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Improving civil jury decision-making : evidentiary and procedural issues

Julian A. Gilbert

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FLORIDA INTERNATIONAL UNIVERSITY

Miami, Florida

IMPROVING CIVIL JURY DECISION-MAKING:
EVIDENTIARY AND PROCEDURAL ISSUES

A dissertation submitted in partial fulfillment of the
requirements for the degree of
DOCTOR OF PHILOSOPHY

in

PSYCHOLOGY

by

Julian A. Gilbert

2006

To: Interim Dean Mark Szuchman
College of Arts and Sciences

This dissertation, written by Julian A. Gilbert, and entitled Improving civil jury decision-making: Evidentiary and procedural issues, having been approved in respect to style and intellectual content, is referred to you for judgment.

We have read this dissertation and recommend that it be approved.

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ABSTRACT OF THE DISSERTATION
IMPROVING CIVIL JURY DECISION-MAKING: EVIDENTIARY AND
PROCEDURAL ISSUES

by

Julian A. Gilbert

Florida International University, 2006

Miami, Florida

Professor Kevin O'Neil, Major Professor

The civil jury has been under attack in recent years for being unreliable and incompetent. Considering the myriad causes for poor civil juror decision-making, the current investigation explores both procedural and evidentiary issues that impact juror's decisions. Specifically, the first phase of this dissertation examines how jurors (mis)use evidence pertaining to the litigants when determining liability and awarding damages. After investigating how jurors utilize evidence, the focus shifts to exploring the utility of procedural reforms designed to improve decision-making (specifically revising the instructions on the laws in the case and bifurcating the damage phases of the trial). Using the results from the first two phases of the research, the final study involves manipulating pieces of evidence related to the litigants while exploring the effects that revising the judicial instructions have on the utilization of evidence in particular and on decision-making in general.

This dissertation was run on-line, allowing participants to access the study materials at their convenience. After giving consent, participants read the scenario of a fictitious product liability case with the litigant manipulations incorporated into the

summary. Participants answered several attitudinal, case-specific, and comprehension questions, and were instructed to find in favor of one side and award any damages they felt warranted. Exploratory factor analyses, Probit and linear regressions, and path analyses were used to analyze the data (M-plus and SPSS were the software packages used to conduct the analyses). Results indicated that misuse of evidence was fairly frequent, though the mock jurors also utilized evidence appropriately. Although the results did not support bifurcation as a viable procedural reform, revising the judicial instructions did significantly increase comprehension rates. Trends in the data suggested that better decision-making occurred when the revised instructions were used, thus providing empirical support for this procedural reform as a means of improving civil jury decision-making. Implications for actual trials and attorneys are discussed.

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Introduction

The jury can be regarded as the zenith of American jurisprudence—the marquee of justice designed to protect the innocent and lay blame or responsibility to wrongdoers. More than that though, the jury is perhaps the only mechanism of democracy besides voting that so decisively places decision-making responsibilities in the hands of everyday people. This year alone, over four million Americans will perform a civic duty by participating in one of the oldest traditions in the history of our legal system, jury service (Arizona Supreme Court, 2002). Although the vast majority of these four million Americans will be seated on criminal juries, hundreds of thousands of individuals will assume the role of civil jurors each year. Jury service both educates the public and legitimates the justice system. As Alexis De Tocqueville wrote in 1835:

“Juries, especially civil juries, instill some of the habits of the judicial mind into every citizen, and just these habits are the very best way of preparing people to be free...[The jury] should be regarded as a free school which is always open and in which every juror learns his rights...and is given practical lessons in the law...I do not know whether a jury is useful to the litigants, but I am sure that it is very good for those who have to decide the case” (quoted in Hans, 2000, p.225).

In civil tort litigation, injured people seek redress by filing a lawsuit against the person or entity that they believe is responsible for their injuries. At these times, ordinary people playing the unordinary role of jurors are asked to resolve these legal claims. The first fundamental duty of the jury in civil litigation is determining liability (i.e., each party’s respective responsibility for the injuries and harm in question). The second major duty of the civil jury, assuming they found the defendant at least partially liable, is determining damages. Damages are designed either to compensate the victim (i.e., compensatory damages) or to punish the wrongdoer (i.e., punitive damages).

As a result of carrying out these duties, horizontal inequities sometimes arise, particularly with respect to damage awards (Saks, Hollinger, Wissler, Evans, & Hart, 1997). Horizontal inequities occur when different juries judging similar cases (in terms of the claims, the evidence, the severity of the injury, etc.) produce disproportionately variable and different verdicts (liability or damage awards). One frequently discussed cause of horizontal inequities is jurors' lack of comprehension of judicial instructions. The current project consists of three studies designed to: (1) explore causes of horizontal inequities in liability and damage award assessments, (2) revise judicial instructions in an attempt to increase juror comprehension rates, and (3) test whether revising instructions moderates the effect of procedural and evidentiary manipulations, ultimately reducing horizontal inequities.

Chapter One introduces background material on the legal concepts of negligence, products liability, and damage awards. Chapter Two focuses on some of the perceived problems with the civil jury system, particularly horizontal inequities in verdicts, and details if those concerns are supported in the empirical research. Chapter Three deals with some of the proposed reforms designed to minimize horizontal inequities in civil jury decision-making, specifically concentrating on revised judicial instructions and bifurcation. Chapters Four through Six detail the three studies that compose the current proposal. Chapter Seven consists of a general discussion, including potential limitations and general implications for the project as a whole.

Chapter One: Legal background material

Before getting into the legal concepts of negligence and products liability, I will touch briefly on why a products liability case was chosen for this project. Products liability is a controversial and important field of law because it cuts across many fundamental issues in society. Products liability can be viewed as a test of the private industry's ability to balance competitiveness and safety, a test of the fairness and functioning of the tort system, and a test of the jury system as a method of dispute resolution (Phillips, 1998). As Phillips (1998) states, "it is not inappropriate to view the law of products liability as a microcosm and a distillation of the entire system of civil litigation" (p. 302). Products liability law is big business, amounting to over 40,000 cases annually (National Center for State Courts, 2004).

As prior research demonstrates, products liability is a complex legal topic, so comprehension rates tend to be low and horizontal inequities frequent. Also, laws governing products liability offer several ways of measuring liability (e.g., manufacturing defect, design defect, and failure to warn). Determining whether a product is defective is one of the more difficult decisions within products liability. The inherent difficulties in determining design defects may promote the inappropriate use of evidence by jurors. Research using products liability cases routinely find that jurors misuse evidence (e.g., Greene, Woody, and Winter (2000) found that defendant conduct inappropriately influenced compensatory damage awards). Since the misuse of evidence is common when dealing with products liability, there clearly is room for improving jury decision-making in these cases. Moreover, judicial instructions in such cases contain difficult legal concepts and standards that make comprehension rates suffer but are ideal for revision.

Finally, choosing a products liability scenario involving a design defect allows examination of factors that impact corporate defendants, particularly exploring how liability and damage awards are properly or improperly determined.

Negligence and products liability

The tort concept of negligence can arise in numerous ways in a products liability case—through inadequate inspection, packaging, warning, marketing, or (relevant to this investigation) design of a product (Phillips, 1998). Negligence is the failure to use reasonable care, which is the degree of care that a reasonably careful person would exercise under similar circumstances. Negligence may consist of either doing something that a reasonably careful person would not do under similar circumstances or failing to do something that a reasonably careful person would do under similar circumstances. The legal concept of negligence is rather complex. The tort of negligence contains four distinct elements: (1) *duty*: did the defendant owe the plaintiff a duty to conform his conduct to a standard necessary to avoid an unreasonable risk of harm to others? (2) *breach*: did the defendant's conduct, whether by act or omission, fall below the applicable standard of care set by law? (3) *causation*: was the defendant's failure to meet that standard of care causally connected to the plaintiff's harm? and (4) *damages*: did the plaintiff suffer harm (Epstein, 1998)? Of particular interest when discussing whether the defendant was negligent is the second of the above questions; that is, did the defendant engage in conduct that “falls below the standard established by the law for the protection of others against unreasonable risk of harm” (American Law Institute, 1979, §282). The standard established by law is that which a “reasonable person under like circumstances” (American Law Institute, 1979, §283) would do—this “reasonableness” standard is

defined in terms of a CBA (cost-benefit analysis) or a risk-utility analysis. Both the plaintiff and the defendant may be negligent, though the present research does not focus on a plaintiff's contributory negligence. Overall, and most important, whether this standard of care has been breached should be determined solely by jurors' judgments about the reasonableness of the litigant's behavior.

Phillips (1998) describes how the concept of negligence can relate to a products liability claim. He states that the manufacturer of a product is negligent "if the manufacturer fails to use a reasonable amount of care, skill and diligence in designing and supplying the product that a reasonably careful manufacturer would use in similar circumstances to avoid exposing others to a foreseeable risk of harm" (p. 39). A manufacturer must reasonably anticipate the environment in which its product is normally used and must design the product to minimize foreseeable risks of harm resulting from using the product in such an environment. However, the manufacturer is not required to design a product that is foolproof or incapable of producing injury—this is not necessary in proving that a manufacturer was negligent. To prove that a manufacturer was negligent, the plaintiff must show that the manufacturer failed to use reasonable care in designing its product and that this breach of duty was the proximate cause of the plaintiff's injuries. Proximate cause means not only that there was a connection between the alleged negligent conduct of the defendant and the plaintiff's injuries but also that the occurrence responsible for producing those injuries was a natural and probable result of the defendant's negligent conduct (Epstein, 1998).

Separate from the issue of negligence, a manufacturer may also be held liable for consumer injuries under theories of products liability. A product is usually thought of as

tangible personal property (though product liability has extended beyond tangible goods to include things such as electricity). Significantly influenced by Justice Traynor's concurring opinion in *Escola v Coca-Cola Bottling Co.* (1944), products liability was traditionally governed by strict liability standards in order to protect consumers. Traynor's opinion became the dominant view when the American Law Institute incorporated general principles of strict liability into section 402A of the Restatement (Second) of Torts. The Restatement (Second) of Torts (§402A) focused on manufacturers' liability, particularly concentrating on manufacturers' market power and their ability to internalize the costs of accidents associated with their products (Epstein, 1998). Under the Second Restatement, the seller of a product may be strictly liable for harm caused to the consumer if the product is "unreasonably dangerous to the user" (§402A). A product is considered unreasonably dangerous if it is "dangerous to an extent beyond that which would be contemplated by the ordinary consumer who purchases it, with the ordinary knowledge common to the community as to its characteristics" (American Law Institute, 1979, §402A comment g). This standard was held for products liability cases involving manufacturing flaws and design defects.

In 1997, the American Law Institute adopted the Restatement (Third) of Torts: Products Liability. Section 2 divides product defects into manufacturing flaws, design defects and inadequate warnings or instructions. Thus, modern products liability claims expanded to explicitly separate failure/duty to warn and design defect cases from the traditional manufacturing defect cases. Strict liability is still imposed for manufacturing flaws. A product is considered to have a manufacturing or production flaw when the product differs from its intended design even though a reasonable amount of care was

used when preparing and marketing the product. The factual elements of a manufacturer defect claim are: 1) the product contained a defect when it left the manufacturer's possession, 2) the product was used in a manner reasonably foreseeable to the manufacturer, 3) harm was caused by the use of the product, and 4) the manufacturer's defect was a substantial factor in causing that harm. Liability for design defects and failure to warn is typically imposed for "foreseeable risks of harm" that could have been avoided by the adoption of a "reasonable alternative design" or "reasonable instructions or warning," and the non-use or omission of the design or warning "renders the product not reasonably safe" (American Law Institute, 1997, §2).

Since this dissertation only examines design defects, the focus will shift to that specific type of products liability claim. Under the most recent Restatement's definition, deciding whether a design defect exists might require a risk-benefit analysis examining if the cost of making an alternative, safer product is greater or less than the risk of danger from the product in its present condition. Many courts incorporate the idea of a cost-benefit analysis (CBA) into the standard for determining whether a product is defective. This incorporation of CBAs into design defect theories is highlighted by the changing standards used by courts in determining the existence of a design defect (e.g., Did failure to use a reasonable alternative design make the product "not reasonably safe?"). Thus, the prevailing standard for determining liability for a product defect is whether the product was "not reasonably safe" (as opposed to the older standard of "unreasonably dangerous").

As noted previously, "reasonableness" is defined in terms of a CBA or a risk-utility analysis. Since the prevailing product liability standard now incorporates

“reasonableness,” it therefore involves a form of a cost-benefit analysis. That is, the “not reasonably safe” standard for determining if a product is defective implies that the jury finds the defendant liable if they determine the risk of danger inherent in the challenged design outweighs the benefits of the design. Here, the jury might engage in a CBA by considering the likelihood of danger associated with the challenged design or the feasibility of a reasonable alternative design (Epstein, 1998).

In sum, the conduct of the defendant in designing and distributing the product is the fundamental consideration the jury must bear in mind when determining liability. Assuming that the jury does find the defendant liable for the wrongdoing, the next key decision they make entails damage awards.

Typology of damage awards

Compensatory damages

Damage awards may be compensatory or punitive. Compensatory damages are generally intended to compensate the injured person, to return that person to pre-injury levels of functioning, or to replace the loss caused by the injury (to the extent that money can do so; American Law Institute, 1979, §901). Thus, compensatory damages focus on the injured party. In other words, compensatory damages are plaintiff-focused, meaning that the jury is supposed to focus exclusively on the needs of the plaintiff and the severity of the plaintiff’s injury in an attempt to return the injured person to his or her pre-injury levels of functioning (Anderson & MacCoun, 1999). Jurors are therefore supposed to focus solely on the nature, extent and duration of the injury when determining compensatory damages.

Compensatory damages are typically divided into economic and non-economic damages (also referred to as pecuniary and non-pecuniary damages). Economic damages refer to any financial costs the plaintiff encounters as a result of the injury. This typically includes past and future income, past and future medical expenses, or funeral costs if applicable. Non-economic damages, sometimes generically described as *pain and suffering*, are designed to compensate the victim for any injury to the “intangible, subjective state of the plaintiff’s life” (Vidmar, 1995, p. 186). These damages may entail physical pain and disfigurement, emotional distress (such as fear, anxiety or depression), the lost enjoyment of life, loss of mental faculties, and loss of consortium or companionship (marital or otherwise).

Punitive damages

Punitive damages, also known as exemplary damages, are designed to punish the defendant for egregious conduct and to deter the defendant, as well as others, from engaging in similar misconduct in the future (Owen, 1994). Jurors are typically instructed that they may award punitive damages if they find that the defendant acted in a reckless, malicious, willful or wanton manner. Conduct is reckless if done carelessly and with gross disregard for the consequences. Conduct is malicious if prompted or accompanied by ill will or gross indifference to the rights of others. An act is willful if done voluntarily and intentionally and with specific intent to commit said act. An act is wanton if done in careless disregard to the rights of others (Melsheimer & Stodghill, 1994). Nearly all states allow for punitive damages, and approximately 60 federal statutes permit the awarding of punitive damages (Greene & Bornstein, 2003). However, wide variation

exists between jurisdictions regarding the definition of and instructions on punitive damages.

Punitive damages are defendant-focused (Anderson & MacCoun, 1999). In other words, the jury should determine an amount for punitive damages that will effectively punish the defendant, deter the defendant, and/or make an example out of the defendant. In determining an appropriate amount for punitive damages, jurors should consider the reprehensibility of the defendant's conduct and the wealth of the defendant (in order for the award to have a deterrent effect). Also, the Supreme Court, in *State Farm Insurance Co. v. Campbell* (2003), instructed that courts consider the actual or potential harm suffered by the plaintiff when determining an appropriate sum for punitive damages. Although they are not awarded very frequently, punitive damages have captured a great deal of attention in the media (due to some atypical anecdotal cases such as the infamous McDonald's coffee-spill case). Moreover, punitive damages are a frequent point of contention surrounding the civil jury, particularly for being unpredictable and highly variable.

Chapter Two: Critiques of the civil jury

The jury system under attack

Despite the jury system's importance in American jurisprudence, it has been under attack for many years. Over one hundred years ago, one critic denounced the jury as 12 people of average ignorance (Spencer, c1902). Another anonymous commentator asked, "How would you like your fate decided by twelve people who weren't smart enough to get out of jury duty?" (cited in Shuman & Champagne, 1997). Even the famed writer Mark Twain called the jury "the most ingenious and infallible agency for defeating justice that wisdom could contrive" (cited in Wrightsman, Greene, Nietzel, & Fortune, 2002). The civil jury in particular has been the subject of recent vilification. As Vidmar (1998) notes, "so many writings, both scholarly and journalistic, have been devoted to criticizing the institution of the civil jury that it becomes boring to recite the claims" (p. 849). Vidmar states that civil juries have been criticized for being unreliable, unpredictable, incompetent, biased, sympathy-prone, confused, hostile to wealthy and corporate defendants, and excessively generous to plaintiffs. Yet, as Hans (2000) astutely points out, little of the debate surrounding the jury's ability to arrive at appropriate damage awards has been influenced by careful study, experimentation and analysis.

Flashy anecdotes that capture widespread media attention serve to fuel the condemnation of the American civil jury system. For instance, critics are quick to point to the well-known coffee spill case involving McDonald's to demonstrate the outrageous, irrational and unjust institution that is the civil jury. In *Leibeck v. McDonald's Corp.*, the jury found in favor of the plaintiff, Ms. Leibeck, who had burned herself badly when she spilled some coffee on herself and awarded her 2.7 million dollars in punitive damages

(most people do not know that the trial judge later reduced this initial award to \$480,000; Hoole, 1996).

Much of the general public could not fathom how or why the jury would find for a woman who should have known that the coffee would be quite hot and could easily cause burns if spilled. What most of general public never knew was that Ms. Liebeck had to be hospitalized for seven days as a result of the severe burns and was required to undergo painful skin grafts as part of the treatment. Most of the general public also never knew that McDonald's served their coffee hotter than any other restaurant, that McDonald's had received over 700 other reports of excessively hot coffee and resultant burns, and that McDonald's already paid out more than \$500,000 in settling claims. The general public was also not told that corporate management refused to alter their practices in order to make the coffee safer for its customers or that McDonald's continually turned down Ms. Liebeck's attempts to settle, offering her only \$800 (which did not even cover the cost of the medical bills). In addition, most people never found out that the large award given to Ms. Liebeck was only equal to 1-2 days' coffee sales for the fast food chain (Hoole, 1996). Given these considerations, perhaps the jury deciding the case was not being irrational or unjust at all. Such ostentatious anecdotes nourish the public perception that civil juries are irrational bodies unfit to decide the cases on which they are seated. But whether or not civil juries are acting rationally and are being influenced by the proper evidence are empirical questions that should be examined through research.

Competence of civil juries and horizontal inequities

Particularly in the last quarter of the 20th century, the civil jury has been derogated for being (among other things) unpredictable, biased and incompetent, resulting in

damage awards that are highly variable and too large (i.e., horizontal inequities; Vidmar, 1998). Thus, a focal point of the debate surrounding the civil jury system is concern that juries are not competent enough to carry out their duties. That similar cases may result in different verdicts on liability or damage awards fuels criticism that juries are too incompetent or inept to carry out their duties. Yet, the legal system accepts some degree of inequity in verdicts. Indeed, some horizontal inequity is inevitable given the nature of the jury system. As Vidmar (1998) states, “human variability is inherent in the task assigned to the jury” (p. 876).

Conceptual causes of inequities

Juries are a measure of community sentiment; they are the conscience of the community composed of a group of unique, individual jurors. As such, each juror’s attitudes, background, and personality attributes are likely to influence perceptions of the evidence and consequently jury decisions. Each individual juror’s idiosyncratic differences affect how that juror interprets evidence, listens to the judge and the attorneys, evaluates the litigants, and so on. For example, jurors will differ in their determinations of a witness’s credibility or believability. Ultimately, individual differences among jurors influence verdict preferences. One study found that five of the ten demographic characteristics and eight of the nine attitudes measured were significantly related to liability preferences (Diamond et al., 1998). Therefore juror verdicts will inevitably vary across similar cases given the idiosyncratic differences of the jurors.

Variance in verdicts is also produced because of the nature of the task facing jurors. Deciding a verdict is a conceptually difficult and complex task. Each unique case

is composed of specific pieces of evidence (e.g., defendant's recklessness, extent of harm) and case features (e.g., lawyer's recommendations, size of corporate defendant). Given that different jurors may react to different pieces of evidence or case features, any of these specific features or factors of the case may contribute to variability in verdicts, whether they are supposed to (e.g., recklessness of defendant conduct) or not (e.g., corporate vs. individual defendant). Complex cases, such as a products liability claim where both negligence and design defect are issues, likely exacerbate variability in verdicts. Similarly, cases involving large quantities of evidence and complicated testimony will increase the amount of evidence and variability in the resulting verdicts.

In general, jurors are often asked to consider large amounts of confusing evidence and conflicting testimony. For instance, experts offer widely differing monetary estimates of losses and even experienced claims adjusters show great variability in their valuations of damages (Vidmar, 1998). Jurors also have difficulty when asked to estimate the magnitude of damages on a scale that is not limited (Kahneman, Schkade, & Sunstein, 1998). For instance, two jurors might differ significantly in their translation of punitive intent into monetary values. That is, two jurors may be equally upset with the defendant and believe punitive damages are warranted, but the two will likely differ in the actual amount awarded (even if they are roughly comparable in their desire to punish the defendant). Indeed, one study revealed a significant degree of variability produced primarily by large (and possibly meaningless) individual differences in the translation of punitive intent into dollar values (Kahneman et al., 1998). Given the complex nature of the task assigned to jurors, variation in verdicts across similar cases arises.

Legal causes of inequities

In addition to the conceptual reasons for variability in verdicts across similar cases, there are causes of horizontal inequities derived from legally dictated procedures. Jurors may have particular difficulty in determining certain components of compensatory and punitive damages. For instance, if there is a record of past medical expenses one could easily demonstrate how much was spent on hospital and doctors' bills, medicine, therapies and rehabilitation due to the injury. However, the situation is complicated when it involves those who are self-employed or stay-at-home spouses (Greene & Bornstein, 2003). The situation is also more complex and controversial when dealing with future losses, where jurors must forecast future medical expenses, available job opportunities and advancements, projected life expectancies, and even inflation and interest rates. These anticipations are laden with uncertainty and very difficult to forecast.

Determining non-economic damages is even more confusing and uncertain than deciding economic damages. Non-economic damages clearly involve both social and psychological components and, because they are often hidden from plain view, may be particularly difficult to quantify (Wissler, Evans, Hart, Morry, & Saks, 1997). How does one estimate or measure pain and suffering? Imagine putting a price tag on a partner's companionship or having to determine how much the infliction of embarrassment or depression should cost. One study revealed twice the variability in damage awards for pain and suffering than for economic damages (Diamond et al., 1998). Punitive damages are also wrought with uncertainty and vilified for their unpredictable nature. Critics claim that the determination of punitive damages is essentially random and that few guidelines are given to jurors regarding these determinations (Greene & Bornstein, 2003). Also,

most people do not know what a given dollar amount would do, or mean to, a particular defendant (especially a corporation; Sunstein, Kahneman, & Schkade, 1998).

