “the expert witness looked young”
- “both doctors seemed well qualified”
- “both doctors seem trustworthy, I trust their word”
- Any discussion not related to the evidence
  - E.g.
    - “I feel bad for the plaintiff”

## Appendix L: Consent Form

**RESEARCH STUDY INFORMATION SHEET**

XXXXX Version

TITLE OF STUDY: Mock Civil Trial

INVESTIGATOR: Monica K. Miller, Ph.D., J.D., Steve Wood, M.S.  
775-784-7572

PROTOCOL NUMBER: XXXXX

**PURPOSE**

You are being asked to participate in a research study that asks you to watch a videotaped mock civil trial. At the conclusion of the video, you will be asked to render a verdict, evaluate the strength of evidence, and rate the attorneys' performance. In addition, you will be asked to complete several attitudinal questionnaires. Please read the directions carefully and complete each section to the best of your ability.

**PARTICIPANTS**

You are being asked to participate because you are a worker on the Amazon Mechanical Turk (MTurk) website, live within the United States of America, have a HIT approval rate greater than or equal to 98%, and your number of approved HITs is greater than or equal to 5,000. You are not obligated to participate in this specific study for credit. You must be at least 18 years old to participate.

**PROCEDURES**

If you choose to participate, you will be asked to watch a video and complete several questionnaires which will take approximately 45-50 minutes. You will have \$5 deposited into your MTurk account for taking part in this study. You are not obligated to participate in this research study and are not obligated to explain why you did not participate.

The survey consists of a number of multiple choice questionnaires. Some of these questions are personal in nature so the current study should be conducted in a private location if possible. You must complete all sections in one sitting, as you are not allowed to resume at another time from where you left off. While you are participating, your responses will be stored in a temporary holding area as you move through the sections, but they will not be permanently saved until you complete all sections and you are given a chance to review your responses.

**DISCOMFORTS, INCONVENIENCES, AND/OR RISKS**

There are minimal risks for participating in the study. However, you will watch a videotaped mock trial about a woman developing ovarian cancer. If you think this might upset you, you may withdraw from the study with no penalty.

**BENEFITS**

There will be no direct benefit to you as a participant in this study. However, your opinions are valuable to researchers and your responses may help impact the field of social psychology and law.

**CONFIDENTIALITY**

You will be asked to provide researchers with your MTurk Worker ID in order to receive appropriate credit. In order to ensure that you are not personally identified with your responses, your information will be deleted. The data transferred from qualtrics.com will not include your Worker ID so you cannot be identified with your responses. IP addresses will not be collected. If you are using a personal computer and wish to remove the cookies, obtain instructions for deleting cookies from the help menu or contact your Internet provider. If you are using a computer in a public domain, to limit access to your survey responses, close the Internet browser immediately after completing the survey.

**COSTS/COMPENSATION**

There will be no cost to you for participating in this research study. You will receive credit upon completion of the survey. After completing the survey, you will be directed to a credit page where you will input your Worker ID. PLEASE DO NOT SKIP THIS PAGE. This information ensures that you receive appropriate credit.

**RIGHT TO REFUSE OR WITHDRAW**

You may refuse to participate or withdraw from the study at any time without penalty. If the study design or use of the data is to be changed, you will be so informed and your consent re-obtained. You will be told of any significant new findings developed during the course of this study, which may relate to your willingness to continue participation.

**QUESTIONS**

If you have questions about this study, please contact Steve Wood, M.S. at attorneystudy@gmail.com or Monica K. Miller, Ph.D., J.D. at mkmillier@unr.edu. You may ask about your rights as a research subject or you may report (anonymously if you so choose) any comments, concerns, or complaints to the University of Nevada, Reno Social Behavioral Institutional Review Board, telephone number (775) 327-2368.

- I agree to participate in this study.
- I do NOT agree to participate in this study.

## Appendix M: Debriefing Form

## Mock Civil Trial

Monica Miller, J.D.,Ph.D. (mkmiller@unr.edu); Steve Wood, M.S.  
(attorneystudy@gmail.com)

PROTOCOL #:  
8/26/13

Debriefing for: "Mock Civil Trial"

**PURPOSE**

Thank you for participating in this study. This study has four main objectives or purposes. The first objective is to investigate the processes responsible for jurors' decisions in civil litigation. The second is to determine whether the strength of the attorney may affect jurors' judgments. The third purpose is to determine whether the strength of the evidence may affect jurors' judgments. The fourth purpose is to determine whether individual cognitive processing styles may affect the information that is attended to.