The inherent variation in verdicts is exacerbated by the ambiguous and vague guidance provided to jurors concerning their verdicts. That is, jurors are expected to face a conceptually difficult and amorphous task without clear, comprehensible instructions (particularly with respect to damage awards). Research indicates that jurors are notoriously bad at comprehending judicial instructions (e.g., Greene & Bornstein, 2000). Failure to comprehend judicial instructions contributes to jurors' inappropriate consideration of evidence and extralegal factors and increases the likelihood of horizontal inequities in verdicts. Jurors are expected to rely only on the appropriate evidence and to disregard irrelevant information (i.e., extralegal factors). Some of these factors are completely extralegal (e.g., defendant status or appearance) while other factors may be occasionally extralegal (e.g., defendant wealth only should be considered when deciding punitive damages). If jurors cannot understand the instructions dictating the use (or admonishing the misuse) of such factors, how can they make decisions in accordance with the law? Providing jurors with broad discretion and little guidance allows jurors to operate in an unrestrained manner (Melsheimer & Stodghill, 1994). The vague, unintelligible guidance encourages jurors to rely on their own personal biases, prejudices and whims when determining liability or damage awards, which can cause horizontal inequities in verdicts (Greene & Bornstein, 2003). When jurors are left to their own devices to provide the appropriate amount for damage estimates, individual differences result in unpredictable variation, reflecting a rational response to ambiguity (Diamond et al., 1998).

Since researchers will never identify the myriad causes of horizontal inequities in liability and damage award verdicts, it is impossible to adequately account for them, let alone eliminate them. Also, given the individual differences of jury members and the uniqueness of each case, it is unreasonable to expect that two cases, no matter how similar they are to each other, will result in exact same outcome. Therefore, the criticism about horizontal inequities more realistically concerns the degree of inequity (statistically speaking, the amount of variance) rather than the existence of any inequity. Consequently, studies examining horizontal inequities, such as this dissertation, are concerned with the feasible tasks of identifying and reducing variability rather than the impossible task of eliminating it.

There have been a number of suggestions, both specific and broad, made in the literature regarding reducing horizontal inequities in verdicts. Specific recommendations include using less variable punishment ratings for punitive damages rather than highly variable estimates of actual dollar awards (the punitive ratings could be translated to a monetary value by the court according to some pre-determined standard; Kahneman et al., 1998). Another possibility is to provide guidance to jurors either in the form of upper or lower dollar limits that could be imposed for damage awards or by giving jurors a set of comparable cases with the associated dollar values awarded in those instances (both of these have met with some success in reducing inequity; see Saks et al., 1997).

A broad suggestion designed to reduce horizontal inequities not yet empirically explored is revising judicial instructions, which is a focal point of the current project. Poor comprehension of judicial instructions may lead to the consideration of extralegal factors or the misuse of evidence when determining verdicts. For instance, jurors'

confusion concerning important legal concepts such as “negligence” or “proximate cause” may result in similar cases reaching varied liability verdicts. Moreover, the ambiguous guidance given to jurors allows individual preferences to dictate damage awards rather than the appropriate considerations of evidence. Therefore, revising judicial instructions may help reduce inequity in verdicts and improve civil jury decision-making by increasing juror competence through both improved comprehension of legal concepts and the utilization of the appropriate pieces of evidence. Empirical investigations, such as this one, are needed to explore this possibility. Before discussing the literature on juror comprehension of instructions, however, I discuss the extant research on factors that improperly influence jurors’ decisions. These factors are variables whose influence should be reduced when jurors better comprehend instructions. Given the plethora of these variables, the current investigation only attempts to systematically examine some of the following variables.

Completely extralegal factors

Litigant characteristics: juror-litigant similarity, race and gender. Although jurors should not be influenced by their similarity to the litigants, some research suggests that juror-litigant similarity affects verdicts. Notably, the vast majority of the research on juror similarity deals with criminal cases (and therefore the similarity of the defendant to the jurors). Nonetheless, a small amount of research has examined juror-litigant similarity. For instance, Stephan (1974) found that mock jurors tended to favor plaintiffs of their own gender. The similarity-leniency hypothesis (Kerr, Hymes, Anderson, & Weathers, 1995) proposes, in the context of civil damage cases, that more lucrative awards will be given to plaintiffs who are similar to the jurors. Indeed, plaintiffs’

attorneys often attempt to select jurors similar in some way to their clients (Greene & Bornstein, 2003). Alternatively, some psychologists point to the black sheep effect (BSE; Marques, Yzerbyt, & Leyens, 1988) to explain why, in certain cases, litigants who are similar to the jurors actually receive harsher treatment (Taylor & Mettee, 1971). Here, positively viewed in-group members (i.e., those defendants or plaintiffs similar to the jurors) are viewed more favorably than out-group members (i.e., those dissimilar to the jurors), but negatively viewed in-group members are viewed less favorably than out-group members. Thus, whether or not the litigant is similar to the jurors (i.e., in is their in-group) may help or hurt the litigant, depending on how that litigant's behavior reflects on the in-group. Recent research, in the context of actual criminal cases, found no support for either the similarity-leniency hypothesis or the black sheep effect (Taylor & Hosch, 2004).

Two ways that jurors discern how similar they are to the litigants are the obvious demographic characteristics of race and gender. Research on the plaintiff race indicates that race does affect civil jury verdicts. Using archival data, Chin and Peterson (1985) found that African American plaintiffs received lower damage awards compared to Caucasian plaintiffs. However, several hypotheses may account for this finding. African Americans may retain less competent attorneys or they may not be able to attain expert economists to testify about the extent of losses suffered. Also, African Americans may have lower incomes so their requests for compensatory damages may be lower than Caucasians (Vidmar, 1994). These alternatives might account for the apparent discrimination against African American plaintiffs. Of course, it is also possible that there is some racial bias against African American plaintiffs. For defendants, there is some

evidence that race influences damage awards, with African American defendants being required to pay somewhat less than Caucasian defendants for similar injuries (Chin & Peterson, 1985). However, this may simply be a reflection of the differences among plaintiffs who sue Caucasian versus African American defendants, such as their income level (Chase, 1995).

Research also demonstrates that litigant gender may adversely impact civil jury decisions. Research on plaintiff gender suggests that women are disadvantaged in civil cases (e.g., Goodman, Greene, and Loftus, 1989). Archival data indicates that not only do male plaintiffs tend to receive higher awards than their female counterparts but also husbands who sue for losses related to their wives' injuries tend to collect more than wives suing for losses related to their husbands' injuries. That is, men collect more money for their own injuries as well as for injuries to their spouses (Greene & Bornstein, 2003). One likely explanation for this finding is that women either hold lower paying jobs or they get paid less than their male counterparts. However, this should mean women who sue on behalf on their injured husbands should be getting more money than men suing for their injured wives, though the data suggest otherwise.

Further demonstrating a gender bias, Goodman, Loftus, Miller and Greene (1991) examined 98 wrongful-death suits between 1984 and 1988. The mean and range of awards were greater when the deceased was male as compared to female, suggesting that civil juries pay attention to gender. In order to further explore the findings from archival data in experimental studies, Goodman and her colleagues (1989) varied certain facts, including gender, in one of three wrongful death lawsuits while keeping other facts constant (the deceased was married, self-employed, and earned \$25,000 a year). Across

all three cases, survivors of female decedents were awarded only 58% of what survivors of male decedents were given. The mean award was \$788,000 when the deceased was male but only \$458,000 when the deceased was female (Goodman et al., 1989). When the researchers examined the mock jurors' written explanations of their awards, they found that jurors were significantly more likely to consider factors such as salary increases and the effects of inflation and investment potential when the deceased was male than when female. When the deceased was female, mock jurors simply picked a number that seemed fair (Goodman et al., 1989).

Juror personality and attitudes. It is inevitable that jurors' attitudes and personality attributes will influence their perception of the evidence and ultimately jury decisions. The important question then is whether or not juror attitudes and personality influence perceptions of the evidence accordingly. Do the attitudes have a direct effect on verdict, such that the effect of the attitudes is independent of the effect of the evidence in the case? Or are there indirect effects, such that the attitudes affect how jurors interpret the evidence, which in turn influences verdicts (i.e., the effect of attitudes is mediated by the evidence)? Or are there interactions between attitudes and evidence, such that attitudes influence the weight jurors assign to evidence? Court decisions imply that attitudes should not have a direct effect on verdict if jurors are following the law (O'Neil, Patry, & Penrod, 2004), and thus any such effects would be "extralegal." Nonetheless, criminal jury decision-making research suggests that certain dispositions, such as authoritarianism, belief in a just world, and locus of control may influence criminal jury verdicts (e.g., Narby, Cutler, & Moran, 1993). Other criminal jury research found

evidence of large direct effects of death-penalty attitudes on sentencing verdicts in capital cases (O'Neil et al., 2004).

What about the effect of attitudinal factors in civil cases? Since the law is less clear regarding the role of attitudes in civil cases, one might anticipate direct effects of attitudes on verdicts. Therefore research might focus on the magnitude of such direct effects, as well as how those attitudes influence interpretations of evidence. Hans and Lofquist (1992; 1994) asked actual jurors questions related to the legitimacy of civil lawsuits and the size of damage awards. Collectively, these questions were designed to measure what Hans and Lofquist referred to as litigation-crisis attitudes. They found that many of the jurors they interviewed thought the civil justice system was in trouble. Most believed that there were too many lawsuits, people were too quick to sue, and that damage awards were too high. Not surprisingly, Hans and Lofquist (1992) also found that these litigation-crisis attitudes were negatively correlated with damage awards ($r = -.54$) such that the stronger the jurors perceived a litigation crisis, the lower were the determinations of damage awards. Other research found evidence of effects of attitudes toward tort reform on damage award assessments, such that jurors who favored tort reform gave lower damage awards (Greene, Goodman, & Loftus, 1991; Hastie, Schkade, & Payne, 1999). Prior research has not investigated if the total effect of attitudes is mediated by perceptions of the evidence or whether attitudes moderate the effect of evidence.

Defendant status. An extralegal factor that has been well studied is defendant status as a corporation or an individual. There is a widely held perception that juries treat individual defendants and corporate defendants differently (Hans, 1989, 2000; Hans &

Ermann, 1989). MacCoun (1996) referred to this phenomenon as a defendant identity effect. Support for this phenomenon comes largely from archival data, which suggests that business, professional and government defendants tend to pay more than individual defendants who are held liable for causing similar injuries (e.g., Chin & Peterson, 1985; Ostrom, Rottman, & Goerd, 1996). The most likely explanation for this finding is that juries hold corporate defendants to a higher standard than individual defendants.

Experimental research using simulated trials has also found that corporate defendants are held liable more frequently and pay greater compensation than individual defendants (e.g., MacCoun, 1996). Hans and Ermann (1986) presented mock jurors with a trial scenario involving several workers harmed by exposure to a toxic substance. The injured workers sued their employer, described as either an individual defendant (“Mr. Jones”) or a corporate defendant (“Jones Corporation”). Hans and Ermann (1989) found that the corporate defendant was held liable for a greater number of claims and was required to pay more in compensatory damages than the individual defendant. Bornstein (1994), using four different personal injury cases, manipulated the defendant status such that the defendant was portrayed as either a large corporation or a small, individually owned company (i.e., he manipulated the size of the company). Bornstein (1994) found that large corporate defendants were perceived with less sympathy, held to stricter safety standards and more likely held liable but were not required to pay more in damages than smaller companies. Nonetheless, even if status only affects judgments of liability, jurors are misusing this extralegal information when deciding the case.

Number of plaintiffs. Although civil juries are supposed to evaluate the merits of each plaintiff’s claim absolutely and not relative to other plaintiffs, some research

suggests that as the number of plaintiffs increase, damage awards increase as well.

Horowitz and Bordens (1988) utilized either a consolidated trial or separate trials with four independent plaintiffs in which the defendant was a chemical plant that supposedly contaminated the residential drinking water. The results showed that punitive damages significantly increased as the number of plaintiffs increased. A different study by Horowitz and his colleagues demonstrated that the number of plaintiffs could affect compensatory damage awards as well (Horowitz, FosterLee, & Brolly, 1996). In this study, increasing the number of plaintiffs impeded jurors' abilities to attend to each plaintiff individually, such that jurors lumped all the plaintiffs together and awarded more in compensatory damages when they heard from eight plaintiffs as opposed to only four. Other research by Horowitz also indicates that an increase in damage awards accompanies an increase in the number of plaintiffs up to a point (Horowitz & Bordens, 2000). These researchers found that damage awards were lowest with one or two plaintiffs, reached their peak with four plaintiffs, and then slightly decreased with six and ten plaintiffs.

Occasionally extralegal factors

Factors such as juror-litigant similarity, jurors' litigation crisis attitudes, or defendant status are completely extralegal; that is, they ideally should have no influence on civil jurors' decisions (even though research suggests that they do). Other factors may be legally appropriate for some certain decisions civil juries make but are irrelevant to other decisions. Occasionally extralegal factors thoroughly explored in civil jury research include the amount requested, the severity of the injury, the conduct of the defendant, and defendant wealth.

Amount requested. According to the anchoring and adjustment heuristic (Tversky & Kahneman, 1974), a salient reference point, known as an anchor, serves as a basis for simplifying judgments that involve uncertainty (such as determining damage awards). When new information is presented (for example, in the context of civil litigation, evidence about injury severity or defendant reprehensibility), adjustments may be made away from the anchor but the resulting response will still be related to the initial anchor. Plaintiffs' attorneys, or experts on the plaintiffs' behalf, typically proffer some number for the amount of damages sought by the plaintiff (this is known as the *ad damnum*), and sometimes defense attorneys (or their experts) will counter with a second recommended figure. Although these suggestions bear some relation to lost and future earnings and other factors relevant to economic damages, it is extremely difficult to objectively quantify non-economic and punitive damages. Consequently, there is concern that jurors are improperly swayed by the (somewhat arbitrary) anchors suggested by attorneys, to the detriment of appropriately considering the evidence.

Empirical research demonstrates that jurors do indeed fall prey to the anchoring and adjustment heuristic when determining damage awards. Chapman and Bornstein (1996) found that the *ad damnum* not only systematically influenced compensation awards, but also affected judgments of the probability that the defendant caused the injuries and other perceptions of the litigants. The title of their paper, "The More You Ask for, the More You Get," aptly summarizes the effects of anchors on damage awards. Other researchers have found support for this assertion. Hastie, Schkade, and Payne (1999) discovered that a plaintiff's request had a dramatic effect on punitive damage awards: the higher the request, the higher the award. Note that in the case of punitive

damages, the amount requested typically bears little relation to the award since punitive awards should be based on the defendant's conduct and wealth. Marti and Wissler (2000) systematically varied the amount requested by the plaintiff and the rebuttal by the defense. They too found that the amounts requested affected the amounts awarded, as long as the requests were not too extreme (which resulted in a boomerang effect). Award size and variability increased with the plaintiff's request but decreased with the most extreme request and award size and variability decreased as the defense rebuttal decreased but increased with the most extreme rebuttal. These researchers argued that the award recommendations alter jurors' beliefs about what constitutes acceptable awards and that award recommendations produce biased and unpredictable damage awards (Marti & Wissler, 2000).

Injury severity. The severity of the plaintiff's injury is obviously relevant when deciding an appropriate amount for compensatory damages. After all, more severely injured plaintiffs will likely have higher medical expenses, greater lost wages, and experience more pain and suffering than plaintiffs with less severe injuries. However, if information concerning the severity of injury affects liability decisions, then jurors are using such information improperly. In terms of the relationship between injury severity and liability decisions, the research is abundant and clear. Unfortunately, it suggests that information regarding injury severity does inappropriately impact liability decisions.

A recent meta-analysis by Robbennolt (2000) examined the hypothesis that greater responsibility is attributed to the potentially responsible party as the outcome becomes more severe. This notion, called the defensive attribution hypothesis, is explained in the social cognitive literature. Fiske and Taylor (1991) state that

consequences of an action become more unpleasant as they become more severe. As a result, the idea that the action might be accidental becomes less tolerable and people fear that a similar fate could befall them. The researchers claim that “seeing the actions as avoidable and blaming the person for their occurrence makes the actions more predictable and hence avoidable by the self” (Fiske & Taylor, 1991, p. 85). Therefore, attributing accountability to the seemingly responsible party makes the incident seem controllable and thus avoidable. A meta-analytic review supports the defensive attribution hypothesis, concluding that research strongly suggests that more responsibility is attributed to an accident perpetrator when the consequences are severe than when they are mild (Burger, 1981).

In the context of a civil jury, the more severe the consequence of an incident, the greater is the need for jurors to feel as though they could avoid such injuries. Therefore, jurors are more prone to attribute liability to the party that supposedly caused the incident when the injuries are more severe. Robbenolt’s (2000) meta-analysis supports this assertion. She found a small but significant positive relationship between outcome severity and the responsibility-related judgment of liability ($r = .08, p < .001$). As Robbenolt accurately notes, “the existence of any relationship between outcome severity and liability is counter to the legal doctrine that dictates that the severity of injury ought not to influence liability judgments” (Robbenolt, 2000, p. 2596). Other research concerning the effect of injury severity on liability decisions tends to find that the relationship between injury severity and liability is mediated by emotional reactions to the litigants (Bornstein, 1998). Whereas plaintiffs who are hurt worse arouse greater feelings of sympathy and sadness in jurors, defendants who cause more severe injuries

are viewed with less sympathy and arouse anger and anxiety in jurors. Consequently, these feelings tend to lead to liability verdicts in favor of the plaintiff (Bornstein, 1998).

Greene, Johns, and Bowman (1999) conducted a study that was not included in the Robbennolt (2000) meta-analysis but still examined the relationship between injury severity and liability decisions. These researchers manipulated the severity of injury in a simulated automobile negligence case and found that it inappropriately affected liability decisions. The defendant was perceived as more negligent when the plaintiff suffered more serious injuries than when the injuries were not as severe. The researchers also manipulated another factor, the reprehensibility of the defendant's conduct, which is relevant when determining liability and punitive damages but not compensatory damages. They found that juror judgments about the defendant's conduct influenced irrelevant considerations regarding compensating the plaintiff for his injuries (Greene et al., 1999).

Defendant conduct before the injury. Obviously, the carelessness or recklessness of the defendant plays a large part when deciding if the defendant was legally responsible for causing any injury to the plaintiff. Similarly, the defendant's conduct is very relevant with respect to punitive damages, both when deciding whether or not to award them and when determining an appropriate sum. Indeed, most judges' instructions regarding punitive damages direct jurors to award such damages if the defendant's conduct was reckless, reprehensible, wanton, or malicious. Yet if the defendant's conduct affects compensatory damage awards, jurors are inappropriately considering this evidence.

Greene and her colleagues have conducted much of the recent experimental research addressing the extent to which mock jurors correctly use evidence regarding the conduct of the defendant. Cather, Greene, and Durham (1996) manipulated the

reprehensibility of defendant conduct in three different tort cases (personal injury, products liability, and insurance bad faith). For instance, in a product liability case involving a young boy injured while using a lawnmower, the reprehensibility of the defendant's conduct was measured in terms of the amount of safety research conducted on the product as well as the number of similar previous incidences. The mock jurors were asked to award compensatory and punitive damages and the results showed that the reprehensibility of the defendant's conduct properly influenced punitive damage decisions but not compensatory damage assessments (Cather et al., 1996).

Other research done by Greene and her colleagues has produced somewhat conflicting results. Greene, Woody and Winter (2000) also manipulated the reprehensibility of the defendant's conduct in three tort cases (products liability, automobile negligence, and medical malpractice) and found similar results. Mock jurors appropriately utilized the reprehensibility manipulation in two of the cases (i.e., it only affected punitive damage awards). However, reprehensibility also improperly influenced compensatory damage awards in the products liability case (Greene et al., 2000). Moreover, in the medical malpractice case, the reprehensibility manipulation did not affect assessments of punitive damage, though it should have if jurors were properly considering such evidence.

Another study by Greene, Johns and Smith (2001) used a more realistic mock trial as the stimulus material. Whereas prior studies provided brief written summaries of the tort cases, this group of researchers used an audio-taped mock trial of an automobile negligence case, along with photographs and demonstrative evidence. In this study participants were asked to determine negligence and award any compensatory damages

they believed the plaintiff deserved (but mock jurors were not allowed to award punitive damages). Defendant conduct was manipulated by providing no conduct information (as a control) or by describing either mildly careless conduct (defendant traveling near speed limit with one lane change prior to accident), or very careless conduct (defendant traveling 10 mph over speed limit, changed two lanes before accident, and had a Breathalyzer test revealing a small amount of alcohol consumption). Both individuals and deliberating juries awarded greater compensation when they heard any evidence related to defendant conduct than when no such information was provided (Greene et al., 2001). It is certainly possible that not being allowed to award punitive damages caused mock jurors to inflate compensatory damages as a means of punishing the more reprehensible defendant.

Another interesting finding was that mock jurors who heard evidence about the defendant's conduct perceived the plaintiff as being harmed more severely than those who received no information about conduct, even though actual evidence of the plaintiff's injury was held constant (Greene et al., 2001). In other words, evidence related to the conduct of the defendant (and therefore liability) shaped perceptions of the plaintiff's injuries such that more negligent defendants appeared to cause greater harm than less negligent defendants, even for the same injury. Consequently, more negligent defendants may be required to pay more in compensation than less negligent defendants.

These conflicting results make it difficult to ascertain the effects of the reprehensibility of defendant conduct on mock juror verdicts. Are jurors using this information properly? On one hand, it appears that such evidence may not affect compensatory damage awards while punitive damage awards usually are influenced by

defendant conduct (Cather et al., 1996). On the other hand, some research suggests that compensatory damage awards may be influenced by defendant reprehensibility (Greene et al., 2000; Greene et al., 2001) while punitive damage awards may not be affected (Greene et al., 2000). Perhaps case or study specifics such as case type and trial complexity account for these discrepancies in the research. For instance, some of the research used corporate defendants (e.g., product's liability) while other research did not (e.g., medical malpractice)—perhaps the different standards jurors hold for corporate versus individual defendants influenced their use of defendant conduct. Also, the research differed in their manipulations, such that some research varied injury severity and reprehensibility (Cather et al., 1996) while other research also manipulated trial type (unitary vs. bifurcated; Greene et al., 2000).

Defendant wealth/revenue. One of the most common criticisms levied against the civil jury is that it is biased against wealthy defendants. People assume that civil juries are intent on transferring wealth from the rich defendant to the poor plaintiff (the so-called Robin Hood effect or deep-pocket hypothesis). Defendant wealth is clearly not relevant when deciding liability or compensatory damage awards, but should be considered when deciding an appropriate sum for punitive damages. The purposes of punitive damages include punishing the defendant for reprehensible conduct and deterring the defendant from future misconduct. Thus, jurors should consider the wealth of the defendant in order to adequately punish and have a deterrent effect. For a corporation that makes millions of dollars per year in revenue, a punitive damage award of one hundred thousand dollars would be a drop in the bucket to them even though it seems like a large figure to laypeople. Since defendant wealth is a rather obvious aspect

of the defendant, and it is relatively easy to examine in archival data and manipulate in simulation experiments, a large body of research has been dedicated to exploring the effect of defendant wealth on civil jury verdicts.

Chin and Peterson (1985) conducted one of the first and largest archival analyses examining the deep-pocket hypothesis. These researchers at the Rand Corporation analyzed jury verdicts in Cook County (Chicago), Illinois over two decades from 1959 to 1979. They found that corporate defendants were required to pay more in damages than individual defendants, even when similar injuries resulted. Other researchers examining juries nationwide in the 1990s also found evidence of horizontal inequities in damage awards, such that there were remarkable differences in awards for corporate versus individual defendants (Ostrom et al., 1996). However, it is important to recognize that it may not be defendant wealth that is causing horizontal inequities in damage awards but instead defendant status as a corporation.

In 1996, MacCoun attempted to decipher between a deep-pocket effect and a defendant identity effect. As MacCoun (1996) noted, to demonstrate a true deep-pocket effect, verdicts (liability, damage awards, or both) must vary only as a function of defendant wealth and not due to any other factor that might correlate with wealth (such as corporate identity). To assess the effects of wealth and status independently, MacCoun (1996) conducted two experiments in which mock jurors made decisions about several different personal injury cases. Each case utilized three defendant conditions: a poor individual, a wealthy individual, and a corporation. Therefore, a comparison of the first two conditions represented a test of the deep-pocket effect and a comparison of the second and third conditions represented a test of the defendant-identity effect.

In his first experiment, MacCoun (1996) found that wealthy and poor individuals were equally likely to be held liable but were both less likely to be held liable than corporate defendants. The same pattern emerged for compensatory damages. MacCoun (1996) replicated these findings in his second experiment, demonstrating that what once was believed to be a deep-pocket effect was in fact a defendant-identity effect. Thus, wealthy defendants are not necessarily at a disadvantage; apparently, jurors are paying attention to the defendant status as a corporation. However, two caveats need to be made about MacCoun's findings. First, the corporation was perceived as significantly wealthier than the wealthy individual (MacCoun, 1996). For a true test of the defendant-identity effect, they should have been perceived as equally wealthy. Second, MacCoun confounded wealth and identity by not having separate conditions representing a poor corporation and a wealthy corporation, making it impossible to attribute differences found between corporations and wealthy individuals to differences solely in identity. Regardless of these limitations, even though defendant wealth may not improperly affect jurors' verdicts, defendant identity should play no part in jurors' decisions. That empirical evidence suggests otherwise reflects that jurors indeed are influenced by extralegal factors when deciding liability and determining damage awards.

Extralegal factors on which research is lacking

The previous discussion has been limited to issues that have already been explored in research on factors that may inappropriately influence civil juries and contribute to horizontal inequities in verdicts. Some of these variables (e.g., defendant wealth, defendant conduct before trial) will be examined in this project. The next section

of this dissertation covers extralegal factors on which not much empirical research has been conducted but which will be explored in the current investigation.

Corporate defendant size and wealth. Prior research on defendant status (and indirectly defendant wealth) has revealed that jurors indeed hold corporate defendants to different standards than individual defendants (Hans, 2000). Although this research has focused on defendant identity as an individual or corporation, little empirical research has explored whether jurors are sensitive to manipulations regarding corporations, such as the size of the company. It is possible that certain corporate identities foster horizontal inequities in determinations of liability and damage awards.

Both the size of the corporation (an extralegal factor measured in terms of the number of company locations nationwide and/or over-seas) and the wealth of the corporation (a factor relevant only to punitive damages and measured in terms of net revenue per year) might inappropriately influence civil jury-decision making. Indeed, in one of the few studies to manipulate corporate size, Bornstein (1994) found that larger corporations were viewed with less sympathy and were less likely to win their case than smaller businesses. In order to make the large corporate defendant less sympathetic to mock jurors, Bornstein (1994) had them represented *in absentia* (represented only by their attorneys) while the individual owner of the business represented the smaller business in court. Thus, Bornstein (1994) introduced a possible confound in his study, such that the differences found could be attributable to either corporate size or company representative.

Who represents the company at trial is an extralegal factor that applies to corporate defendants yet has been generally overlooked in the empirical research (except

for conference presentations: Slawson & Bornstein, 2000; McGorty & Bornstein, 2004). One study found that company size interacted with the presence of a representative such that higher damage awards were assessed when there was no representative for the smaller company but when there was a representative present for the larger company (McGorty & Bornstein, 2004). In addition to whether or not the presence of someone from the company affects verdicts, the status of the company representative may also influence jurors.

Research on juror-litigant similarity has revealed a similarity-leniency hypothesis, such that litigants similar to the jurors tend to get more lenient treatment (assuming the litigant's conduct does not threaten the juror's positive view of themselves). According to this reasoning, a CEO or someone else in a position of power in the company will be viewed more negatively than an employee from the lower ranks because jurors (who are unlikely to be company executives) will likely view the CEO as a member of an out-group. Alternatively, the status of the representative for the corporation might be linked to wealth. For instance, jurors might reason that a company who has the CEO represent them at trial is wealthier than a company who has a lower employee such as an engineer representing them.

Defendant conduct at trial. Most empirical research on defendant conduct has focused on the reprehensibility of the conduct in causing injury to the plaintiff; that is, research has mainly considered defendant conduct prior to trial. In contrast, there has been relatively scarce research on defendant conduct at trial. To the extent that the defendant's conduct at trial does not reflect an admission of fault, guilt, or responsibility, conduct at trial is an extralegal factor (that is, it should not impact verdicts). Yet, it is

certainly possible that defendant conduct during trial might influence jurors' verdicts. One of the few studies to examine defendant conduct at trial was conducted by Bornstein, Rung and Miller (2002) examining the effects of defendant remorse and responsibility. They had participants read one of three case scenarios where a physician had already been found liable for malpractice. The researchers manipulated the physician's level of remorse to ascertain the effect on damage award assessments. In one condition, the defendant did not indicate feeling any remorse (the no-remorse condition). In the remorse condition, the physician expressed sorrow for "the unfortunate death" of the plaintiff's husband but did not admit any wrongdoing. Finally, in a third condition, the defendant expressed remorse for his own negligence and the resulting death of the plaintiff's husband (the remorse-responsibility condition). The interesting finding was that the defendant in the remorse condition that did not admit responsibility was required to pay less in compensation than in the other two conditions (Bornstein et al., 2002). Thus, there is some evidence that expressing remorse may actually benefit the defendant, as long as no responsibility is admitted.

One of the only other studies to explore defendant conduct before trial examined the effect of an apology on settlement decisions prior to any trial (thus the effect of the apology at trial was not actually assessed). Whether or not a company issues an apology may be another factor that can affect how jurors view corporate defendants. Robbennolt (2003) manipulated whether an apology was issued, as well as the type of apology, in a personal injury case involving a pedestrian-bicycle accident. Some participants read a scenario in which no apology was offered. Other participants received a scenario in which a partial apology was offered that merely expressed sympathy. Finally, a third

group of participants read a scenario in which a full apology that involved taking responsibility for causing the injuries was issued. Robbennolt (2003) found that full apologies (expressing sympathy and responsibility) increased mock jurors' willingness to settle and resulted in the defendant being viewed with greater sympathy and less anger than those issuing a partial apology (only expressing sympathy) or no apology. Mock jurors also expected that fewer damages would be awarded when a full apology was proffered. Although the case used was relatively innocuous, the study does provide some evidence that defendant conduct in the form of an apology might influence juror verdicts.

The extant research has explored the effects of apologies on settlement decisions (Robbennolt, 2003) and in a medical malpractice case involving an individual defendant (Bornstein et al., 2002). Therefore, there has yet to be an empirical examination of the effects of an apology when the defendant is a corporation. Just as Robbennolt (2003) found that individual defendants were viewed with more sympathy and less anger when they offered an apology, it is likely that corporate defendants will be treated more leniently when they proffer an apology than when they do not (providing the apology does not include admissions of responsibility or imply guilt). Jurors may be sensitive to these issues regarding corporate defendants, such that certain corporate identities are treated differently in terms of liability verdicts and damage award assessments, but empirical research is needed to explore this possibility.

Plaintiff characteristics. Prior research in the civil arena has failed to consider the impact of many plaintiff characteristics, like plaintiff occupation, on juror verdicts. The plaintiff's occupation is relevant to compensatory damages, since assessments of economic damages, particularly for lost and future earnings, should be made in light of

the plaintiff's profession. However, the plaintiff's occupation may also inappropriately influence assessments of liability or punitive damages if, for example, jurors are less inclined to find in favor of a plaintiff with a high-paying occupation. In these instances, it is possible that plaintiff occupation contributes to horizontal inequities in verdicts. For instance, suppose a neurosurgeon and a schoolteacher suffered comparable injuries when using the same product but the defendant is more likely to be found liable with the schoolteacher as the plaintiff. The similarity-leniency hypothesis proposes that jurors will be sympathetic and lenient toward litigants similar to themselves. The average juror can relate to a schoolteacher more than a neurosurgeon, both in terms of social status and wealth. Therefore, jurors may improperly consider plaintiff occupation when deciding liability or even punitive damage assessments (e.g., "The neurosurgeon is already wealthy enough so he doesn't need any extra money in punitive damages.").

Manipulating the plaintiff's occupation is one way to examine the effects of plaintiff wealth on civil jury verdicts. Another way to explore plaintiff wealth is by manipulating the case and the cause of the injury. In a medical malpractice case, the plaintiff might be injured when undergoing a necessary, vital procedure (e.g., heart-bypass surgery; kidney transplant) or an unnecessary, luxurious procedure (e.g., plastic surgery, liposuction). In a products liability case, the plaintiff might be injured while using a common, conventional product (e.g., car) or an opulent, extravagant product (e.g., yacht). In both of the above instances, the wealth of the plaintiff (and indirectly that of the defendant as well) is varied by the cause of injury. Perhaps jurors are sensitive to the wealth of the plaintiff (and the defendant) as reflected by the case and cause of injury and feel little sympathy for a plaintiff injured by a luxurious procedure or product. This could

translate into fewer verdicts in favor of the plaintiff, even if other factors were held constant (e.g., defendant conduct).

Summary

The current project consists of several studies designed to explore civil jury decision-making. The first study manipulates several of the aforementioned litigant characteristics and completely extralegal factors in the context of a corporate defendant in a products liability case. Many of these variables have yet to be explored in this context, so the analyses will focus on the how mock jurors utilize litigant characteristics when determining verdicts. As the focus of the project shifts to comprehension and the judicial instructions, we manipulate additional pieces of “occasionally extralegal” factors, or those factors whose consideration is only appropriate for specific decisions (e.g., injury severity should impact compensatory damages but not liability). How mock jurors use (or misuse) these factors and how comprehension influences this (mis)use are of particular interest in the later stages of this project.

Judicial instructions

Comprehension of judicial instructions

Thus far, the focus of the discussion on juror competence has been on completely extralegal factors and evidence relevant only to specific decisions. Jurors’ consideration of extralegal factors or misuse of evidence when making various decisions contributes to variability in liability verdicts and horizontal inequities in damage awards. One explanation of the effects found in the research described above may be jurors’ failure to comprehend judicial instructions. If jurors cannot comprehend the instructions on the law, how can they make decisions in accordance with the law?

Judges' instructions play an important role in every case. They explain the laws that are applicable to the case (e.g., defining the standard of proof), and direct jurors to reach a verdict in accordance with those laws. Jurors are presumed to understand and comprehend the complicated legal terminology and concepts in these instructions. Unfortunately, research suggests that jurors are notoriously bad at comprehending judicial instructions (e.g., Ellsworth, 1999; Greene & Bornstein, 2000). Even some judges seem to be aware that jurors fail to understand the instructions read to them. As one judge stated, "When I read instructions to the jury, I hope that I will see a light go on in the jurors' eyes, but I never do" (quoted in Severance, Greene, & Loftus, 1984, p. 202).

There are a number of explanations for why juror comprehension of these instructions is so poor. One reason is the unfamiliar legal language in which the instructions are written. Often times, the instructions simply repeat statutory language and are laden with strange legal terms. Phrases comprised of unusual terminology, such as "preponderance of the evidence," "proximate cause," or "non-economic losses...incurred to the present time," are common in judicial instructions but are rarely encountered in everyday language. Considering that *preponderance* appears only 0.26 times per million words in the English language and *negligence* appears once per million words (Greene & Johns, 2001), it is no wonder that jurors have difficulty comprehending some of the terminology. As another example, here is how jurors are typically instructed on the definition of *proximate cause*: "a cause which, in a natural and continuous sequence, produced damage, and without which the damage would not have occurred" (quoted in Wrightsman et al., 2002, p.425).

Due to the use of complicated, technical and convoluted legalese, it is estimated that jurors spend at least 20% of their time in deliberation trying to decipher the meaning of the instructions, but still tend to have difficulty comprehending them (Ellsworth, 1989). Studies of juror comprehension of judicial instructions find comprehension rates that range from under 50% (comparable to having no instructions at all; Elwork, Sales, & Alfini, 1977; Steele & Thornburg, 1988; Reifman, Gusick, & Ellsworth, 1992) to approximately 64% (which is slightly more promising but still rather meager; Greene & Johns, 2001). Besides the legalese, judicial instructions are often written in grammatically complex and compound sentences, in passive voice, and they tend to contain negatively modified words. For instance, the word “disregard” appears frequently in the instructions. Understanding this word requires comprehension of the word “regard” and then a negation of it, which involves a two-step process. A better word choice to substitute for “disregard” would be “ignore,” which only requires one-step for comprehension. Since the instructions should inform people what to do, negative words and negators (e.g., “not” or “never”), which tell them what to avoid, often cause unnecessary confusions (Elwork et al., 1977).

Another reason that jurors may be confused by judicial instructions is the way the instructions are communicated to jurors. Typically, the jury listens passively while the judge monotonously reads the instructions aloud at the very end of the trial. Jurors are almost never allowed to ask questions to clarify any misunderstandings. Even if the jurors do ask for assistance while deliberating, judges are reluctant to help, reasoning that rewording or clarifying the instructions might open the door for appeals. Thus, the judge simply repeats the instructions that were read initially (which obviously does nothing to

help clarify any confusion). Moreover, judges assume that the instructions will have the intended effects of guiding jurors through myriad complex and foreign legal concepts (Wrightsman et al., 2002). Other reasons jurors have difficulty understanding judicial instructions lay in the ambiguity and vagueness of the instructions. The judicial instructions may inform jurors of certain concepts such as economic damages, but typically do not provide specific definitions of various terms (e.g., pain and suffering, loss of consortium), explain how jurors are to consider and weigh these issues, or provide information on how these terms translate into dollar awards (Greene & Bornstein, 2000).

Punitive damage instructions are even more ambiguous and vague than instructions governing compensatory damages. Most judicial instructions concerning punitive damages simply tell the jurors to assess an amount sufficient to punish and deter, and in doing so, jurors should consider the reprehensibility of the defendant's conduct and the defendant's wealth. Other than that, the instructions are usually no more specific (although some jurisdictions do provide some additional criteria, such as the award should not bankrupt the defendant or be motivated out of passion or prejudice). In essence, jurors are left completely on their own to assess a reasonable sum for punitive damages. Even the Supreme Court, in their 2003 decision in *State Farm Insurance Co. v Campbell*, recognized the shortcomings of punitive damage instructions, stating that "vague instructions, or those that merely inform the jury to avoid 'passion or prejudice,' do little to aid the decision maker in its task of assigning appropriate weight to evidence that is relevant and evidence that is tangential or only inflammatory" (p. 436).

Lack of comprehension leads to misuse of evidence

As described above, the vague direction and guidance in the instructions may contribute to jurors using certain elements of evidence inappropriately when determining liability and damage award verdicts. For instance, evidence relevant to one decision (e.g., injury severity) may influence other decisions (e.g., liability verdicts; Greene et al., 1999). Additionally, jurors' confusion concerning important legal concepts (e.g., "preponderance of evidence" or "unreasonably dangerous") may result in similar cases reaching different liability verdicts. One jury may interpret the concepts in a certain way while another jury understands the concepts differently. If jurors cannot make sense of the instructions they receive, they cannot reach a sensible verdict (Melsheimer & Stodghill, 1994). Given the above concerns regarding judicial instructions, a number of procedural reforms have been proposed to not only provide more guidance and improve comprehension of instructions, but also to ensure that jurors use the appropriate evidence when determining liability and damage awards. Empirical research is needed to explore the effectiveness of these reforms. This project specifically focuses on revising judicial instructions so they are specific, clear, and understandable.

Chapter Three: Proposed procedural reforms for the civil jury

Reforms for judicial instructions

Suggestions for improving judicial instructions tend to focus on two issues: increasing juror comprehension of the instructions and ensuring that jurors are using evidence correctly when reaching their verdicts. These improvements in judicial instructions include both minor and radical reforms. Some of the mild reforms that have already been adopted in certain jurisdictions include allowing jurors to take notes and providing jurors with written copies of the instructions. Drastic reforms, often viewed with skepticism by legal professionals, are obviously more difficult to implement than benign reforms. These reforms include requiring judges to clarify instructions or answer other questions that jurors might have during deliberation. As stated earlier, judges are hesitant to do such things for fear of opening the door for later appeals. Instead of requiring judges to clear up confusion over the instructions, it might be easier, and more influential, to revise the instructions in order to avoid ambiguity and misunderstandings in the first place.

Revising judicial instructions

Previous empirical attempts to revise instructions have met with success in both the criminal (e.g., Severance et al., 1984) and civil arena (e.g., Elwork et al., 1977; English & Sales, 1997). Most of the studies that revise judicial instructions use principles from the field of psycholinguistics, which is the study of how people understand and use language (Wrightsmann et al., 2002). These principles include minimizing or eliminating the use of abstract, uncommon, and technical terms, as well as homonyms (e.g., “respect” is used in the instructions to mean “reference” but could be misinterpreted to mean

“esteem”). Suggestions based on principles from psycholinguistics also involve eliminating negatively modified words, compound sentences and passive voice, as well as reorganizing the instructions in a more simplistic and logical manner (Elwork et al., 1977).

Another way to improve jurors’ comprehension rates for instructions and improve their use of evidence is to be more explicit in defining terminology. For instance, Hawaii’s instructions are one of the very few to include a definition of the term “mental suffering” and New Jersey’s instructions are one of the few that define “disability” (Wissler, Kuehn, & Saks, 2000). Alternatively, some researchers suggest eliminating certain legal jargon altogether. For example, instead of telling jurors that the plaintiff must prove negligence by a “preponderance of the evidence” and then defining preponderance, the instructions could read, “You must decide whether it is more likely than not...” (Saltzburg, 1993, p. 357).

Some recommendations are more case-specific, including tailoring the instructions and definitions to the exact case. Saltzburg (1993) provides a simple but poignant example. “If the plaintiff’s theory of negligence is that the defendant failed to stop at a traffic light, the instruction...could be made case specific...so that it reads, ‘You must decide whether it is more likely than not that the defendant failed to exercise reasonable care under the circumstances because he drove his car through a red light’” (p. 357). His instruction eliminates the use of the technical terms “preponderance” and “negligence” while being very case-specific. Other case-specific recommendations involve providing upper and lower dollar amounts for the type of injury the jury is evaluating or giving jurors several similar injury scenarios and the damage awards

associated with those scenarios. Giving guidance in the form of information regarding awards in comparable cases or providing a range of appropriate dollar amounts can reduce variability in damage awards (Bovbjerg, Sloan, & Blumstein, 1989; Saks et al., 1997).

Judges' instructions could also be improved by being more explicit in the information they convey to jurors. These overt instructions are designed to provide better guidance and ensure jurors are considering the appropriate issues when deciding their verdicts. Consequently, these instructions should reduce horizontal inequities in verdicts. Wissler and her colleagues (2000) advocate that jurors should be told overtly that they are not to consider attorney's fees, attorney's recommendations, or beliefs about litigant's insurance coverage. Instructions could also include an admonition to limit the use of defendant conduct to determinations of liability (and punitive damages) but that defendant conduct should not be considered when deciding an amount for compensatory damages. Another similar admonition could be made regarding limiting evidence of injury severity only to determinations of damages. Finally, it has been suggested that jurors should be instructed explicitly to not discount awards due to the plaintiff's contribution to the incident (Wissler et al., 2000). In other words, jurors should be warned against awarding less to negligent plaintiffs because the court will reduce the award in proportion to the plaintiff's negligence (this instruction is designed to avoid double discounting; see Zickafoose & Bornstein, 1999).

Research on the effectiveness of some of the above admonitions has met with mixed results and therefore more empirical research is needed. Several studies have found such instructions were effective in getting jurors to disregard certain irrelevant

information (Cox & Tanford, 1989; Pickel, 1995; Wissler et al., 2001). Yet the danger with these admonitions is that explicit instructions may backfire and result in jurors focusing on the issues even more than if no such instructions were given (some research finds such a boomerang effect; Wolf & Montgomery, 1977). However, empirical studies have shown that explaining the policy or reasoning behind the admonition makes the cautionary instructions more sensible and effective, thus reducing the likelihood of a boomerang effect (Diamond & Casper, 1992; Wissler et al., 2001). Also, some of the above recommendations for revising instructions have never been systematically manipulated and tested. Ultimately, questions about the effectiveness of these suggestions concerning revising judicial instructions are empirical in nature. This investigation will revise typical pattern instructions to examine if they enhance jurors' use of the evidence properly and reduce the misuse of evidence. Before courts are willing to replace the current judicial instructions with revised versions, the courts must see some conclusive support that the revised instructions are an improvement.

Other procedural reforms

Revising the judicial instructions may be one of the most influential procedural reforms in terms of improving jurors' comprehension and their use of the appropriate evidence, but research has indicated that other procedural reforms may also improve civil jury decision-making.

Pre-instructions

One such reform, offering jurors pre-instructions, has met with considerable support in the lab and the field. Researchers close to 30 years ago found evidence demonstrating that presenting instructions at the beginning and again at the end of the

trial allowed jurors a greater opportunity to focus their attention on relevant evidence and remember it (Elwork et al., 1977). A field experiment by Heuer & Penrod (1989) found that pre-instructions assisted jurors in following legal guidelines in their decision-making. In a different study, jurors who were pre-instructed on the elements of compensation made appropriate distinctions between several differentially injured plaintiffs, such that the most severely injured plaintiffs received the most in compensation. Those participants that did not receive preliminary instructions failed to use injury severity appropriately when determining compensatory damage awards (FosterLee, Horowitz, & Bourgeois, 1993). It should be noted that some states already use preliminary instructions (e.g., Arizona, Indiana).

Bifurcation

A procedural reform more relevant to the current investigation than pre-instructions is bifurcation. Bifurcation is the separation of the various issues put before a jury. It may involve either a separation of evidence relevant to liability and damage awards or a separation of evidence related to compensatory and punitive damages. One benefit of bifurcation is increased efficiency (Greene & Bornstein, 2003). In unitary (non-bifurcated) trials, the jury hears all the evidence and decides all the issues in one deliberation. In many of these cases, the jury finds that the defendant is not liable. Therefore no damages are awarded but time has been wasted presenting all the evidence relevant to damages. In bifurcated cases, the jury initially would hear evidence only related to liability and not damages.

There are more important advantages to bifurcation than improved efficiency. One such benefit to bifurcating the trial is that it improves jurors' proper use of evidence

when they are deciding their verdicts (Gensler, 2000). In unitary trials, jurors may confuse issues and improperly consider evidence that has no bearing on the particular decision they are making. Logically, in bifurcated trials, inappropriate use of evidence would be lessened because jurors only hear the evidence relevant to one particular decision (i.e., they would not hear about injury severity when determining liability). Another important benefit to bifurcation is that it can improve jurors' comprehension of judicial instructions by narrowing the range of issues (and accompanying testimony and instructions) that they must consider (Gensler, 2000). Thus, by allowing jurors to focus on fewer issues and instructions at any one time, bifurcation should improve comprehension. Unfortunately, the empirical evidence regarding the benefits of bifurcation produces a muddled picture.