All participants were asked to watch the same mock trial. However, participants were randomly assigned to one of several conditions in which the credibility of the plaintiff and defense attorneys was varied between strong (i.e., credible) and weak (i.e., non-credible), and the strength of the plaintiff evidence was varied between strong (i.e., in favor of the plaintiff) and ambiguous. In addition, the cognitive processing styles of all participants were measured.

Prior research suggests that individuals who prefer to engage in deep thought use different information than individuals who prefer to engage in shallow thought when making a decision following a persuasive argument (Chaiken, 1980). Accordingly, we hypothesized that participants who prefer to engage in deep thought would pay more attention to the strength of the evidence and make verdict decisions in accordance with whether the evidence was strong or ambiguous. When the evidence was strong, there would be more verdicts in the plaintiff's favor than when the evidence was ambiguous. In addition, we hypothesized that these individuals would pay attention to the credibility of the attorney in certain situations and not in other. When the plaintiff attorney was credible and plaintiff evidence was strong, these individuals would attend both elements. Similarly, when the defense attorney was non-credible and the evidence was strong, these individuals would also attend to both elements. In both of these situations, a strong plaintiff case would be made stronger.

When the plaintiff attorney was non-credible and the evidence was strong, these individuals would only attend to the strength of the evidence and not the credibility of the attorney. Therefore, strong evidence would lead to more plaintiff verdicts than

ambiguous evidence. When the defense attorney was credible and the plaintiff evidence was strong, these individuals would attend to the strength of the evidence and not the attorney. In this instance, there would be more plaintiff verdicts than ambiguous evidence.

When the evidence was ambiguous, these individuals would pay attention to the credibility of the attorneys. A credible plaintiff attorney would receive more verdicts in his favor than a non-credible plaintiff attorney. Likewise, a credible defense attorney would receive more verdicts in his favor than a non-credible defense attorney. We made no hypotheses about what would occur when the evidence was ambiguous and both attorneys were credible or non-credible.

For participants who prefer to engage in shallow thought, we hypothesized that the credibility of the attorneys would influence the verdict decisions, independent of the strength of the evidence. Plaintiff attorneys who were viewed as credible would receive more verdicts in their favor than plaintiff attorneys who were viewed as non-credible. Defense attorneys who were viewed as credible would receive more verdicts in their favor than defense attorneys who were viewed as non-credible. These individuals would only pay attention to the strength of the evidence when both attorneys are non-credible or credible.

Research has also suggested that pre-existing attitudes may also influence verdict decisions in civil litigation. For this reason, all participants were asked about their attitudes about tort reform and their psychological sense of entitlement.

## **CONFIDENTIALITY**

You will not be personally identified in any reports that may result from this study, and all of the responses you provide (case-related judgments and attitudes, responses to personality and belief questionnaires, and demographic information) will remain anonymous. Only the investigator, research assistants, and the UNR Social Behavioral Institutional Review Board will have access to the data. All surveys will be stored for 5 years in a locked space in the investigator's laboratory and then destroyed. We request that you not discuss this experiment or share information included in this debriefing form with other individuals who may be participants themselves.

## **FINAL REPORT**

If you are interested in obtaining a copy of the final report of this study, please contact Monica Miller, J.D., Ph.D. Associate Professor of Criminal Justice and Social Psychology, at 775-784-6021; Department of Criminal Justice Mailstop 214, Ansari Business Building; [mkmiller@unr.edu](mailto:mkmiller@unr.edu); or Steve Wood, Graduate Researcher, at [attorneystudy@gmail.com](mailto:attorneystudy@gmail.com).

**CONTACT**

Thank you for participating in our study. If you have any questions regarding this study, its purposes, or procedures, please contact Monica Miller, J.D., Ph.D. Associate Professor of Criminal Justice and Social Psychology, at 775-784-6021; Department of Criminal Justice Mailstop 214, Ansari Business Building; [mkmiller@unr.edu](mailto:mkmiller@unr.edu); or Steve Wood, Graduate Researcher, at [attorneystudy@gmail.com](mailto:attorneystudy@gmail.com).