The previous discussion on juror competence and extralegal factors has highlighted research demonstrating that jurors misuse evidence (e.g., Bornstein, 1998, where injury severity affects liability; Greene et al., 2000 & 2001, where defendant conduct influenced compensatory damages). So can bifurcation of liability and damage awards alleviate this improper use of evidence? An early study on the effects of bifurcation indicated that significantly fewer defendants were found liable in bifurcated trials than in unitary trials (Zeisel & Callahan, 1963). The researchers proposed that jurors in the unitary trials were using evidence about injury severity when deciding liability and therefore tended to find that the defendant was liable in unitary trials. Horowitz and Bordens (1990), conducting a mock jury experiment, varied whether the trial was unitary or bifurcated and also found more verdicts in favor of the plaintiff in unitary trials than in bifurcated trials. Strangely, although the defendant was found liable

more often in unitary trials, compensatory damages were higher in bifurcated trials.

Greene and Smith (2002) explored bifurcation in an automobile negligence case. Their results showed jurors in the bifurcated conditions gave smaller awards than those in the unitary conditions (indicating that those in the bifurcated conditions did not misuse evidence relevant to liability).

However, other research has shown that bifurcation is not effective at reducing jurors' improper use of evidence. Wissler and her colleagues (Wissler, Rector, & Saks, 2001) manipulated trial type in a mock personal injury case. They found that bifurcation actually exacerbated the impact of liability evidence (i.e., defendant conduct) on compensatory damage awards. In other words, jurors awarded more compensatory damages when the trial was bifurcated than when it was unitary, indicating that defendant conduct influenced jurors even more so when the trial was divided than unitary. Thus, it appears that bifurcation of liability and damages may be somewhat useful in improving jurors' use of evidence. It may be effective in reducing the impact of injury-related evidence on judgments of liability but not as effective in reducing the impact of conduct-related evidence on damage awards.

What about the effects of bifurcation of compensatory and punitive damages? It has been suggested that defendant's net worth (relevant to punitive damages) may influence compensatory damages. One study revealed that varying trial structure had no effect on compensatory damage awards. That is, jurors in unitary conditions awarded the same amount of compensatory damages as those in bifurcated conditions. Yet punitive damages were unexpectedly affected by trial structure, such that punitive damage awards were higher in bifurcated trials than unitary trials (Greene et al., 2000). Landsman and

colleagues (Landsman, Diamond, Dimitropoulos & Saks, 1998) also assessed the impact of bifurcating compensatory and punitive damages. They found some evidence that jurors inappropriately used punitive damage evidence (defendant net worth) in unitary trials when determining compensatory damages, indicating that separating punitive and compensatory damage issues can reduce the misuse of evidence. However, the researchers also found punitive damage awards were higher in bifurcated trials than in unitary trials (Landsman et al., 1998). Therefore, bifurcation may hinder the improper use of punitive damage evidence when determining compensatory damages but may also augment punitive damage awards.

Overall, the research is complicated and rather ambiguous concerning whether or not bifurcation actually results in better juror verdicts (i.e., increases jurors use of the appropriate evidence when making various decisions). What about the effects of bifurcation on juror comprehension rates? Unfortunately, the paucity of research on this issue does not permit a definitive answer. One of the only studies to examine the issue found that bifurcating compensatory and punitive damages did not affect comprehension of the evidence or judge's instructions (Landsman et al., 1998). However, their study only utilized four questions to measure comprehension of judicial instructions, so it would be premature to conclude that bifurcation does not improve comprehension rates. Certainly, more empirical research is needed in order to ascertain the effect of bifurcation on comprehension rates of judicial instructions. The current investigation will use typical pattern instructions and revised instructions in unitary and bifurcated trials to both explore the effects on juror comprehension rates and examine the effects on jurors' use of evidence.

The current project consists of three studies designed to: (1) explore horizontal inequities in liability and damage award assessments, (2) revise judicial instructions to attempt to increase juror comprehension rates and improve use of evidence, and (3) test whether revising instructions moderates the effect of procedural and evidentiary manipulations, reducing horizontal inequities. This is the first investigation to measure juror comprehension rates of revised civil instructions while also empirically testing the moderating effects of instructions on procedural and evidentiary manipulations regarding the issues of liability, compensatory and punitive damage awards.

Chapter Four: Study #1

This investigation has two goals. The primary goal is developing a more comprehensive model of horizontal inequities in civil jury decision-making by exploring potential interactions between irrelevant and relevant litigant characteristics. The second goal is to develop a measure of mock jurors' comprehension rates of typical judicial instructions in a products liability case. The comprehension measure developed in this study will be used in future studies (revised if necessary). The first study investigates the impact of litigant characteristics on mock jurors' determinations of liability and damage awards and how those characteristics contribute to horizontal inequities in verdicts. No empirical studies to date have explored the combined impact of defendant and plaintiff characteristics on jurors' verdicts in the context of a corporate defendant. This study focuses on five variables described above: corporate size, corporate wealth, corporate representative, defendant apologizing, and plaintiff occupation. In a products liability case involving either a car (i.e., ordinary product) or a yacht (i.e., luxurious product), litigant extralegal factors and those factors only appropriate for specific decisions will be systematically manipulated. Several of these factors have not been examined in previous research. Additionally, potential mediators, such as sympathy and anger will be considered.

It is hypothesized that main effects will be found for all manipulations. Based on the similarity-leniency hypothesis, we anticipate that more lenient treatment will be given to the corporate defendant when an engineer as opposed to the CEO represents it at trial. It is expected, based on Bornstein (1994) and the deep-pocket hypothesis, that larger and wealthier corporations will be found liable more often and required to pay greater

compensation than smaller and less wealthy corporations. It is expected that, as in prior research (e.g., Robbennolt, 2003) apologizing will result in more lenient treatment of the defendant, as long as jurors do not interpret the apology as an admission of guilt or responsibility. Thus, we hypothesize that more lenient treatment will be given to the corporate defendant when they issue the following apology at trial: “I am truly, deeply sorry for your loss. My heart goes out to you in this time of tragedy and I offer my sincerest condolences regarding this unfortunate and terrible accident.” Finally, based on the litigant-similarity hypothesis, it is anticipated that mock jurors will find in favor of the plaintiff and award more in damages when the plaintiff is a schoolteacher or the product is conventional (i.e., a car) than when the plaintiff is a neurosurgeon or the product is luxurious (i.e., a yacht). On the other hand, previous research examining corporate defendants found that, although jurors insisted on product safety and held high expectations for corporations, they were more favorable towards the corporate defendants than the plaintiffs. Jurors were generally skeptical of the profit motives of individual plaintiffs and expressed concern about large damage awards (Hans & Lofquist, 1992). Thus, it might be expected that jurors will discount the plaintiff’s occupation in light of their skepticism regarding plaintiffs suing corporations.

The scarcity of prior research prevents the construction of explicit a priori hypotheses addressing the interactive impact of all litigant characteristics. However, past research indicates that attitudes toward plaintiffs (and litigation crisis) are more powerful predictors than attitudes toward corporations (Hans & Lofquist, 1992). Accordingly, it is expected that defendant characteristic manipulations will have smaller effects (or no

effect) in conditions where the plaintiff is viewed with greater sympathy (e.g., a schoolteacher, a car as the product). We will explore all possible two way interactions.

Method

Design

The design is a 2 (Corporate size: branches in 40 states vs. only one branch) X 2 (Defendant wealth: annual net revenue of 500 million dollars vs. 50 million dollars) X 2 (Corporate representative: CEO vs. associate engineer) X 2 (Defendant apology: yes vs. no) X 2 (Plaintiff occupation: neurosurgeon vs. schoolteacher) X 2 (Product: yacht vs. family sedan) between-subjects factorial design. The dependent variables of interest are the participants' liability verdicts and any compensatory and punitive damages they would award. Additionally, participants answered 15 multiple-choice or true-false questions designed to measure comprehension of typical judicial instructions (see Appendix E). These comprehension questions focus on the burden and standard of proof in civil cases, the issues of negligence and design defects, and considerations of compensatory and punitive damages. Also, participants will answer various attitudinal questions regarding their feelings toward the litigants and their views toward civil litigation in general (see Appendix A).

Participants

One hundred fifty eight participants were recruited from the psychology participant pool at Florida International University. The experiment was posted on-line at www.experimentrix.com/fiu, where participants could read a brief description of the experiment, view available times and sign-up to participate. Only students enrolled in PSY2020 (Introduction to Psychology) and certain other classes are part of the participant

pool. Those students under 18 years of age were not allowed to participate, as they must be the legal age to serve on a jury. Their mean age was 19 years old, with 27.8% ($n = 44$) being male and 72.2% ($n = 114$) female. The majority of these students were Hispanic ($n = 101$), with the remainder being Caucasian ($n = 30$), African-American ($n = 19$), Asian ($n = 5$), and Other ($n = 3$). Two hundred thirty additional non-student, adult participants were recruited through a Web-based participant pool (<http://www.studyresponse.com>) that sends out solicitations for Web-based studies. Of these non-student participants, 51.7% ($n = 123$) were male and 48.3% were female ($n = 115$), with their mean age being 34 years old. The vast majority of these participants were Caucasian ($n = 175$), with the remainder being Asian ($n = 22$), African-American ($n = 14$), Hispanic ($n = 14$), and Other ($n = 5$).

Materials

This was a Web-based study so all materials were in the form of Web pages. Stimulus materials include the scenario of a products liability case involving a faulty automobile or boat fuel system (depending on the trial version) that resulted in a fire that killed the plaintiff's spouse and a 9-item questionnaire that measures participants' attitudes toward the litigants (see Appendix B). A brief, 16-item questionnaire was also used to assess participants' attitudes regarding civil litigation. After reading typical judicial instructions on the law (see Appendix C), participants completed a 15-item multiple-choice test designed to measure participant's comprehension of the instructions. Materials also include a verdict form that required participants to determine liability and award any damages they deemed appropriate.

Procedure

Participants initially read an informed consent form on the first Web page before proceeding. By clicking on a button on the bottom of the page, they gave implied consent. The following web page consisted of 16 items that assessed participants' attitudes toward civil litigation and corporations. Next they read a hypothetical scenario, approximately 1600 words long, depicting a products liability case involving defective fuel lines in either a car or yacht that caused an explosion and resulted in a man's death. His estate was suing the car/boat manufacturer. The various litigant manipulations (e.g., plaintiff occupation, corporate size, whether an apology was issued) were incorporated into the summary. Some manipulations simply involved changing a few words in the summary (e.g., manipulating wealth only required changing a number: revenue/year) whereas others variables involved greater alterations (e.g., manipulating occupation required changing the testimony pertaining to compensatory damages).

At the end of the web page containing the scenario, participants completed 9 nine-point Likert-type ratings regarding their reactions to various aspects of the case (e.g., sympathy for plaintiff, anger toward defendant). After completing these 9 items, participants clicked on a button at the bottom of the page to proceed. The following web page contained judicial instructions meant to approximate the typical judicial instructions that would be given to jurors at the end of a trial. After clicking on a button at the bottom of this page, participants continued to another web page that had 15 questions designed to assess their comprehension of the judicial instructions they just read. After this page, participants proceeded to a page that assessed their verdict for liability. Assuming they find for the plaintiff, participants were instructed to assign an appropriate sum for

compensatory and punitive damages as though they were jurors seated on the case. After clicking on a button at the bottom of this page, they continued to a short debriefing page, where they were thanked for their participation and provided with contact information in case they had any questions or concerns.

Results

An exploratory factor analysis (EFA) was performed on the 16 Likert-type case and study-specific attitudinal items in order to identify a smaller number of attitude factors that might influence liability and damage award assessments. Four factors emerged from this analysis. The first factor, which measured participants' belief that wealthier or bigger corporations should be held to a higher standard of care ($\alpha = .77$), was composed of three items. One example item was, "Wealthier defendants should pay more than less wealthy defendants." The second factor, which measured anti-corporation attitudes ($\alpha = .62$), was composed of two items (e.g., "Corporations will do anything for profit"). The third factor, which measured litigation crisis attitudes ($\alpha = .71$), was composed of three items. For example, one item was, "Outrageous monetary awards are ruining society." The final factor, which measured a sense of strict liability ($\alpha = .55$), was composed of two items (e.g., "A company should never be excused from compensating consumers who are injured by its products"). These factors were entered into all future regressions to examine their total main effects, as well as their interactions with the various litigant characteristics. Analyses were conducted separately for sample type (students vs. non-student, adult participants). We explored total main effects, as well as both two and three-way interactions involving sample type but since only one significant

difference emerged between the two groups, the results are presented together. The significant finding for sample type on punitive damage awards is covered below.

Structure of path analysis

The majority of the analyses for Study #1 were structured as a path analysis using M-plus software (Muthen & Muthen, 2004). The independent variables and the attitudinal factors derived from the EFA were entered into the first level of the path analysis. A total of 29 possible two-way interactions involving the various independent variables and the attitudinal factors were entered into the second level (fifteen of these were the interactions among the independent variables, the remaining either involved sample type or one of the various attitudinal factors). We entered four potential mediators (comprehension, outrage and sympathy directed toward the defendant, and sympathy for the plaintiff) in the third and final step on the path analysis. The statistics reported below are for the total effects that emerged, with mediation covered at the end of the Results section.

Liability verdicts

Findings are significant at $p < .05$ unless otherwise stated. The corresponding z -values equate to $p < .05$, $p < .01$ and $p < .001$: $z = 1.96$, 2.58 , and 3.27 respectively. For all questions regarding liability verdicts, the dependent variable was the dichotomous choice between the plaintiff and the defendant on each cause of action (negligence and design defect). 72.8% of the participants found the defendant negligent and 71.9% found the defendant liable for a design defect. These dichotomous liability verdicts were analyzed through path analysis using Probit regression.

For both causes of action, a total main effect was found for litigation crisis attitudes. Not surprisingly, those who agreed more that there was a litigation crisis were less likely to find the defendant liable for negligence or a design defect than those who did not believe there was a litigation crisis ($\beta = -.23, z = -4.54$ and $\beta = -.26, z = -4.95$, respectively). For both causes of action, there was a significant interaction between company revenue and attitudes concerning standards for wealth and size ($\beta = -.18, z = -2.42$ for negligence and $\beta = -.17, z = -2.32$ for design defect). To interpret the interaction, we performed a median split on the attitude variable and observed that those participants who agreed less that wealthier or larger corporations should be held to higher standards found the wealthier company liable significantly less often than the relatively poorer company while there were no differences among those who did endorse such attitudes (see Table 1 for negligence & Table 2 for design defect). For both causes of action, there was also a significant interaction between the corporate representative and anti-corporation attitudes ($\beta = .14, z = 2.19$ for negligence and $\beta = .19, z = 2.68$ for design defect). Those participants who held anti-corporation attitudes found the defendant liable more often when the engineer was the representative than when the CEO was the representative while those who held more favorable attitudes toward corporations tended to find liability more often when the CEO represented the company rather than the engineer (see Table 3 for negligence & Table 4 for design defect).

Regarding the issue of liability for a design defect, there was a marginally significant main effect for the corporate representative ($\beta = .12, z = 1.92, p < .06$) and a significant main effect for the plaintiff's job ($\beta = .14, z = 2.02$). Participants were more likely to find the defendant liable when the engineer was the representative (75.3% found

for the plaintiff) than when the CEO represented the corporation (68.5%) and when the plaintiff was a teacher (78.4%) rather than a surgeon (65.4%). A significant interaction between the company representative and revenue was also found on design defect verdicts ($\beta = -.13$, $z = -2.09$). For relatively poorer companies, the representative manipulation did not affect liability verdicts (73.6% found for the plaintiff with the CEO and 75.6% with the engineer) but for wealthier companies, more liability verdicts were assessed when the engineer was the representative (75.0%) than the CEO (63.8%).

Damage awards

Prior research on damage awards has analyzed awards in a number of ways. Some only analyze the awards of those participants that first found the defendant liable (realistically simulating actual trials). We have chosen to compare that type of analysis to analyses including the entire sample (thereby including those who chose not to award any damages). Analyses that include the entire sample should find effects that mirror effects on liability verdicts, as damage awards for the entire sample reflect jurors' assessment of the amount of deserved compensation.

Also, some researchers examine the raw damage awards while others transform the award value in some way (taking the natural log of the awards both reduces skewness and allows examination of the magnitude of the awards instead of the raw numerical values). For our data, a square root transformation was sufficient to alleviate skewness and kurtosis, so complementary analyses using natural log transformation tests effects of the relative magnitude of awards. Thus, all four possible ways of analyzing damage awards (either square root or natural log transformation and either entire or partial sample) were compared in this investigation.

Analyses including the entire sample ($n = 388$) were conducted using M-plus software (Muthen & Muthen, 2004), specifying the award as censored-below in order to take into account the non-normal distribution of damage awards. A censored variable is essentially a “cut-off” continuous variable, such that all values below a certain value have the same value, producing a large number of observations at either the minimum or maximum of the scale (therefore ordinary estimates of the mean and variance are biased). Since jurors who decide that the defendant is not liable all must award \$0 in compensatory damages, but may still vary in perceptions of deserved compensation, damage awards could be considered a censored variable. Though raw means for awards were not analyzed, they are reported for ease of understanding and visualization. Statistics reported pertain to the square root analyses of awards but findings are significant for both square root and natural log transformations unless otherwise indicated.

Compensatory damages. Several interesting main effects and interactions were found when analyzing compensatory damage awards that included the entire sample of participants. Significant main effects were found for the plaintiff’s job and litigation crisis attitudes ($\beta = -.14$ and $-.31$ respectively, both $p < .01$). Predictably, participants awarded more in compensatory damages to the surgeon ($M = \$3,241,922$) than the teacher ($M = \$1,755,095$) and those participants who thought more that there was a litigation crisis awarded less in damages. There were also several significant interactions involving the company representative. The presence of an apology interacted with the corporate representative ($\beta = -.12$, $z = -2.28$). With the presence of an apology, more damages were awarded when the CEO was the representative, but when no apology was

offered more was awarded when the engineer was the representative as opposed to the CEO (see Table 5). Reflecting the interaction found on liability verdicts, the company's revenue again interacted with the representative ($\beta = -.13, z = -2.52$). When the corporation was wealthier, more was awarded with the engineer ($M = \$2,809,739$) than the CEO ($M = \$2,290,034$) but when the corporation was relatively poorer, compensatory damages were larger with the CEO as the representative ($M = \$2,791,267$) than the engineer ($M = \$1,835,424$). Finally, there was an interaction between the representative and anti-corporation attitudes ($\beta = .16, z = 2.88, p < .01$), such that those endorsing anti-corporation attitudes awarded significantly more when the engineer was the representative than the CEO but the opposite finding resulted among those who endorsed such attitudes to a lesser extent (see Table 6).

Analyses focusing on only those participants who found liability and awarded damages were conducted using SPSS software and linear regression. When the analyses only focused on this group of participants ($n = 312$), several significant findings emerged. Main effects were found for defendant revenue ($\beta = -.13, t = -2.16$), plaintiff job ($\beta = -.18, t = -6.46, p < .01$), and litigation crisis attitudes ($\beta = -.29, t = -2.79, p < .01$), as well as a marginally significant main effect for apology (for the natural log analysis only; $\beta = .11, t = 1.94, p < .06$). Compensatory damages were larger when the corporation was wealthy ($M = \$3,408,478$ vs. $M = \$2,803,569$). Unsurprisingly, damages were greater when the plaintiff was a surgeon ($M = \$4,401,635$) than a teacher ($M = \$2,101,781$) and when participants did not endorse litigation crisis as strongly. Surprisingly, compensatory damages were greater when an apology was issued ($M = \$3,454,496$) than when apology was not given ($M = \$2,779,221$). The only significant interaction was between

representative and revenue (which mirrors the interaction found when all participants were included in the analysis; $\beta = -.13$, $t = -2.20$).

Punitive damages. The next analysis focuses on the decision to award punitive damages (thus the dependant variable is the dichotomous choice between yes and no). We first examined those participants who first found liability and therefore were legally able to award punitive damages ($n = 312$). The only variables with total main effects emerging from this analysis were attitude factors regarding litigation crisis ($\beta = -.26$, $z = 3.70$, $p < .01$) and standards for wealth and size ($\beta = .11$, $z = 2.21$). Predictably, those with greater anti-corporation attitudes were much more likely to impose punitive damages. Those participants who believed more in holding wealthier and richer companies to higher standards than smaller and less wealthy companies were more likely to impose punitive damages than those endorsing such attitudes to a lesser extent.

When the entire sample was included in the analyses for punitive damages, significant main effects were found for the product (for the natural log analysis only; $\beta = -.12$, $z = -2.34$), and attitudes concerning litigation crisis ($\beta = -.25$, $z = -4.26$, $p < .01$), anti-corporation ($\beta = .12$, $z = 2.16$), and strict liability ($\beta = .13$, $z = 2.34$). Punitive damages were larger when the product was a car ($M = \$5,946,164$) than a boat ($M = \$3,369,354$). Punitive damages were smaller among participants who thought more that there was a litigation crisis present in society. However, punitive damages were larger among those who endorsed anti-corporate attitudes and strict liability attitudes to a greater degree than those who did not endorse such attitudes as much. Three noteworthy interactions emerged from this analysis. The first interaction, between representative and plaintiff job ($\beta = .14$, $z = 2.21$), indicated that punitive damage awards did not differ

between the teacher and surgeon when the CEO represented the company ($M_s = \$4,261,366$ and $\$4,251,465$ respectively) but punitive damages were higher with the teacher ($M = \$5,602,276$) than the surgeon ($M = \$4,707,357$) when the engineer was the representative. The second interaction was between the plaintiff's job and the product ($\beta = .10, z = 2.32$). Here both the surgeon and the plaintiff were given considerably less in punitive damages when the product was a boat versus a car ($M_s = \$2,542,887$ versus $\$6,031,336$ for the surgeon and $M_s = \$4,021,845$ versus $\$5,864,505$ for the teacher). The final interaction was between company revenue and attitudes concerning standards for size and wealth ($\beta = -.15, z = -3.51, p < .01$). Predictably, those participants who endorsed the attitudes punished the wealthier company more than the relatively poorer company, but the opposite pattern emerged among those who did not endorse such attitudes (see Table 7).

The final analysis focuses on those participants who found the defendant liable and awarded punitive damages ($n = 257$). Main effects emerged for sample type (students vs. adults; $\beta = .16, t = 2.50$), revenue ($\beta = -.13, t = -1.98$), and litigation crisis attitudes ($\beta = -.15, t = -2.84, p < .01$) and a marginal main effect was found for product (for the natural log analysis only; $\beta = -.12, t = -1.93, p < .06$). Adults tended to award larger punitive damages than students ($M = \$7,771,956$ vs. $\$5,520,992$ respectively). Punitive damages were greater when the corporation was wealthier than less wealthy ($M_s = \$8,186,992$ and $\$5,675,392$ respectively). Punitive damages were smaller when the participants endorsed to a greater degree litigation crisis attitudes. Punitive damages were also smaller when the product was a boat ($M = \$5,160,273$) as opposed to a car ($M = \$8,368,676$). The only noteworthy interaction that emerged from this analysis was

between company size and plaintiff job ($\beta = .13, t = 2.01$). When the corporation was large, more punitive damages were assessed with the surgeon as the plaintiff rather than the teacher ($M_s = \$9,182,385$ and $\$3,783,364$ respectively) but the opposite pattern emerged when the corporation was small ($M = \$4,660,745$ for surgeon and $M = \$10,390,677$ for teacher).

Mediators

The following four mediators were examined in data analysis: outrage toward the defendant, comprehension of judicial instructions, sympathy for the defendant, and sympathy for the plaintiff. Comprehension influenced negligence verdicts and the decision to award punitive damages, such that lower comprehension scores were associated with pro-plaintiff preferences. That is, those with higher comprehension scores were less likely to find the defendant negligent or were less likely to award punitive damages. However, comprehension also impacted actual punitive damage amounts, such that higher comprehension was associated with higher punitive awards (this curious pattern also emerged in Studies #2 and #3 and is discussed in greater detail when the focus of the project shifts to comprehension). Although sympathy for the plaintiff did not affect any the measures, sympathy and outrage for the defendant impacted every dependant variable. The effects of these mediators on each dependant measure are provided in Table 8.

Across all analyses, most results consistent with mediation involved the effect of litigation crisis attitudes. For all dependent variables, consistent with partial mediation (because the direct effect was still significant), jurors who had greater beliefs about a litigation crisis had more sympathy for the defendant and less outrage directed toward the

defendant (see Figures 1 through 3). In analyses of negligence verdicts, the decision to award punitive damages, and the amount of punitive awards, there was also an indirect effect through comprehension of instructions, as jurors who had greater beliefs about a litigation crisis actually had slightly higher comprehension. Other analyses showed that outrage toward the defendant partially mediated the effect of the plaintiff's job on compensatory damages. Outrage toward the defendant completely mediated the effect of attitudes concerning standards for wealth and size on the decision to award punitive damages. Outrage toward the defendant also completely mediated the representative by revenue interaction on design defect verdicts and compensatory awards. Finally, outrage toward the defendant mediated the representative by job interaction on punitive damage awards.

A summary of the total and the direct effects described above are provided in Table 8 and Table 9, respectively.

Discussion

Overall, the results suggest that mock jurors occasionally used certain evidence properly (e.g., plaintiff occupation affected compensatory damages). However, the results also demonstrate that mock jurors misused evidence frequently (e.g., defendant wealth impacted compensatory damages) and improperly considered extralegal factors (e.g., the presence of apology), which ultimately contributes to variability in liability and damage award assessments. Horizontal inequities in verdicts may arise because members of two juries viewing similar cases may endorse different attitudes, for example, regarding corporations or the presence of a litigation crisis. Similarly, inequities may arise because members of the juries are influenced differently by pieces of evidence or their

consideration of extralegal factors. For instance, one jury may misuse evidence concerning company revenue while the other jury does not or perhaps only one jury improperly considers the company representative.

Litigant characteristics

A primary goal of this phase of the project involved exploring the interactions between various plaintiff and defense characteristics. In Study #1, litigant characteristics interacted twice to influence punitive damage awards (Job X Size and Job X Representative). In both instances, plaintiff occupation was misused since punitive damage amounts varied based on the plaintiff's job (which should not affect punitive damages). The majority of the other interactions involved attitudinal factors and various litigant characteristics. However, a plethora of main effects were found for the independent variables, with defendant wealth and plaintiff occupation being particularly influential. Consequently, both of these variables will be manipulated in the subsequent stages of this research.

Jurors' proper use of evidence

Unfortunately, there were only two pieces of evidence that were used appropriately by the mock jurors. First, plaintiff occupation was considered correctly when determining compensatory damage amounts, such that the neurosurgeon was awarded more money than the teacher. Second, defendant wealth influenced punitive damages in the appropriate manner. In order for punitive damages to have a deterrent effect, defendant wealth needs to be taken into account and mock jurors awarded more in punitive damages against the wealthy corporation than the less wealthy corporation. Also, defendant wealth did not impact liability verdicts, so our results do not support the deep-

pocket effect. Although participants used both plaintiff occupation and defendant wealth correctly for certain decisions, they also misused both pieces of evidence.

Jurors' improper use of evidence

Regrettably, mock jurors misused pieces of evidence more often than they correctly considered them. The first notable effect concerns the influence of the plaintiff's job on liability verdicts. As predicted, more pro-plaintiff liability verdicts were found when the teacher was the plaintiff rather than the surgeon. Since it is likely that most participants view themselves as more similar to a teacher than a neurosurgeon, this finding is in accordance with the similarity-leniency hypothesis. However, this also means that participants were misusing plaintiff occupation when deciding liability since plaintiff occupation should not have any impact on liability verdicts.

Although mock jurors used defendant wealth properly when considering punitive damages, they also misused such evidence when considering compensatory damages. As hypothesized, wealthier corporations were required to pay more in compensatory damages. It is possible that knowledge about the wealth of the defendant served as an anchor that influenced the amount awarded for compensatory damages. Perhaps participants' desire to punish the wealthier corporation bled into compensatory damage assessments, or maybe participants felt as though the wealthier company could afford to give more money to compensate the plaintiff's family than the relatively poorer company.

When determining an amount for compensatory damages, participants were also inappropriately influenced by the presence of an apology (an extralegal factor). While it was expected that issuing an apology would reduce compensatory damages, the presence

of an apology actually increased the damage amount. This seems contrary to prior research findings that suggest that offering a remorseful apology might reduce awards (Bornstein, 2002; Robbennolt, 2003). One possible explanation is that participants suspected that an apology was an admission of responsibility (thus implying that the plaintiff was not responsible and deserved more in compensation). Therefore, corporate litigants should be hesitant to proffer an apology during trial (especially if that apology might imply responsibility).

Participants also improperly considered the product as well as the plaintiff's job when assessing punitive damages, such that more punitive damages were awarded when the product was a car than a yacht, particularly if the plaintiff was a teacher. Since participants are much more likely to use a car than a yacht, the death of a person using a car may seem more frightening and realistic to participants, which could translate into the desire to punish the manufacturer of the defective vehicle. Similarly, most participants can relate to a teacher more than a surgeon, so participants were additively most punitive when the teacher dies from using a car.

As previously mentioned, who the company representative was affected liability verdicts, such that more pro-plaintiff liability verdicts were assessed when the engineer represented the company as opposed to the CEO. Perhaps more lenient treatment was provided when the CEO represented the company because participants may have felt that the corporate defendant was taking the case very seriously if the CEO was present at the trial (particularly when the company was wealthier). In other words, participants may have been impressed that the head of the company was at trial ("He really stepped up to the plate"), and thus offered more lenient treatment than when the engineer was present.

Alternatively, since the engineer is likely viewed as more responsible for the incident than the CEO, participants treat the corporate defendant worse when the engineer represents them at trial (especially when the corporation is large or wealthy). Interactions found between representative and revenue demonstrated that wealthy corporations represented by the engineer were more likely found liable than when represented by the CEO. Wealthy companies represented by the engineer were also required to pay the most in compensatory damages. It is possible that when faced with a large or wealthy corporate defendant, participants attempt to place a face on the otherwise “faceless” entity. In essence, they look for a specific person to whom they can assign some blame or responsibility. When the engineer represents the corporation, participants are able to attach responsibility to him to the detriment of the corporation he represents. Moreover, the most compensatory damages were assessed when the engineer does not apologize at trial (the apology might be viewed as a means of expressing sympathy or accepting some of that blame). These findings imply that corporate litigants should be cautious about whom, if anyone at all, should sit with counsel during trial and whether or not they should issue an apology (particularly if the representative played any role in the incident in question).

Influence of attitudinal factors

Probably more generalizeable and predictive of actual juror behavior than the specific litigant manipulations, several attitudinal factors either exerted a main effect on verdicts or interacted with some litigant manipulations to affect liability and damage award assessments. Therefore, the attorneys working for corporate defendants would be wise to assess such case-specific attitudes during voir dire to assist in seating jurors

favorable to their side (or at least, not biased against their clients). In the present experiment, attitudes concerning a litigation crisis and standards for wealth/size influenced liability verdicts (either negligence, design defect, or both). As might be expected, more liability verdicts were rendered among those participants who did not think there was a litigation crisis in our society and among those who felt negatively towards wealthier defendants and larger companies. However, the interactions between these attitudinal factors and the litigant manipulations are more interesting and revealing than the main effects.

Attitudes regarding wealth and size interacted with revenue to affect both negligence and design defect verdicts such that wealthier corporate defendants were less likely to be found liable among participants who agreed less that wealthier defendants and larger companies should be held to higher standards. That is, certain participants exhibited an “anti-deep-pocket” effect, where the wealthier defendant actually got more lenient treatment. Thus, wealthy defendants may want to ask venire members about their standards regarding defendant wealth and size (though less wealthy defendants may not want to concern themselves with this issue). Both liability verdicts were also affected by the interaction between anti-corporation attitudes and the corporate representative. Since the engineer is likely viewed as more responsible for the design and the resultant injuries than the CEO, more pro-plaintiff liability verdicts are found when the engineer represents the company, especially when participants hold more negative views about corporations. This implies that corporate litigants would be prudent to measure potential jurors’ attitudes about corporations in general as well as be cognizant of who from the corporation sits with counsel at trial.

Not only did the main effects and interactions involving attitudinal factors influence liability verdicts but they also affected damage award verdicts in the same manner. For instance, those participants who believed a litigation crisis was present in society awarded less in damage awards than those who did not hold such beliefs. Those who endorsed anti-corporate attitudes awarded the most compensatory damages. And just as wealthier corporate defendants were least likely found liable when participants did not feel negatively toward wealthier defendants and larger companies, they were also least likely required to pay punitive damages. These findings concerning damage awards support the notion that corporate litigants should measure these attitudes among venire members during voir dire.

Reactions to litigants

Emotional reactions to the litigants, particularly outrage and sympathy directed toward the defendant, influenced a multitude of decisions including liability verdicts, the decision to award punitive damages, and actual compensatory and punitive damage awards. Moreover, many of the effects found in the present study, particularly those involving attitudinal factors, were mediated by emotional reactions to the litigants. Sympathy for the defendant and outrage toward the defendant influenced the effects found on both liability and damage award verdicts. Therefore, besides assessing case-specific attitudes (e.g., those concerning corporate wealth and size) and more general attitudes (e.g., about the presence of a litigation crisis), attorneys should consider jurors' reactions to litigants as a powerful determinant of verdicts. Emotional reactions to the litigants may be particularly useful when considering settlements for the case. For

instance, knowing that jurors are unsympathetic toward one litigant may influence willingness to settle.

Conclusion

Practical implications exist for the results of the first study. Attorneys or trial consultants should examine factors that pertain to litigants in focus groups or mock trials in order to assess which attitudes or pieces of evidence concerning corporate litigants might be particularly influential in a specific case. Such assessments could also be utilized in jury selection to identify and seat sympathetic jurors (or conversely used to eliminate unfavorable potential jurors). Attorneys or consultants should assess the impact of specific pieces of evidence and case-specific attitudes related to corporate litigants by questioning venire members about these factors during voir dire. Finally, settlement decisions by corporate litigants might be influenced by the results. For example, depending on which litigant characteristics are present or how jurors react to the litigants, recommendations could be made regarding when to settle or what monetary values might be offered in the settlement proposition.

Although not finding many interactions between litigant characteristics like I thought could occur, this first study did show how mock jurors use the appropriate information or extralegal information when determining liability and damage award verdicts. Unfortunately, the results indicated that mock jurors were often influenced by extralegal factors and improperly considered specific pieces of evidence. One potential reason for this poor decision-making is failure to comprehend the judicial instructions covering the applicable laws in the case. In the first study, a 15-item instruction comprehension test was administered and the mean comprehension score was eight. That

is, the average comprehension score was slightly over 50% correct, which is consistent with low comprehension rates found in prior research (e.g., Elwork et al., 1977; Steele & Thornburg, 1988). The second study tests revised judicial instructions in an attempt to improve comprehension rates and ultimately decision-making.

Chapter Five: Study #2

The second study investigates two proposed procedural reforms that may influence juror competence: revising judicial instructions and bifurcating the trial. Typical instructions (used in Study #1) will be made more explicit and revised according to principles of psycholinguistics (see Appendix D). Such revisions have resulted in improving jurors' use of the proper evidence as well as their comprehension rates in past research (Elwork et al., 1977; English & Sales, 1997; Wissler et al., 2001). Bifurcation of the damage phases of the trial (another procedural reform designed to improve jurors' decision-making and comprehension rates) will also be systematically explored. No empirical studies to date have examined the effects of revised instructions in the context of bifurcated civil trials. In other words, the combined effects of these two procedural reforms have yet to be investigated.

This study has three goals. The first goal is to examine the effects of the revised instructions in the context of a unitary trial. Some participants will be given either the typical pattern instructions or the revised judicial instructions used in the first study. The same comprehension test will be used to investigate improvements in comprehension rates due to the revised instructions. It is hypothesized that the revised instructions will lead to significantly higher comprehension rates than the typical pattern instructions. The second goal of this investigation is to examine the effects of the revised instructions in the context of a bifurcated trial. It is expected that bifurcating the compensatory and punitive damage phases will decrease improper use of defendant wealth when determining compensatory damages but amplify punitive damage awards (as in Landsman et al., 1998 and Greene et al., 2000). However, it is also hypothesized that

using revised instructions in bifurcated trials will decrease this tendency to augment punitive damages, such that the best juror decisions will be made in bifurcated trials with the revised instructions. The final goal of this study is to revisit the issue of mock jurors' proper and improper use of evidence. Based on the results of the first study, it is hypothesized that mock jurors will utilize certain evidence appropriately (e.g., plaintiff occupation will affect compensatory damage awards) but will also misuse pieces of evidence (e.g., defendant wealth will affect compensatory damages). Ideally, the revised instructions will increase the proper use of evidence and decrease the misuse of evidence.

Method

Design

The design is a 3 (Instructions: none, pattern, or revised) X 2 (Plaintiff occupation: schoolteacher vs. neurosurgeon) X 2 (Defendant wealth: annual net revenue of 500 million dollars vs. 50 million dollars) X 2 (Trial type: unitary or bifurcation of damages) between-subjects factorial design. The dependent variables of interest are the participants' liability verdicts and any compensatory and punitive damages they would award. Additionally, participants' scores on the 15 multiple-choice questions designed to measure their comprehension of judicial instructions were measured. Also, participants answered various attitudinal questions regarding their feelings toward the litigants and their general views toward civil litigation and corporate defendants.

Participants

Four hundred and six participants were recruited from the psychology participant pool at Florida International University. The experiment was posted on-line at www.experimentrix.com/fiu, where participants could read a brief description of the

experiment, view available times and sign-up to participate. Only students enrolled in PSY2020 and certain other classes are part of the participant pool. Those students under the age of 18 years of age were not allowed to participate, as they must be the legal age to serve on a jury. Their mean age was 20 years old, with 28.3% ($n = 115$) being male and 71.7% ($n = 291$) female. The majority of these students were Hispanic ($n = 238$), with the remainder being Caucasian ($n = 54$), African-American ($n = 46$), Asian ($n = 13$), and Other ($n = 32$). The remaining 23 participants preferred not to provide their racial information.

Materials

This was a Web-based study so all materials were in the form of Web pages. Stimulus materials include the same scenario used in the first study of a products liability case involving a faulty automobile fuel system that resulted in a fire that killed the plaintiff's spouse. In the bifurcated conditions, the scenario is broken into two parts. Materials also include a 9-item questionnaire that measures participants' attitudes toward the litigants and a 16-item questionnaire used to assess participant's attitudes regarding civil litigation and corporate defendants. Some participants read either typical or revised judicial instructions on the law. These participants were instructed to answer a 15-item multiple-choice and true-false test designed to measure their comprehension of the instructions. Stimulus materials also included a verdict form that required participants to determine liability and award any damages they deemed appropriate. In bifurcated conditions, the verdict form was split into two sections (a form for liability and compensatory damages and a verdict form for punitive damages).

Procedure

Participants read an informed consent form on the first Web page before proceeding. By clicking on a button at the bottom of the page, they gave implied consent. Next, they answered 16 attitudinal questions about civil litigation. Then they read a hypothetical scenario depicting a products liability case involving defective fuel lines in a car that caused an explosion and resulted in a man's death. His estate was suing the car manufacturer.

Unitary trial conditions. In the unitary trial conditions, the participants read the entire scenario before they answered any questions regarding reactions to the case or deciding any verdict (i.e., liability, compensatory and punitive damages). Before reading the scenario, participants first answered 16 items assessing their attitudes toward civil litigation and corporations. After the scenario, participants answered 9 questions regarding their reactions to various aspects of the case (e.g., sympathy for plaintiff, impact of attorney's recommendation). After completing these items, participants were instructed to click on a button at the bottom of the page to proceed. The following web page contained either typical pattern or revised judicial instructions meant to approximate the judicial instructions that would be given to jurors at the end of a trial, or contained no instructions. After clicking on a button at the bottom of the page, these participants continued to another web page that has 15 questions designed to assess their comprehension of the judicial instructions they just read. After the comprehension questions, liability verdicts were assessed. Assuming they found for the plaintiff, participants were instructed to assign an appropriate amount for compensatory and punitive damages as though they were jurors seated on the case. After clicking on a

button at the bottom of this page, they continued to a short debriefing page, where they are thanked for their participation and provided with contact information in case they had any questions or concerns.

Bifurcated trial conditions. In the bifurcated conditions, participants first answered 16 attitudinal questions regarding civil litigation and corporations. Next they received the part of the scenario describing the event and testimony pertaining to compensatory damages. Then some participants read either the pattern or revised judicial instructions describing the law governing liability and compensatory damage decisions before being asked 10 comprehension questions related to liability and compensatory damages. All participants were then asked to determine liability and award any compensatory damages. After clicking on a button at the bottom of the page, they proceeded to the next page where they read information pertaining to punitive damage (e.g., defendant wealth) before some participants received either the pattern or revised judicial instructions governing punitive damage decisions. Next, they clicked on a button at the bottom of the web page and continued to the comprehension measure relevant to punitive damages before proceeding to a verdict page for punitive damages (where they decided whether or not to award them). Participants then answered 9 questions regarding their reactions to various aspects of the case (e.g., sympathy for plaintiff). Following completion of these items, participants clicked on a button at the bottom of the page to proceed. The final web page was a short debriefing page, where participants were thanked for their participation and provided with contact information in case they had any questions or concerns.

Results

The same exploratory factor analysis (EFA) was performed on the 16 Likert-type case and study-specific attitudinal items in order to replicate the results from Study One identifying a smaller number of attitude factors that influenced liability and damage award assessments. Three factors emerged from this analysis. The first factor, which measured participants' belief that wealthier or bigger corporations should be held to a higher standard of care ($\alpha = .51$), was composed of two items. One example item was, "A corporation should be held to a higher standard of responsibility than an individual." The second factor, which measured anti-corporation attitudes ($\alpha = .51$), was composed of two items (e.g., "Big, wealthy corporations don't care about consumers."). The third factor, which measured litigation crisis attitudes ($\alpha = .71$), was composed of four items. For example, one item was, "Jury awards are too large." These factors were entered into future regressions as predictors of liability verdicts and damages awards. Findings are significant at $p < .05$ unless otherwise stated. The corresponding z-values equate to $p < .05$, $p < .01$ and $p < .001$: $z = 1.96$, 2.58 , and 3.27 respectively.

Structure of path analysis

The majority of the analyses for Study #2 (and Study #3) were structured as a path analysis. The independent variables, the attitudinal factors from the EFA, and the interactions involving these variables were all entered into the first level of the path analysis. We were able to enter the interactions into the first level of the path analysis along with the independent and attitudinal variables because the interaction terms were residualized (Cohen, 1978; Lance, 1988) and therefore not correlated with these variables. The second level or step of the path analysis involved comprehension. We

entered participants' comprehension scores and residualized interactions involving comprehension and the independent variables into the second level of the path analysis (these interactions are described further below). If comprehension moderates the use or misuse of evidence, then results should show interactions between the instruction revision experimental conditions and evidentiary manipulations and also interactions between the comprehension measures and evidentiary manipulations. This is a test of moderated mediation (Baron & Kenny, 1986), and can be interpreted either as how comprehension moderates the effects of evidence, or how the effect of comprehension on verdicts varies under different evidence conditions.

Comprehension of judicial instructions

Comprehension of judicial instructions, measured by a 15-item test, was broken down into four sections: comprehension for general issues (e.g., burden of proof), design defect issues (e.g., legal definition of defect), and compensatory and punitive damage awards (e.g., purpose of punitive damages). Instead of focusing on participants' reactions to the litigants as potential mediators (as in Study #1), these four comprehension measures were explored as potential mediators of liability verdicts and damage award assessments. The mean scores of these measures of comprehension are given in Table 10. Amazingly, these various comprehension scores did not mediate the effects found in the analyses, so only total effects of the level-one variables are presented for Study #2.

We created two new variables based on our instruction manipulation to: (1) compare having no instructions with having the original instructions (called instruct1) and (2) compare having the original instructions with having the revised instructions (labeled instruct2). Unsurprisingly, those participants who received no instructions had

lower comprehension scores for both general issues [$F(1, 405) = 25.14, p < .001; \beta = -.20$] and defect issues [$F(1, 405) = 9.00, p < .01; \beta = -.18$] than participants who received instructions. More importantly, those participants who received revised instructions had higher comprehension scores for both general issues [$F(1, 405) = 15.76, p < .001; \beta = .19$] and defect issues [$F(1, 405) = 10.38, p < .001; \beta = .13$] than those who received original instructions. As with general and defect issues, those participants who received no instructions had lower comprehension scores for instructions regarding compensatory damages than participants who received instructions [$F(1, 405) = 6.29, p < .01; \beta = -.14$] and those with revised judicial instructions had higher comprehension scores for issues concerning compensatory damages than those who received typical pattern instructions [$F(1, 405) = 3.73, p < .05; \beta = .12$].

Comprehension was also influenced by attitudinal factors. For instance, participants who believed there was a litigation crisis present in society tended to score lower on the comprehension measure concerning compensatory damage awards than those who did not believe in a litigation crisis [$r(404) = -0.10, p < .06$]. Similarly, participants who endorsed litigation crisis attitudes scored lower on the comprehension measure regarding punitive damages than those who did not endorse such attitudes [$r(388) = -0.14, p < .01$]. Finally, participants who received no instructions had lower comprehension scores for punitive damages issues than participants who received instructions [$F(1, 389) = 32.07, p < .001; \beta = -.28$] and those participants who received revised instructions had higher comprehension for punitive damages issues than those who received original instructions and [$F(1, 389) = 30.43, p < .001; \beta = .25$]. No other manipulations influenced comprehension scores.

Comprehension interactions

In addition examining the mediating effects of the above four comprehension measures in the analyses described below, various interactions involving these comprehension measures were explored as predictors of liability verdicts and damage awards. The interactions were computed by multiplying the different comprehension scores with each of the five independent variables (instruct1, instruct2, trial type, revenue, and occupation). Therefore, there were five interaction terms for each of the four comprehension measures. For liability verdicts, comprehension interactions involving comprehension scores for general issues and defect issues were entered into the regressions. For compensatory damage awards, comprehension interactions included those involving general and design issues, as well as comprehension for instructions regarding compensatory damages. For both the decision to award punitive damages and actual punitive damage awards, comprehension interactions involving comprehension for instructions pertaining to punitive damages were included in the regressions, along with comprehension interactions involving general issues, defect issues and compensatory damage awards.

Liability verdicts

As in the first study, for questions regarding liability verdicts, the dependent variable was the dichotomous choice between the plaintiff and the defendant on each cause of action (negligence and design defect). 70.1% of the participants found the defendant negligent and 83.4% found the defendant liable for a design defect. These dichotomous liability verdicts were analyzed via path analysis using probit regressions. M-plus software (Muthen & Muthen, 2004) was used for all probit regression path

analyses. For both liability verdicts, the total main effects and interactions involving the independent variables and attitudinal factors were analyzed. After the main effects and interactions involving the manipulations and attitudinal factors were examined, the main effects and interactions involving comprehension scores for both general issues and defect issues were then added to the regressions (comprehension scores for compensatory and punitive damages were not included since they are not relevant to liability verdicts).

For the issue of negligence, total main effects were found for the judicial instruction manipulation, the factors measuring differing standards and anti-corporate attitudes, and the comprehension of judicial instructions pertaining to design defects. Those who received the revised judicial instructions found the defendant negligent more often than participants who received the original instructions (74.6% vs. 66.5%, respectively; $\beta = .14$, $z = 1.99$). Not surprisingly, those who held greater anti-corporate attitudes or agreed more that wealthier or larger corporations should be held to higher standards were more likely to find negligence ($\beta = .16$, $z = 2.41$ and $\beta = .17$, $z = 2.48$, respectively). Finally, those who scored higher on the comprehension measure for defect issues were less likely to find negligence than those who scored poorly ($\beta = -.22$, $z = -4.04$, $p < .001$).

In addition to examining the above total effects, various potential two-way interactions were also explored: the nine possible two interactions among independent variables (e.g., trial type X defendant wealth, instruct1 X occupation), a total of six interactions between independent variables and specific attitudinal factors (differing wealth/size attitudes X defendant revenue, litigation crisis attitudes X each IV), and the relevant interactions between independent variables and certain comprehension scores

(e.g., plaintiff occupation X comprehension for defect issues), as described above. The only significant two-way interaction detected was between trial type and comprehension for design defect issues ($\beta = .11, z = 2.04$; see Table 11). Here, participants with higher comprehension scores were less likely to find the defendant negligent than those with lower scores. This interaction was driven by the unitary trial condition ($\beta = -.22, p < .01$), although the same pattern emerged in the bifurcated conditions (though clearly not significant; $\beta = -.06, p = .49$). A total of 13 three-way interactions were examined. Five of these were among the independent variables (instruct1 X trial type X job, instruct1 X trial type X wealth, instruct2 X trial type X job, instruct2 X trial type X wealth, trial type X job X wealth). The other eight involved each of the four comprehension measures (along with trial type and either job or wealth). However, no significant three-way interactions emerged from any of the analyses.

Only one total main effect emerged when examining the verdict concerning a design defect. As with negligence, a main effect of comprehension was found, such that participants were less likely to find the defendant liable for a design defect when they scored higher on the comprehension measure concerning design defects ($\beta = -.23, z = -4.01, p < .001$). A significant interaction between plaintiff occupation and comprehension for general issues showed that, when the plaintiff was a school-teacher, participants with high comprehension scores were less likely to find the defendant liable for a design defect than those with low scores (74.0% found the defendant liable vs. 90.2%), but not when the plaintiff is a neurosurgeon (84.1% vs. 82.7%) ($\beta = -.11, z = -2.16$). A marginally significant interaction between the manipulations of trial type and judicial instructions revealed that participants were more likely to find the defendant liable when

they received no instructions in unitary trials (88.9% vs. 79.2%) but when judicial instructions were given in bifurcated trials (86.4% vs. 79.8%; $\beta = -.19$, $z = -1.93$, $p < .06$).

Damage awards

As in the first study, damage awards were analyzed in a number of ways (e.g., analyzing the awards of those participants that first found the defendant liable, analyzing transformed values of damage award). In all, four possible ways of analyzing damage awards (either square root or natural log transformation and either entire or partial sample) were compared in this investigation. Once again, analyses including the entire sample were conducted using M-plus software (Muthen & Muthen, 2004), specifying the award as a censored-below, continuous variable. Though raw means for awards were not analyzed, they are reported for ease of understanding and visualization. Statistics reported pertain to the square root analyses of awards but findings are significant for both square root and natural log transformations unless otherwise indicated.

Compensatory damages. When the entire sample was included in the analysis, three main effects were found. For the natural log analysis only, a main effect of anti-corporation attitudes revealed the same pattern shown on the negligence verdict ($\beta = .14$, $z = 2.43$). A main effect of the plaintiff's job ($\beta = -.11$, $z = -2.14$) showed that mock jurors awarded less in compensatory damages to the schoolteacher ($M = \$2,044,125$) than the neurosurgeon ($M = \$3,954,151$). For the natural log analysis only, a main effect of comprehension revealed that participants with higher comprehension scores on instructions concerning compensatory damages awarded fewer damages ($\beta = -.11$, $z = -2.05$). No significant two or three-way interactions were detected.

Linear regression analyses focusing on only those participants who found liability and awarded damages were conducted using SPSS software. When the analyses only focused on this group of participants, several significant findings emerged. Besides replicating the total effect of plaintiff's job ($\beta = -.21$, $t = -3.12$, $p < .01$), analyzing the square root of damages revealed that litigation crisis attitudes significantly affected damage awards, such that participants who believed more in the presence of a litigation crisis awarded less in compensatory damages ($\beta = -.12$, $t = -2.21$). Analyzing the square root of damages revealed the only significant interaction, which was between trial type and job ($\beta = -.18$, $t = -2.07$). Here the neurosurgeon received greater damages in the bifurcated trial than the unitary trial while the teacher received more money in the unitary trial than the bifurcated trial (see Table 12). No significant three-way interactions were detected.

Punitive damages. The next analysis focuses on the decision to award punitive damages (thus the dependent variable is a dichotomous choice). We examined those participants who first found liability and therefore were legally able to award punitive damages ($n = 361$). The only total effect emerging from this analysis was for comprehension of design defect issues, such that participants who scored higher on the comprehension measure for judicial instructions regarding design defects were less likely to award punitive damages than those who scored lower on this measure of comprehension ($\beta = -.32$, $z = -3.45$, $p < .001$). The only significant interaction found was again between trial type and job ($\beta = .14$, $z = 2.06$), such that plaintiff occupation had no effect in unitary trials but did affect the likelihood that punitive damages would be awarded in bifurcated trials (see Table 13). A marginally significant interaction was

found between defendant revenue and comprehension for judicial instructions for defect issues ($\beta = -.18, z = -1.94, p < .06$). When comprehension scores were low, defendant wealth did not impact the likelihood that punitive damages would be awarded (79.6% award punitive damages when the company is wealthy vs. 81.2% when the company is less wealthy), but revenue does influence the likelihood when comprehension scores are high (70.1% award damages when the company is wealthy vs. 54.5% when the company is less wealthy).

When the entire sample was included in the analyses for punitive damages, significant total effects were found for trial type ($\beta = .12, z = 2.72$) and defendant wealth ($\beta = -.12, z = -2.46$). Both of these effects emerged only when examining the square root of damage awards. Participants awarded more in punitive damages against the wealthier company ($M = \$8,819,160$) than the less wealthy company ($M = \$3,193,513$) and when the trial was bifurcated ($M = \$9,261,845$) than when it was unitary ($M = \$3,637,394$). A main effect of litigation crisis attitudes on punitive damage awards was also found ($\beta = -.12, z = -2.41$), such that those participants who believed more in the presence of a litigation crisis awarded fewer damages. Finally, a significant total main effect emerged for comprehension of the judicial instructions regarding compensatory damage awards ($\beta = -.21, z = -3.83, p < .01$). Here, participants with lower comprehension scores tended to award more in punitive damages than those with higher comprehension scores. For the natural log analysis only, the interaction between comprehension for compensatory damage awards and trial type was significant ($\beta = .12, z = 2.44$), revealing that, when comprehension was lower, slightly greater damages were given in the bifurcated trial than the unitary trial, but when comprehension was higher, greater damages were

awarded in the unitary trial (see Table 14). The natural log analysis also revealed a significant interaction between comprehension regarding punitive damages and trial type ($\beta = -.16, z = -2.65$; see Table 15). In the unitary trial, higher comprehension was related to greater damage awards but in the bifurcated trial, greater damages were associated with lower comprehension. Once again, the interaction between trial type and job emerged in the square root analysis of damages ($\beta = -.13, z = -2.30$), showing that the schoolteacher received more money than the surgeon in unitary trials ($M_s = \$5,319,743$ vs. $\$2,268,915$ respectively) but received less money than the surgeon in bifurcated trials ($M_s = \$4,250,097$ vs. $\$13,975,274$ respectively).

The final analysis focuses on those participants who found the defendant liable and awarded punitive damages ($n = 308$). The main effect of litigation crisis attitudes once again emerged ($\beta = -.14, t = -2.47$). For the square root analysis, total effects were also replicated for defendant revenue ($\beta = -.14, t = -2.42$), and trial type ($\beta = .18, t = 3.21, p < .01$), as was the interaction between trial type and job ($\beta = -.19, t = -2.27$), which reflected the same pattern found in the analysis of the entire sample. Also, a significant total effect was found for comprehension of the judicial instructions regarding punitive damages ($\beta = .19, t = 3.28, p < .01$). Here, participants with higher comprehension scores tended to award more in punitive damages than those with lower comprehension scores. Curiously, this pattern is opposite of the other main effects of comprehension, where higher comprehension scores tended to indicate a pro-defense preference. Finally, the only other significant two-way interaction was between comprehension for compensatory damages and the judicial instruction manipulation ($\beta = .20, t = 2.82$). When no judicial instructions were given, those with high comprehension awarded much more than those

with low comprehension ($M_s = \$5,968,249$ vs. $\$1,173,820$) but when instructions were provided comprehension scores only impacted punitive awards slightly ($M_s = \$3,421,168$ vs. $\$2,876,314$).

A summary of the total effects described above is provided in Table 16.

Discussion

Comprehension of judicial instructions

Examining if revising judicial instructions could improve comprehension rates was one of the main goals of Study #2. Indeed, as hypothesized, revising the judicial instructions significantly increased overall comprehension rates. Not surprisingly, the average total comprehension score on the 15-item test among those who did not receive any instructions was only 5.92, which was significantly lower than the average score of those who received the typical pattern instructions ($M = 7.17$). Interestingly, although the average total comprehension score among those who received the revised instructions ($M = 8.13$) was significantly higher than the other two average scores, it still was rather dismal. Curiously, this average score was almost exactly equal to the average comprehension score from Study #1 ($M = 8.12$), where only the typical pattern instructions were given. One likely reason for this notable finding is that only undergraduate students served as participants in the second study, whereas community members from across the country participated in the first study (community members tend to be older and perhaps pay more attention to and are more interested in the research than students who participate as a requirement of class). The percentage correct (just less than 55%) is consistent with previous research demonstrating poor comprehension rates of judicial instructions (Elwork et al. 1977; English & Sales, 1997), which implies that

the initial revisions of the judicial instructions did not sufficiently increase comprehension. Consequently, another round of revisions occurred for the third and final study.

Even though average total comprehension scores among those who received the revised instructions were rather poor, it is encouraging that the revisions did have a significant effect on all four measures of comprehension. That is, comprehension rates were increased for general and design defect issues, as well as for issues pertaining to compensatory and punitive damage awards. Interestingly, higher comprehension scores on these various measures of comprehension tended to indicate a pro-defense preference, such that higher comprehension scores were related to more verdicts for the defense or lower damages awards, even when the comprehension measure was conceptually unrelated to the verdict in question. For instance, those participants with higher comprehension scores on questions related to design defects were less likely to find the defendant liable for a design defect (as well as less likely to find the defendant negligent and less likely to award punitive damages—an issue which will be addressed shortly). Similarly, those who had higher comprehension scores regarding compensatory damages awarded less in compensatory damages and also tended to award less in punitive damages.

The one exception to this trend of higher comprehension indicating a pro-defense bias was the finding that participants with higher comprehension scores on questions pertaining to punitive damages awarded more in punitive damages than those with lower scores. It is unclear why the effect of high comprehension scores on punitive damages was different from the other effects regarding comprehension of judicial instructions—

perhaps those who understand punitive damages and how they should be awarded were sensitive to one of the elements of punitive damages that others were not (e.g., defendant conduct). Alternatively, since punitive damages are not suppose to be awarded that often, perhaps those who comprehend punitive damages are skeptical regarding actually awarding punitive damages. Yet once they become convinced that punitive damages are warranted, those with higher comprehension tend to award large amounts.

Another interesting finding concerning comprehension of the judicial instructions was that comprehension for certain issues (e.g., compensatory damages) affected conceptually unrelated decisions (e.g., punitive damage awards). The effect of comprehension for specific issues on unrelated decisions tended to reflect the above finding (that higher comprehension rates indicated a preference for the defense) even among interactions involving comprehension and independent variables. For example, there was a significant interaction between comprehension related to defect issues and trial type on negligence verdicts. In both unitary and bifurcated trials—but particularly in unitary trials—participants with higher comprehension scores were less likely to find the defendant negligent than those with low comprehension scores (even though comprehension for design defect issues should be unrelated to negligence verdicts).

A potential explanation for the above findings that emerged regarding comprehension involves the intelligence of the participants. Those participants with higher comprehension scores may simply be more intelligent (or at least pay more attention to the stimulus materials) than those with lower comprehension scores. As a result, they may have higher internal standards of proof, demand more information, are higher in their need for cognition, or are more rigorous in their decision-making than

those with low comprehension. Indeed, one study found that people high in the need for cognition were less supportive of punitive responses to crime (Sargent, 2004). One might speculate this occurs because they realize the many gray areas involved in a jury trial, endorse more complex attributions for behavior, or can think of more justifications for the defense's conduct than their less cerebral counter-parts.

A final note about comprehension concerns the judicial instruction manipulation and mock jurors' use of evidence. While it was hoped that better use of evidence would occur when revised instructions were provided, mock jurors actually utilized evidence appropriately for the majority of their decisions, regardless of whether they received the revised or original judicial instructions. While it is encouraging that mock jurors' decisions were largely in accordance with the laws and instructions relevant to the case, in this study, much prior research shows that jurors use evidence inappropriately. Thus, we still anticipate that revising judicial instructions can improve jurors' decisions and their use of evidence, and the next study will focus on evidence misused frequently in past research (injury severity and defendant conduct). Perhaps this will be reflected in the third study, following another round of revisions, which ideally will create a larger distinction in mean comprehension rates between the original and revised instructions.

Bifurcation of the trial

Although the first hypothesis concerning this study was borne out (that the procedural reform of revising judicial instructions would increase comprehension rates), the second hypothesis regarding the procedural reform of bifurcation was only partially confirmed. It was hypothesized that bifurcation would decrease the use of defendant wealth when determining compensatory damages but increase punitive damages.

Unfortunately, the results demonstrated that bifurcating the damage phases had no advantages and perhaps lead to worse decisions than those made in unitary trials. In other words, bifurcation did not decrease the influence of wealth on compensatory damages (mainly because defendant wealth did not significantly affect compensatory damages). In addition, bifurcating the trial augmented punitive damage awards, as hypothesized based on previous research (e.g., Landsman et al., 1998; Greene et al., 2000). Bifurcating the damage phases of the trial also increased the inappropriate influence of comprehension for compensatory damages on punitive damage awards (see Table 14).

The disadvantage of bifurcating the trial was also reflected in an interaction found frequently in the current study. The significant interaction between trial type and job on both the decision to award punitive damages and the actual punitive damages indicate that bifurcating the trial impacted the effect of job on these dependent variables. For instance, the most damages were awarded when the trial was bifurcated and the plaintiff was a neurosurgeon. Of course, this effect of bifurcation is undesirable since plaintiff occupation should not influence punitive damages. Indeed, occupation did not influence the decision to award punitive damages in unitary trials (see Table 13). When considering the above findings, it appears that bifurcating the trial offers little advantages and can actually lead to worse decision-making compared to unitary trials. Consequently, the results suggest that bifurcation (of the damage phases at least) is not a valuable or effective procedural reform.

Jurors' proper & improper use of evidence

The final hypothesis regarding this phase of the project concerns the use (or misuse) of evidence. It was expected that mock jurors would aptly utilize certain pieces

of evidence but also improperly consider evidence. Indeed, mock jurors correctly used plaintiff occupation and defendant wealth. That is, plaintiff occupation only affected compensatory damages and not liability verdicts or punitive damage awards (except in bifurcated trials, as mentioned above). Defendant wealth only affected punitive damage awards and not liability verdicts or compensatory damages (that is, there was not support for the deep-pocket effect). In fact, mock jurors hardly misused any evidence—the only improper use of evidence occurred when the trial was bifurcated (e.g., the aforementioned interaction between trial type and job on the decision to award punitive damages and actual punitive damage awards). Certainly such evidence speaks against splitting up the damage phases of a trial, though bifurcating the liability and damage phases may still be a valuable procedural reform.

Influence of attitudinal factors

While attitudinal factors influenced nearly all dependent variables in the first study, these factors did not seem to matter as much in this phase of the research. In fact, only main effects were found and none were particularly surprising. For instance, participants who thought more that there was the presence of a litigation crisis in society awarded less in compensatory and punitive damages. Participants who endorsed anti-corporate attitudes to a greater extent were more likely to find the defendant negligent and award more in compensatory damages. Perhaps attitudes were not very prognostic in this study because only students served as participants in this phase of the project and attitudes are less predictive of behavior among students as compared to non-student adults. Though attitudes did not seem to exert much influence in the current study, they will still be assessed in the final phase of the investigation. It is expected that these

attitudinal factors will continue to influence decision-making (especially since the third study utilizes non-student adults, as in Study #1). Consequently, attorneys would still be wise to assess such attitudes during voir dire to gain important insight into certain juror's inclinations and biases.

Conclusion

The main focus of Study #2 was testing two possible procedural reforms. Although bifurcation did not improve decision-making and actually appeared counter-productive, revising the judicial instructions did increase comprehension rates. However, since total comprehension was still rather poor, another round of revisions will be made before the final study. Demonstrating that these revisions will increase comprehension rates even further than in Study #2 is one goal of the final study. Other goals are to explore how jurors misuse other pieces of evidence—specifically injury severity and defendant reprehensibility—and to examine the effects those revisions have on the misuse of evidence. Can increased comprehension increase the mock jurors' correct use and/or decrease the improper use of evidence?

Chapter 6: Study #3

This investigation explores whether the revised instructions developed in the second study improve jurors' use of appropriate evidence. Mock jurors will receive either typical judicial instructions or the revised instructions after reading about a products liability case that includes various evidentiary manipulations. These evidentiary manipulations were chosen based on prior research examining the inappropriate use of such evidence (e.g., Landsman et al., 1998, where reprehensibility affected compensatory damages; Cather et al., 1996, where injury severity did not influence compensatory damages). Additionally, the role of comprehension as a mediator will be considered. Mock jurors will be given a comprehension test to replicate that the revised instructions lead to better comprehension rates than the typical judicial instructions.

There are two main goals of the third study. The primary goal is to explore how comprehension affects mock jurors' decisions. We want to improve mock jurors' decision-making by ensuring that they only use the appropriate evidence when determining liability and awarding compensatory and punitive damages. Therefore, of particular interest in the third study is whether or not mock jurors are correctly using evidence when reaching their verdicts. More importantly, we are interested in exploring if revising the instructions can improve those verdicts. Therefore, interactions between the manipulation of judicial instructions and the evidentiary manipulations will be examined. We will also analyze the interactions between the various comprehension measures and the evidentiary manipulations. It is hypothesized that the revised instructions will decrease the improper use of injury severity, defendant reprehensibility, and defendant wealth by explicitly stating how the law wishes jurors to treat specific pieces of evidence.

A secondary goal was to replicate the effect that the revised instructions increase mock jurors' comprehension rates.

Method

Design

The design is a 2 (Instructions: pattern or revised) X 2 (Defendant wealth: annual net revenue of 500 million dollars or 50 million dollars) X 2 (Defendant conduct: low-reprehensibility or high-reprehensibility) X 2 (Injury Severity: mild or severe) between-subjects factorial design. The dependent variables of interest are the participants' liability verdicts and any compensatory and punitive damages they would award. Additionally, participants' scores on the 15 multiple-choice questions designed to measure their comprehension of judicial instructions are of interest. Also, participants will answer various attitudinal questions regarding their feelings toward the litigants and their views toward civil litigation in general.

Participants

Three hundred forty-six participants were recruited from the psychology participant pool at Florida International University. The experiment was posted on-line at www.experimentrix.com/fiu, where participants could read a brief description of the experiment, view available times and sign-up to participate. Only students enrolled in PSY2020 and certain other classes are part of the participant pool. Those students under the age of 18 years of age were not allowed to participate, as they must be the legal age to serve on a jury. Their mean age was 21 years old, with 17.9% ($n = 62$) being male and 82.1% ($n = 284$) female. The majority of these students were Hispanic ($n = 191$), with the remainder being Caucasian ($n = 68$), African-American ($n = 37$), Asian ($n = 8$), and Other

($n = 27$). The remaining 15 student participants preferred not to give their racial information. An additional 176 non-student, adult participants were recruited through a Web-based participant pool (<http://www.studyresponse.com>) that sends out solicitations regarding Web-based studies. Their mean age was 35 years old, with 51.8% ($n = 91$) being male and 48.2% ($n = 85$) female. The majority of these non-student participants were Caucasian ($n = 112$), with the remainder being African-American ($n = 19$), Asian ($n = 16$), Hispanic ($n = 13$), Native American ($n = 3$), and Other ($n = 13$). As in Study #1, analyses were conducted separately for student and non-student, adult participants but no differences emerged between these two groups so results are presented together.

Materials

Stimulus materials include an approximately 1500 word scenario describing a products liability case involving faulty seat design in an automobile and a 9-item questionnaire that measures participants' attitudes toward the litigants. A 16-item questionnaire is also used to assess participant's attitudes regarding civil litigation and corporate defendants. Participants will read either typical or revised judicial instructions on the law and are instructed to answer a 15-item multiple-choice and true-false test designed to measure comprehension of the instructions. Materials also include a verdict form that requires participants to determine liability and award any damages they deem appropriate.

Procedure

Participants read an informed consent form on the first Web page before proceeding. By clicking on a button at the bottom of the page, they gave implied consent. The following web page consisted of 16 items that assessed participants' attitudes toward

civil litigation and corporations. Next, they read a hypothetical scenario depicting a products liability case involving defective van seats that collapsed upon a rear-impact accident, injuring a passenger in the back seat. The passenger is suing the mini-van manufacturer. The various litigant manipulations (e.g., defendant wealth, injury severity) were incorporated into the summary. Defendant conduct was operationalized in terms of the amount of safety research done and knowledge of similar incidences in the past. Highly reprehensible defendants conducted very little safety research on the van seats and knew of several similar incidences in the past. Defendants low in reprehensibility conducted a lot of safety research and knew of no similar incidences in the past. Injury severity was operationalized as either a concussion and some hospitalization (mild) or prolonged hospitalization and permanent paralysis (severe). At the end of the web page containing the scenario, there were 9 questions participants answered regarding their reactions to various aspects of the case (e.g., anger toward defendant). After completing these 9 items, participants clicked on a button at the bottom of the page to proceed. The following web page contained either typical pattern or revised judicial instructions meant to approximate the judicial instructions that would be given to jurors at the end of a trial. After clicking on a button at the bottom of the page, participants continued to another web page that had 15 questions designed to assess their comprehension for the judicial instructions they just read. After this page, participants preceded to a web page that assessed their verdict for liability. Assuming they found for the plaintiff, participants were instructed to assign an appropriate amount for compensatory and punitive damages as though they were jurors seated on the case. After clicking on a button at the bottom of this page, they continued to a short debriefing page, where they were thanked for their

participation and provided with contact information in case they had any further questions or concerns.

Results

Once again, an exploratory factor analysis (EFA) was performed on the 16 Likert-type case and study-specific attitudinal items in order to replicate the identification of a smaller number of attitudinal factors that influenced liability and damage award assessments. The same four factors that were seen in Study #1 emerged from this analysis. The first factor, which measured participants' belief that wealthier and bigger defendants should be held to a higher standard of care than less wealthy and smaller defendants ($\alpha = .68$), was composed of three items. One example item was, "A corporation should be held to a higher standard of responsibility than an individual." The second factor, which measured anti-corporation attitudes ($\alpha = .65$), was composed of two items (e.g., "Big, wealthy corporations don't care about consumers."). The third factor, which measured litigation crisis attitudes ($\alpha = .69$), was composed of four items. For example, one item was, "Jury awards are too large." The final factor, which measured a sense of strict liability ($\alpha = .56$), was made up of three items (e.g., A company should never be excused from compensating consumers injured by its products.). These factors were entered into future regressions as predictors of liability verdicts and damages awards. Findings are significant at $p < .05$ unless otherwise stated. The corresponding z -values equate to $p < .05$, $p < .01$ and $p < .001$: $z = 1.96$, 2.58 , and 3.27 , respectively. Analyses were conducted separately for sample type (students vs. non-student, adult participants). As in Study #1, we examined total main effects and interactions involving sample type but since only one significant difference emerged between the two groups,

the results are presented together. The single effect of sample type on comprehension is covered below.

Comprehension of judicial instructions

Just as in Study #2, a path analysis was utilized. The independent variables, the attitudinal factors from the EFA, and the residualized interactions (Cohen, 1978; Lance, 1988) involving these variables were all entered into the first level of the path analysis. The second level of the path analysis involved comprehension, with comprehension and residualized interactions involving comprehension being entered at this point. As in Study #2, comprehension of judicial instructions was once again broken down into four sections: comprehension for general issues, comprehension for design defect issues, and comprehension for compensatory as well as punitive damage awards. These four comprehension measures were explored as potential mediators in the analyses of liability verdicts and damage award assessments. The mean scores of these measures of comprehension are given in Table 17.

Notably, those participants who received the revised judicial instructions had significantly higher comprehension scores than those who received the original judicial instructions for general issues [$F(1, 520) = 45.81, p < .001; \beta = -0.28; r = .29$], defect issues [$F(1, 520) = 78.59, p < .001; \beta = -0.37; r = .36$], punitive damage issues [$F(1, 520) = 77.64, p < .001; \beta = -0.39; r = .36$] and total comprehension [$F(1, 520) = 117.92, p < .001; r = .43$]. Therefore, only comprehension for compensatory damages was not significantly increased by use of the revised judicial instructions. Also, non-student participants scored significantly higher than student participants on the design defect comprehension measure [$F(1, 520) = 4.91, p < .05$], and jurors who read about the

reprehensible defendant scored slightly lower on the design defect comprehension measure ($M = 3.38$) than those who did not read about the reprehensible defendant ($M = 3.74$) [$F(1, 520) = 5.12, p < .05$]. No other manipulated variables influenced comprehension scores.

In addition to exploring the mediating effects of the four comprehension measures, we also examined various interactions involving these comprehension measures. The interactions were computed as residualized interaction terms (Cohen, 1978; Lance, 1988) between the different comprehension scores and each of the independent variables (e.g., design defect comprehension X defendant conduct). As in the previous study, comprehension interactions involving comprehension scores for both general and defect issues were entered into the regressions for liability verdict in the second level of a path analysis. For compensatory damage awards, comprehension interactions also involved comprehension for instructions concerning compensatory damages. Finally, for both the decision to award punitive damages and actual punitive damage awards, comprehension interactions involving comprehension for instructions pertaining to punitive damages were included, along with all the other possible comprehension interactions.

Liability verdicts

Since very few significant effects were found on the dichotomous negligence verdict in the previous two studies, design defect was the only liability verdict given by jurors in the current study. Thus, for questions regarding liability verdicts, the dependent variable was the dichotomous choice between the plaintiff and the defendant for this cause of action (54.8% of the participants found the defendant liable for a design defect).

For this dichotomous verdict, path analysis using probit regressions was used to analyze the total effects and interactions involving the independent variables and attitudinal factors. Main effects and interactions involving comprehension scores for general and defect issues were also included in the path analysis (comprehension scores for compensatory and punitive damages were not included since they are not relevant to liability verdicts). M-plus software (Muthen & Muthen, 2004) was used for all probit regression path analyses.

Significant total effects emerged for defendant conduct, the factors measuring litigation crisis and strict liability attitudes, and the comprehension of the judicial instructions pertaining to design defects. Unsurprisingly, more design defect verdicts were found for the plaintiff when the conduct of the defendant was highly reprehensible than when not (65.3% and 50.8%, respectively; $\beta = -.18, z = -2.60, p < .01$). Also, those who held more litigation-crisis attitudes were less likely to find liability than those who did not endorse such attitudes as much ($\beta = -.18, z = -3.02, p < .01$) and those who held more strict liability attitudes were more likely to find liability ($\beta = .18, z = 3.11, p < .01$). Finally, those who scored higher on the comprehension measure for judicial instructions pertaining to design defect issues were less likely to find a design defect than those who scored poorly ($\beta = -.13, z = -3.02, p < .01$).

In addition to examining the above total effects, a total of 23 potential two-way interactions were also analyzed: those six among the independent variables (e.g., injury severity X defendant wealth), those between independent variables and specific attitudinal factors (differing wealth/size attitudes X defendant wealth, strict liability attitudes X each IV, and litigation crisis attitudes X each IV), and the eight relevant

interactions between independent variables and certain comprehension scores (e.g., injury severity X comprehension for defect issues). The only significant two-way interaction detected was between litigation crisis attitudes and defendant wealth ($\beta = .15$, $z = 2.07$). Here, among participants above the mean (thus representing those who believed more that there is a litigation crisis present in society) were slightly less likely to find the wealthier defendant liable (49.9%) than the less wealthy defendant (53.3%), but participants who did not endorse such attitudes were much more likely to find the wealthier defendant liable (68.4% and 50.1%, respectively). The four possible three-way interactions between the independent variables were also examined, but, as in the previous study, no significant three-way interactions emerged from any analyses.

Damage awards

As in the prior studies, damage awards were analyzed in a number of ways: analyzing the awards from the entire sample, analyzing the awards of only those participants who first found the defendant liable, and analyzing transformed values of damage awards (square root and natural log transformations). In all, four possible ways of analyzing damage awards (either square root or natural log transformation and either entire or partial sample) were compared in this investigation. Once again, analyses including the entire sample were conducted using M-plus software (Muthen & Muthen, 2004), specifying the award as censored-below, continuous variable. Though raw means for awards were not analyzed, they are reported for ease of understanding and visualization. The statistics provided below are for the natural log analyses of damage awards but findings are significant for both square root and natural log transformations unless otherwise indicated.

Compensatory damages. When the entire sample was included in the analysis, five total effects were detected. A main effect of injury severity ($\beta = -.25, z = -5.59, p < .001$) showed that mock jurors properly used this evidence, such that much higher awards were given to the severely injured plaintiff ($M = \$1,515,490$) than to the plaintiff whose injuries were relatively minor ($M = \$121,033$). A main effect of defendant conduct ($\beta = -.14, z = -2.46$) showed that fewer compensatory damages were awarded when the defendant's conduct was less reprehensible ($M = \$715,404$) than when highly reprehensible ($M = \$1,119,832$). A main effect of litigation crisis attitudes ($\beta = -.15, z = -2.05$) revealed that participants who believed more that a litigation crisis exists awarded fewer damages. A main effect of strict liability attitudes ($\beta = .17, z = 3.58, p < .001$) indicated that participants who agreed more that strict standards were appropriate awarded greater damages than those who did not endorse such attitudes as much. A main effect of anti-corporation attitudes ($\beta = .10, z = 1.96$) revealed that participants who held more anti-corporate attitudes awarded slightly greater damages than those who held these attitudes to a lesser extent (for the natural log analysis only).

A total of 27 potential two-way interactions were examined (the same 23 that were explored with liability, along with the four involving comprehension for compensatory damages). Four significant two-way interactions emerged. First, litigation crisis attitudes interacted with defendant revenue ($\beta = .14, z = 2.41$), such that more money was levied against the wealthier defendant among those below the mean but the opposite pattern emerged among those participants who believe more in a litigation crisis (see Table 18). Litigation crisis attitudes also interacted with the judicial instruction manipulation ($\beta = -.09, z = -2.01$; see Table 19), such that the instruction manipulation

did not influence damages among participants who believed more in a litigation crisis but greater damages were awarded when the original instructions were provided among participants who did hold these attitudes as much. Strict liability attitudes interacted with injury severity ($\beta = -.11$, $z = -2.77$, $p < .01$), such that extent of injury only mattered among those participants who maintained strict liability attitudes (see Table 20).

Comprehension exerted a main effect and interacted with injury severity to influence compensatory damage awards. For the natural log analysis, a main effect of comprehension for design defect issues ($\beta = -.14$, $z = -2.23$) demonstrated that those with low comprehension scores awarded higher damages than those with high comprehension. Also, injury severity interacted with comprehension for compensatory damages ($\beta = -.10$, $z = -2.15$), such that the effect of injury severity was much stronger among those higher in comprehension (see Table 21).

Linear regression analysis focusing on only those participants who found liability and awarded damages was conducted using SPSS software. The analyses that focused solely on this group of participants ($n = 286$) revealed several significant findings. Several of these findings mirrored the effects found in the analysis of the entire sample, including the total effect of injury severity ($\beta = -.38$, $t = -6.09$, $p < .001$), the total effect of strict liability attitudes (for the natural log transformations only; $\beta = .12$, $t = 2.28$), and the interaction between litigation crisis attitudes and the judicial instruction manipulation ($\beta = -.11$, $t = -2.22$). Additionally, a total effect for defendant wealth emerged from the square root analyses ($\beta = -.15$, $t = -2.23$), such that greater compensatory damages were levied against the wealthier defendant than the less wealthy defendant ($M_s = \$749,887$ and $\$538,257$, respectively). Finally, for the square root analysis, there was a significant

interaction between injury severity and defendant revenue ($\beta = .19, t = 1.96$), such that greater damages were awarded against the wealthier company when the injuries were severe ($M_s = \$1,793,376$ and $\$1,106,601$, respectively), but when the injuries were mild, slightly greater damages were awarded against the less wealthy defendant ($M_s = \$157,244$ and $\$92,903$, respectively).

Punitive damages. The next analysis focuses on the decision to award punitive damages (therefore the dependent variable is a dichotomous choice). The only total effects emerging from this analysis involved attitudinal factors and comprehension scores. A main effect of litigation crisis attitudes ($\beta = -.18, z = -3.17$) demonstrated that punitive damages were less likely to be awarded the more participants thought a litigation crisis existed. A main effect of strict liability attitudes ($\beta = .21, z = 3.72, p < .001$) indicated that damages were more likely awarded the more that participants endorsed strict liability attitudes. A main effect of attitudes measuring different standards for wealth and size ($\beta = -.13, z = -2.18$) showed punitive damages were more likely when participants believed more in holding defendants of varied wealth and size to different standards.

Comprehension exerted two main effects and interacted with defendant wealth to impact the decision to award punitive damages. Main effects of comprehension for design defect issues ($\beta = -.14, z = -2.56$) and of comprehension for punitive damages ($\beta = -.12, z = -2.16$) demonstrated that those with higher comprehension scores were less likely to award damages than those with lower comprehension scores (36.3% vs. 50.2% for defect comprehension and 38.8% vs. 49.4% for punitive damages comprehension). Although a total of 31 two-way interactions were examined, the only significant

interaction discovered was between defendant revenue and comprehension for punitive damages ($\beta = -.22, z = -1.99$). When comprehension scores were low, defendant revenue did not impact the likelihood that punitive damages would be awarded (49.8% award punitive damages when the company is wealthy vs. 46.4% when the company is less wealthy), but revenue did influence the likelihood of awarding damages when comprehension scores were high (43.5% award damages when the company is wealthy and 34.5% when the company is less wealthy).

When the entire sample was included in the analysis for punitive damage award amounts, numerous significant total effects emerged. Injury severity exerted a main effect on punitive damage amounts ($\beta = -.22, z = -4.72, p < .001$), such that greater damages were given when the plaintiff's injuries were severe as opposed to mild ($M_s = \$1,185,479$ and $\$104,852$, respectively). A main effect of defendant revenue ($\beta = -.16, z = -3.09, p < .01$) revealed that greater damages were levied against the wealthy defendant than the less wealthy defendant (for the square root transformation only; $M_s = \$1,017,784$ and $\$276,200$, respectively). A main effect of litigation crisis attitudes ($\beta = -.17, z = -3.70, p < .001$) indicated that participants who endorsed such attitudes more awarded fewer damages than those who did not believe in a litigation crisis as much. Strict liability attitudes also exerted a main effect ($\beta = .19, z = 3.95, p < .001$), such that greater damages were given when participants held greater strict liability attitudes than when held such views to a lesser extent.

Several significant interactions were also discovered in the analysis that including the entire sample. Extent of injury interacted with defendant wealth ($\beta = .14, z = 2.09$) such that, when the plaintiff's injuries were severe, much greater damages were levied

against the wealthy defendant ($M = \$1,892,352$) than the less wealthy defendant ($M = \$434,769$), but defendant revenue hardly influenced damages when the plaintiff's injuries were mild ($M = \$96,123$ against the wealthy defendant and $M = \$113,854$ against the less wealthy defendant). Extent of injury also interacted with litigation crisis attitudes ($\beta = .10, z = 2.46$). These attitudes did not influence damages when the plaintiff's injuries were mild but did influence the damage awards when the plaintiff's injuries were severe, such that greater damages were awarded when such attitudes were not endorsed as much (see Table 22). Also, litigation crisis attitudes interacted with defendant wealth ($\beta = .13, z = 2.48$) to reveal a similar pattern in damage awards. That is, the attitudes did not impact damages when the defendant was less wealthy but did influence awards when the defendant was wealthier, such that more damages were awarded when such attitudes were held to a lesser extent (see Table 23).

Comprehension exerted a marginal main effect and interacted with defendant wealth to influence punitive damage awards. A marginally significant total effect of comprehension for defect issues revealed that greater damages were awarded when comprehension was high rather than when low (for the square root analysis only; $\beta = .22, z = 1.95, p < .06$). Defendant wealth interacted with comprehension for punitive damages ($\beta = -.24, z = -2.45$), indicating that there was a greater disparity in awards between the wealthy and less wealthy defendant when comprehension was high rather than low. That is, defendant revenue had a greater impact on punitive awards when comprehension was high ($M = \$273,061$ when the defendant was less wealthy vs. $M = \$1,461,308$ when the defendant was wealthy) as opposed to when comprehension was low ($M = \$277,769$ when the defendant was less wealthy vs. $M = \$875,066$ when the defendant was wealthy).

The final analysis focuses solely on those participants who found the defendant liable and awarded an actual amount for punitive damages ($n = 240$). The results of this analysis mirrored several of findings that appeared when the entire sample was included. Specifically, total effects were replicated for extent of injury ($\beta = -.21, t = -3.75, p < .001$), defendant revenue ($\beta = -.25, t = -3.52, p < .001$), litigation crisis attitudes (for square root analysis only; $\beta = -.11, t = -1.92, p < .06$) and strict liability attitudes (for natural log analysis only; $\beta = .20, t = 2.37$), as was the interaction between extent of injury and defendant revenue ($\beta = .22, t = 2.91, p < .01$), and the interaction between litigation crisis attitudes and defendant revenue ($\beta = .15, t = 2.11$).

Several additional significant interactions also emerged from this analysis. For the square root analysis, injury severity interacted with defendant conduct ($\beta = -.18, t = -2.41$), such that greater damages were awarded when the plaintiff's injuries were severe, especially when the defendant's conduct was reprehensible ($M = \$944,706$ vs. $M = \$856,087$ when the defendant's conduct was not reprehensible). However, when the plaintiff's injuries were mild, slightly greater damages were awarded when the defendant's conduct was not reprehensible ($M = \$72,431$) than when it was reprehensible ($M = \$53,343$). Litigation crisis attitudes interacted with the judicial instruction manipulation ($\beta = -.13, t = -2.23$), such that the instruction manipulation did not impact awards when participants believed more in a litigation crisis ($M = \$274,094$ for pattern and $M = \$303,855$ for revised instructions), but greater damages were awarded when such attitudes were not held as strongly, particularly when participants received the pattern instructions ($M = \$549,437$ vs. $M = \$425,495$ with the revised instructions).

Two measures of comprehension interacted with defendant wealth to influence punitive damage awards. The same interaction between defendant revenue and comprehension for punitive damages that was found in the analysis of the entire samples emerged ($\beta = -.25$, $t = -1.96$). Also, for the square root analysis, comprehension for general issues interacted with defendant revenue ($\beta = -.31$, $t = -2.65$), such that comprehension did not make much difference when the defendant was less wealthy ($M = \$397,114$ when comprehension was low and $M = \$454,546$ when comprehension was high), but awards varied as a function of comprehension when the defendant was wealthy ($M = \$726,330$ when comprehension was low and $M = \$1,258,323$ when comprehension was high).

A summary of the total effects described above is provided in Table 24.

Discussion

The primary goals of this phase of the project were: (1) replicating that the revised judicial instructions augmented comprehension scores, (2) examining whether or not mock jurors correctly utilized evidence when reaching their verdicts, and (3) investigating if revised instructions improved the use of evidence. The results provided support for the hypotheses pertaining to these goals. All significant results are discussed, including a few marginal ones, which could mean some of the included results may have been produced by chance. However, considering the exploratory nature of this project and given that nearly all the interactions had yet to be systematically examined, this project's broad scope is designed to facilitate future research. We leave it to other researchers to replicate the myriad of results and implore them to continue to explore civil jury decision-making.

Comprehension of judicial instructions

As hypothesized, revising the judicial instructions clearly improved mock juror comprehension rates. Three of the four individual measures of comprehension as well as total comprehension scores were significantly increased through the use of the revised judicial instructions. Perhaps more encouraging than the fact that revisions increased comprehension relative to the original instructions is that the revisions actually increased comprehension scores beyond mediocrity. Whereas the mean percentage of correct answers for the revised instructions in the previous study was only 55%, the mean percentage correct in the current study was 68% ($M = 10.15$ out of 15). Although this figure is still not as high as preferred, it is encouraging that the revisions had their intended effect. Since both of our initial attempts at revising the instructions met with success, it seems feasible that additional revisions could increase comprehension rates even higher. Additional research is needed to explore this possibility.

As in the previous study, higher comprehension scores on the various measures of comprehension tended to indicate a pro-defense bias. That is, those participants with higher comprehension scores tended to find for the defendant in liability decisions and/or awarded less money. For comprehension of defect issues, those with higher comprehension scores were significantly less likely to find the defendant liable for a design defect than those with lower comprehension. Also, those with higher comprehension scores on this measure, as well as the measure concerning punitive damage comprehension, were less likely to award punitive damages than those with lower comprehension. The only exception to this trend was the finding that higher comprehension scores on the defect measure were associated with higher punitive

damage awards. Interestingly, a similar finding emerged in the previous study, where higher punitive awards were associated with higher comprehension scores on the measure regarding punitive damages. Thus, it appears as though higher comprehension is typically related to a pro-defense preference, except when it comes to punitive damages (where it indicates a pro-plaintiff preference).

It is unclear why the relationship between comprehension and punitive awards is unique. Although those with higher comprehension are less likely to award punitive damages, when punitive damages are actually awarded, they tend to assess more against the defendant than those with low comprehension. Perhaps jurors with higher comprehension have a good understanding of the definition of punitive awards and when they are warranted (which is not supposed to be that often), so they are less likely to find it appropriate to award them as compared to those with lower comprehension. Yet when they feel as though the evidence supports punitive damages, they give high awards because they see the evidence as so damaging. That is, perhaps people with higher comprehension are skeptical regarding actually awarding punitive damages, but tend to award large amounts once they become convinced that punitive damages are, in fact, warranted.

Comprehension and juror decision-making

As hypothesized, revising the judicial instructions did improve decision-making. Overall, mock jurors did not use evidence inappropriately that often (see below), but there was only one instance of improper use of evidence when revised instructions were provided (and the same misuse occurred when the original instructions were provided). Specifically, the reprehensibility of the defendant's conduct did not impact punitive

damage amounts. However, there were some weak trends in the data revealing better utilization of evidence among those participants who received the revised instructions as opposed to the original instructions (though the interactions between the evidence and the instruction manipulation were not statistically significant, $ps < .2$). For example, the reprehensibility of the defendant's conduct should affect liability verdicts but did so to a greater extent when revised judicial instructions were presented ($r = .13$, power = .84; see Table 25). Similarly, the defendant's conduct is relevant to the decision of whether or not to award punitive damages, but conduct impacted this decision to a greater extent when revised instructions were provided ($r = .09$, power = .53; see Table 26). Also, defendant wealth should not impact compensatory damage awards, but tended to more so when the original instructions were provided ($r = .09$, power = .53; see Table 27).

Perhaps the interactions between the instruction manipulation and pieces of evidence were not significant because the effect of revising the instructions was not strong enough. Indeed, the effect sizes for the instruction revision on the various comprehension measures ranged between .29 and .36. Although these are considered medium effect sizes, it still means that the instruction revision accounted for, at most, only 13% of the variance in comprehension scores. Therefore, the somewhat weak but significant effect of revision might have caused a small increase in comprehension, which in turn may have caused the corresponding increased sensitivity to the proper evidence to also be small (thus, the interactions are $p < .2$). Given that the effects of revision could be much stronger, future research could attempt to further revise the judicial instructions and examine how those additional revisions influence the use and misuse of evidence. At the very least, this project provides initial empirical evidence suggesting that the use of

revised instructions can not only increase comprehension rates, but may improve overall decision-making as well.

Jurors' proper and improper use of evidence

Regardless of whether revised or pattern judicial instructions were provided, it is encouraging that mock jurors used pieces of evidence properly for several distinct decisions. Extent of injury impacted actual damage awards but did not influence liability verdicts or the decision to award punitive damages. This appropriate use of extent of injury belies the prior research finding of a positive relationship between extent of injury and liability judgments (e.g., Greene et al., 1999; Robbennolt, 2000). Defendant wealth, just as in Study #1, improperly impacted compensatory damages. Yet, as in Study #2, this evidence was largely used appropriately, such that defendant wealth neither affected liability verdicts nor the decision to award punitive damages (and there was a trend for wealth to *only* impact punitive damages when revised instructions were used). Therefore, even though defendant wealth inappropriately influenced compensatory damage awards, we did not find support for the deep-pocket effect. Defendant conduct influenced liability verdicts (when the revised instructions were utilized) and punitive damage amounts (via an interaction with injury severity) but consistent with some prior research (e.g., Greene et al., 1999 and Greene et al., 2001), conduct also affected compensatory damages (though see Cather et al. 1996 and Greene et al., 2000, where conduct did not influence compensatory damages). Thus, it appears that mock jurors were using evidence properly at times and making decisions that were in accordance with the law, particularly when revised instructions were supplied.

Unfortunately, interactions of extent of injury with both defendant wealth and defendant conduct demonstrated that mock jurors also improperly considered these pieces of evidence. For instance, extent of injury interacted with defendant revenue to influence both compensatory and punitive damages. Defendant revenue improperly affected compensatory damages when the plaintiff's injuries were severe and defendant revenue did not properly impact punitive damages when the plaintiff's injuries were mild. Extent of injury also interacted with defendant conduct to influence punitive damage amounts, such that the reprehensibility of the defendant's conduct was only utilized correctly when the plaintiff's injuries were severe. That is, when the plaintiff's injuries were severe, mock jurors, likely indignant over the crippling injuries, compensated and/or punished accordingly based on the conduct and revenue of the defendant. However, participants misused and/or ignored defendant conduct and revenue when the plaintiff's injuries were mild. Perhaps they failed to factor these pieces of evidence into their assessments of damage awards when the plaintiff's injuries were mild because those participants who decided to award damages simply offered a small amount without fully considering the evidence and the law. Alternatively, participants may have been sensitive to other factors or pieces of evidence when injury severity was mild. Also, there were generally very low punitive damage awards in the mild injury condition, thus making it harder for anything to have an effect (a floor effect).

Drawing comparisons between these interactions from the present study and the findings from past research that has examined how jurors use these pieces of evidence proves difficult because much of the prior research only explored the main effects of these variables, and often on only one dependent variable (e.g., the impact of defendant

wealth on compensatory damage awards; the influence of injury severity on liability verdicts). One notable exception was a study conducted by Greene and her colleagues (Greene et al., 2001), who specifically investigated the joint influence of injury severity and defendant conduct on compensatory damage awards. Just as we found the two pieces of evidence jointly impacted punitive awards, these researchers found that these pieces of evidence jointly affected compensatory damage awards, such that defendant conduct improperly impacted the award amount, particularly when the plaintiff's injuries were mild (just as in the present study, evidence misuse occurred to a greater extent when the injuries were mild). Since the current research suggests that certain pieces of evidence can influence how jurors use other evidence, future research should explore the combined and interactive effects of various pieces of evidence on juror decision-making. Certainly, most actual trials are complex, involving numerous pieces of evidence that the jury is expected to utilize appropriately in each of their assorted determinations. There is therefore great value in understanding how jurors might use, or be influenced by, several pieces of evidence collectively when making their various verdict decisions.

Influence of attitudinal factors

While attitudinal factors did not exert much influence in Study #2, they impacted nearly every dependent variable in this study. Indeed, strict liability attitudes influenced every dependent measure and total effects for litigation crisis attitudes emerged on every dependent variable except compensatory damages awarded among those who found liability. Not surprisingly, those who endorsed strict liability attitudes tended to show a pro-plaintiff (or, perhaps more appropriately, an anti-defendant) bias and those who believed that a litigation crisis exists demonstrated a pro-defendant (or anti-plaintiff) bias.

Since these attitudes impacted all decisions made by the mock jurors, it certainly seems prudent for attorneys to assess these types of attitudes as early as possible in voir dire to identify those jurors who seem to have strong, pre-existing preferences for one side in a lawsuit. Besides the ubiquitous main effects of strict liability and litigation crisis attitudes, main effects occasionally emerged for anti-corporate attitudes as well as attitudes regarding wealth and size. Therefore, attorneys also may wish to assess these types of attitudes during voir dire, especially when at least one of the litigants is a corporation.

While attitudes often exerted total effects, interactions between these attitudinal factors and the litigant manipulations have greater implications. All but one of these interactions involved litigation crisis attitudes. These attitudes interacted with defendant wealth to affect design defect verdicts as well as both compensatory and punitive damages. In all of these instances, when participants did not believe a litigation crisis existed, defendant revenue impacted verdict such that wealthier corporate defendants were either more likely to be found liable or required to pay greater damages than less wealthy defendants. That is, defendant revenue was particularly influential when participants believed less that a litigation crisis exists. In fact, when such attitudes were not endorsed, there was a slight tendency for participants to treat the wealthier defendant better than the less wealthy defendant. Litigation crisis attitudes also interacted with the judicial instruction manipulation to influence both compensatory and punitive damages. In both instances, differences in the instruction manipulation only occurred when such attitudes were not endorsed as much, such that greater damages were awarded when the original instructions were supplied. To put it another way, it appears as though the

revisions lessened or eliminated the effect of litigation crisis attitudes on actual damage award amounts. Finally, litigation crisis attitudes interacted with extent of injury to impact punitive damage awards. As with the other interactions involving litigation crisis attitudes, the manipulation of the independent variable mattered more as participants believed less that a litigation crisis was present in society—in which case, participants awarded greater damages when the injury was severe as opposed to mild.

It appears as though litigation crisis attitudes serve to not only affect verdicts directly but also indirectly affect verdicts by impacting how evidence is utilized. Indeed, as demonstrated in the above findings, certain evidence was more impactful as jurors agreed less with these attitudes. Perhaps as participants believed more in the presence of a litigation crisis, they paid less attention to the manipulations because they were prone to dismiss the case and find for the defendant regardless of the case facts. This was not always undesirable, however, considering those jurors who did not endorse the attitudes improperly considered evidence for certain decisions while those who endorsed the attitudes did not misuse the evidence. For instance, defendant revenue should not impact liability verdicts and only did so when the attitudes were not held. Regardless of the implications of whether actual jurors endorse these attitudes or not, the plethora of main effects and interactions involving litigation crisis attitudes provides additional empirical support for the notion that attorneys need to assess these attitudes at the earliest possible opportunity.

Conclusion

The mock jurors clearly benefited from the use of the revised judicial instructions. Not only did their comprehension of relevant concepts in the law significantly increase,

but their decision-making improved as well so that they were utilizing evidence appropriately. Importantly, no adverse effects were detected as a result of using the revised judicial instructions. Although additional research is needed to explore the effects of revisions in other types of cases, surely the above findings provide some empirical justification for the revision of judicial instructions. Thankfully, some courts already are addressing the issue of modifying judicial instructions. For instance, in 1997, California appointed a Task Force on Jury Instructions with orders that it make instructions more understandable to jurors while still accurately stating the law. Six years later, revised civil instructions were adopted and now, eight years later, new criminal instructions have been approved (California Bar Journal, 2005).

Chapter Seven: General discussion

In its broadest sense, the purpose of this project was to examine civil jury decision-making. Specifically, we studied civil jury-decision making by systematically investigating how mock jurors utilized evidence, litigant characteristics, and extralegal factors. Based on prior research, our primary concern was that mock jurors use evidence improperly and inappropriately consider extralegal factors in their decisions. Certainly our initial results provided support for this concern. Consequently, our next goal was to explore possible procedural reforms that might improve decision-making. Specifically, we believed that low comprehension of judicial instructions contributed to this poor decision-making. That is, jurors were not making decisions in accordance with the law because they could not comprehend the instructions that are supposed to dictate how jurors should make their decisions. Therefore, we wanted to explore the possibility of revising the judicial instructions as one potential reform that could increase comprehension, improve the consideration of evidence, and ultimately enhance decision-making. Our results partially substantiated this contention. A secondary procedural reform we explored, bifurcating the damage phases of the trial, met with less empirical support. The hypotheses are revisited and an overall picture of the results is provided below. The implications and limitations of the project are also discussed.

Numerous different pieces of evidence and various litigant characteristics were manipulated in the current investigation. Since several of these variables had been explored in previous research, we can determine whether or not our results confirm the hypotheses formed based on those past studies. However, there was also a scarcity of prior research on several of our manipulations, particularly in the context of a corporate

defendant. There was also a paucity of research examining the combined and interactive effects of various pieces of evidence and litigant characteristics. Accordingly, we have little prior research with which we can compare some of our results. Nevertheless, our findings provide valuable insight into how jurors use or misuse information when determining liability and awarding damages, regardless of whether or not we can compare our results with past research.

Extralegal factors

Although little prior research has addressed the effects of some of these variables (e.g., corporate representative), we suspected that mock jurors would inappropriately consider extralegal factors when deciding their verdicts. Indeed, we found ample evidence of these extralegal factors affecting participants' decision-making. The corporate representative improperly influenced design defect verdicts as well as compensatory and punitive damage awards. Based on the similarity-leniency hypothesis, we anticipated that mock jurors would treat the defendant more severely the more dissimilar the representative was to the average person. However, the results failed to support this expectation as more lenient treatment was given to the defendant when the representative was the CEO of the company (highly dissimilar to the average mock juror) than an engineer (more similar to the average mock juror). We reason this occurred because the engineer was described as a person who helped design the defective product and therefore the responsibility attached to him caused more severe treatment of the corporation he represented.

Similarly, even though an apology is extralegal, we expected the presence of an apology by the defendant to foster sympathy for the defendant and promote more lenient

treatment (past research suggests apologizing might reduce damages; see Robbennolt, 2003). Mock jurors did inappropriately consider the issuance of an apology, but contrary to our prediction, apologizing augmented compensatory damage awards. Perhaps, mock jurors perceived the presence of an apology as an indication of responsibility and remorse (past research demonstrates this might augment damages; see Bornstein et al., 2002). Regardless of the direction of these findings, the result is the same: extralegal factors affect verdicts.

We previously argued that attitudes could be considered extralegal if they have a direct effect on verdict, such that the effect of the attitudes is independent of the effect of the evidence in the case. Since the law is not very clear concerning the role of attitudes in civil cases, and given prior research on attitudes in civil cases (e.g., Hans & Loftquist, 1992), we anticipated direct effects of attitudes on verdicts. It seems foolhardy to think that attitudes would not directly influence mock jurors' decisions. As expected, a plethora of attitudinal main effects emerged from this data, especially involving litigation crisis attitudes (in all three studies), anti-corporation attitudes (in the first two studies) and strict liability attitudes (in the final study). These attitudinal factors impacted every dependent measure and therefore influenced decision-making with regards to both liability and damage award verdicts.

We also found myriad interactions between attitudes and evidence, such that attitudes influenced how several specific pieces of evidence were utilized (e.g., defendant wealth, extent of injury). The conglomeration of results pertaining to attitudinal factors provides strong indication that attorneys should attempt to assess the attitudes of the venire as early as possible. Certainly, attitudes are better predictors of verdict inclination

than any superficial characteristics attorneys might look for during voir dire (i.e., demographics). At the very least, projects such as this one can provide attorneys with some initial concrete items that measure certain relevant attitudes. Litigation crisis and anti-corporate attitudes in particular were prevalent in the current investigation and seem relevant in actual trials.

Misuse of evidence and litigant characteristics

Just as we expected that mock jurors would consider extralegal factors, we also predicted that mock jurors would misuse specific pieces of evidence and litigant characteristics. Certainly, an abundance of extant literature on civil jury decision-making supports this assertion. Indeed, our results showed that the improper utilization of evidence was a constant found in all three phases of the current project. In several instances, evidence pertaining to the defendant (e.g., wealth, conduct) was not used correctly. Research on the deep-pocket hypothesis demonstrates that defendant wealth can improperly influence verdicts. While only a small amount of research has explored wealth in the context of a corporate defendant, we found partial support for the deep-pocket hypothesis, as defendant wealth impacted design defect verdicts and compensatory damage awards.

Although little empirical research has systematically examined reprehensibility of conduct with a corporate defendant, the results of other studies on conduct in the context of an individual defendant suggest defendant conduct may incorrectly influence compensatory damages (Greene et al., 2001) and not punitive damages (Greene et al., 2000). We found mixed support for prior research in the context of a corporate defendant,

where reprehensibility of conduct affected punitive damages in the appropriate manner but also impacted compensatory damage awards.

Evidence relevant to the plaintiff (e.g., injury severity, occupation) was also misused. Jennifer Robbennolt's (2003) meta-analysis on the effects of injury severity indicates a small positive relationship between extent of injury and liability judgments. Although we did not find that injury severity influenced liability verdicts (contrary to Robbennolt's meta-analysis), extent of injury was misused in the current investigation. Extent of injury either exerted a main effect or interacted with other manipulations to impact punitive damage awards even though the focus of punitive awards should be on the defendant (e.g., defendant conduct, defendant wealth).

Based on the similarity-leniency hypothesis, we predicted that mock jurors would provide better treatment to a plaintiff similar to themselves than one dissimilar (we tried to manipulate the similarity of the plaintiff to the average mock juror through both plaintiff occupation and the product). We found support for the similarity-leniency hypothesis with both manipulations. Even though plaintiff occupation should neither affect liability verdicts nor punitive damage awards, we found that mock jurors did factor plaintiff occupation into these decisions, such that better treatment was provided to the plaintiff when he was a schoolteacher rather than a neurosurgeon. Similarly, support for the similarity-leniency hypothesis also emerged when examining the product, such that higher punitive damages were levied when the plaintiff was injured while using an ordinary product (a car) as opposed to a luxurious product (a yacht). Thus, even though plaintiff occupation and the type of product should be irrelevant to liability and punitive damage verdicts, mock jurors improperly considered both pieces of information.

Comprehension of judicial instructions and decision-making

We know from the extant literature and the results of the current study that people misuse evidence and consider extralegal factors when deciding their verdicts. We believed that poor comprehension of judicial instructions was one cause of the incorrect utilization of evidence and litigant characteristics. The unfamiliar legalese in which the instructions are written, coupled with the vague guidance provided in the instructions, can contribute to jurors using certain elements of information inappropriately when determining their verdicts. Moreover, jurors' confusion concerning important legal concepts, such as "preponderance of evidence," may result in similar cases reaching different and highly variable verdicts. If jurors cannot comprehend the instructions on the law, how can they make decisions that follow the law? We hypothesized that improving the clarity and wording of the instructions would not only increase comprehension rates, but also improve the utilization of evidence (and therefore improve decision-making).

The results generally supported our expectations regarding the revision of judicial instructions as an effective procedural reform. In both phases of the investigation examining the utility of the revised instructions, comprehension rates were significantly increased. Sadly, the average comprehension score when the pattern instructions were used mirrors the findings from prior research, with comprehension barely above fifty-percent correct. Perhaps even more disappointing, when revised instructions were used after two attempts at revisions, comprehension rates still averaged just over two-thirds correct. Thus, a promising trend emerged in the data that supports reforming the judicial instructions, but further revisions are necessary to increase comprehension rates to a higher percentage.

In addition to increasing comprehension rates, we hypothesized in the third study that the revised instructions would improve mock jurors' decisions by either increasing the correct use or decreasing the improper use of certain information. Improper use of evidence was rare with the revised instructions, such that the reprehensibility of the defendant's conduct was the only piece of information not utilized correctly. Yet improper use of evidence often arose among those participants who received the original instructions. Additional research is needed to determine if the revised instructions will have the same effect on the misuse of other pieces of information used in earlier phases of the investigation (e.g., extralegal factors such as the corporate representative, or litigant characteristics such as the plaintiff's occupation). Nonetheless, since very little research has explored instruction revision in civil cases, these initial results provide promising empirical evidence in favor of instruction revision and hopefully encourage future research.

Bifurcation and decision-making

Although our hypotheses concerning judicial instructions were largely supported, confirming the value of instruction revision as an effective procedural reform, bifurcating the damage phases of the trial met with less empirical support. We initially hypothesized that bifurcating the damages phases would decrease the improper use of evidence (e.g., plaintiff occupation would affect compensatory damages but not punitive damages). Unfortunately, the results indicated that bifurcation actually *increased* the inappropriate consideration of evidence. For instance, plaintiff occupation was utilized incorrectly when the damages were bifurcated, such that occupation affected punitive damages

(though this did not occur in unitary trials). Thus, it appears as though splitting up the damages actually exacerbated the improper use of this evidence.

Moreover, bifurcating the trial did not significantly increase comprehension, although we anticipated that it might since mock jurors were able to focus on fewer issues at once. This finding is in accord with other preliminary research examining the effects of bifurcation on comprehension (Landsman et al. 1998). Finally, based on previous research (Gensler, 2000; Greene et al., 2000), we hypothesized that bifurcating the damages would augment punitive damages. Indeed, our findings mirrored the results from these prior studies. One explanation is that those who decide to award punitive damages already favor the plaintiff in terms of liability and compensation so they award higher punitive damages. That is, the pro-defense jurors would not reach the punitive damage phase of the trial and the ones who do proceed to this stage already hold a bias against the defendant. Additionally, separating evidence pertaining to punitive damages from the rest of the case serves to isolate that information which allows jurors to focus and dwell on it. Taken as a whole, the findings concerning bifurcation suggest that bifurcating the damages phases of the trial may not be an effective procedural reform and may actually hinder proper decision-making. Bifurcating the liability and damage phases of the trial may still prove a valuable procedural reform, but given the conflicting extant literature on this type of bifurcation, additional research is needed to empirically explore this possibility.

Implications

Jurors are ordinary people faced with an extraordinary and difficult task wrought with uncertainty and unpredictable variability. It should come as little surprise that two

juries hearing similar cases can produce distinct outcomes or that juries can make decisions not in line with the law by improperly considering information. Yet rather than casting the blame onto the people who step out of their normal lives into the unfamiliar realm of a courthouse to resolve disputes, we examine the system that demands jurors perform such a difficult task with little instruction and guidance. We realize there are conceptual as well as legal causes for poor jury decision-making, and that certain causes are inherent to the task facing juries. However, we contend that other causes of poor or unreliable decisions can be addressed in order to improve decision-making. Specifically, (1) exploring the role of judicial instruction comprehension in decision-making, and (2) examining the utility of revising judicial instructions lay at the heart of the current investigation.

Our results provide valuable insights into civil jury decision-making that could be utilized in actual cases. Litigators should be mindful of projects such as this one that produce results with practical implications. For instance, higher comprehension rates were associated with a pro-defense preference (except with punitive damages). Therefore, attorneys may try to assess comprehension as early as possible. Even though jurors will not yet hear judicial instructions, attorneys could create a few questions to ask during voir dire that assess general comprehension for civil litigation (e.g., who has the burden of proof). Perhaps attorneys are already aware of this to some extent, as many share the general belief that people with higher education and higher income tend to be pro-defense. Similar to comprehension, attorneys surely want to assess certain attitudes during voir dire. In the current investigation, several attitudinal factors played important roles in several stages of the decision-making process. Moreover, these attitudinal factors

tended to indicate either a pro-defense or pro-plaintiff preference, such that a juror's endorsement of specific attitudinal questions might indicate to attorneys whether that juror is pro-plaintiff or pro-defense.

Judges and other decision-makers within the legal system should also be mindful of empirical studies that explore potential procedural reforms as the results have obvious implications. Given that a chief critique of civil jury decision-making focuses on the competence of jurors, procedural reforms that might improve competence should be systematically examined. Empirical investigations provide a vehicle through which to test the utility of various procedural reforms. If the results consistently support the value of a feasible procedural reform, such as the revision of judicial instructions, then perhaps the social-scientific evidence will help convince legal decision-makers to adopt valuable reforms. Alternatively, if the results suggest a specific reform may not prove worthwhile, legal decision makers can consider such research when deciding the utility of adopting the reform. At the very least then, these studies provide evidence that can support or contest possible reforms and legal decision-makers would be prudent to familiarize themselves with social-scientific research that focuses on improving decision-making.

This investigation in particular found promising results that supported revising judicial instructions (but not bifurcation of damages) as an effective and valuable procedural reform. Yet the results may be limited to the specific instance used in the project: a product liability case involving a design defect with the vehicle manufacturer as the corporate defendant. Additional research is needed to determine if the results we found concerning the procedural reforms apply to other types of cases and defendants as well. That is, although the initial results regarding revising judicial instructions were

promising, the results need to be replicated in a variety of cases before deciding if the reform should be adopted or abandoned. Obviously, some revisions to the judicial instructions are specific to the laws necessitated by the type of case and therefore change from one type of case to the next. It is possible that certain instructions are more open to revisions than other instructions. For instance, complex cases involving foreign concepts (e.g., anti-trust litigation with numerous parties) may utilize difficult instructions not be prone to simple revision, which is precisely why some revisions may need to be examined empirically on a case-by-case basis. However, other revisions may be more general, such as those in the current research that addressed compensatory and punitive damage awards. Successful revision of these specific instructions may prove valuable regardless of the type of case. Nonetheless, that this project is based on a specific instance is a critical concern and notable limitation to the study, as the results might vary considerably with other cases. Additional possible limitations are discussed below.

Limitations

There are several other limitations to the current investigation that should be addressed. Most concern the methodological realism, or ecological validity, of the proposed studies. First, the stimulus materials involve a simulated mock trial. Thus, the common concerns are present regarding the mock juror sample, the research settings, the trial medium, the trial elements included, and the consequentiality of the task (Bornstein, 1999). For instance, the participants read a brief case summary and the judicial instructions instead of sitting in a courtroom, listening to extensive testimony and being presented with evidence and arguments by attorneys before having the judge read instructions on the law in the case. This investigation is obviously an extremely

simplified approximation of an actual, complex trial. However, it should be noted that jury simulations utilize experimental methodology, allowing systematic manipulations of independent variables and eliminating the problems of confounds and the difficulty of interpreting differences in behavior (Greene & Bornstein, 2003). Actual cases vary on multiple dimensions that can account for differences in verdict (e.g., skill and experience of attorney, idiosyncrasies of judge). Thus, although the case scenario may be simplistic, it allows us to accurately assess the effects of specific variables on verdicts.

Besides being a simplistic approximation of an actual trial, the current research neglects the process of deliberation on civil jury verdicts. Actual jurors must deliberate before reaching a verdict while the mock jurors in these studies only provide individual preferences. It is possible that the verdict inclinations and damages awarded in this research might change if mock jurors met to deliberate. However, it should be noted that one of the most robust and widely replicated findings in jury research is that the verdict preferred by the majority of jurors on the first ballot coincides with the jury's final verdict (Devine, Clayton, Dunford, Seying, & Pryce, 2000). Notably, there is some evidence that jury awards are more predictable and less variable than individual jurors' awards (e.g., Diamond et al., 1998). There is also some empirical research suggesting case type affects civil jury verdicts. For instance, malpractice defendants are relatively more successful compared to other defendants (Greene & Bornstein, 2003). More relevant to the current research, punitive damages are less likely awarded in products liability cases compared to other tort cases (Devine et al., 2000). Perhaps this limits the findings of the current investigation to products liability cases (or even more specifically, those with automotive or boat manufacturers as the corporate defendant).

Another common concern regarding simulation research is the presentation media. This investigation uses brief written summaries instead of live or even videotaped stimulus materials. However, Bornstein (1999) surveyed 11 studies that compared different trial presentation media (mode of presentation) as a main effect. He found that only 3 of the 11 studies that examined mode of presentation revealed any main effect. Moreover, among the studies that did reveal a main effect for this manipulation, the findings were inconsistent. Also, he found evidence of studies that successfully replicated their main findings despite changes in trial medium (Bornstein, 1999). Thus, the trial medium likely has little effect on our findings. There is still concern related to the consequentiality of the task, such that the trial and consequences are not real, but this problem is inherent in simulation research.

Perhaps the biggest concern related to simulation research is the sample. Usually, college students serve as the participants for jury simulations. As a result, critics are quick to point out that students are different from actual jurors (in terms of age, education, SES, etc.). Although this concern has intuitive appeal, research comparing undergraduate students to non-student adults finds very little differences in verdict inclinations in both criminal and civil case. In only five out of 26 studies reviewed was there a main effect of sample on verdicts, including a study concerning civil damage awards where students awarded more in compensatory damages than actual jurors (though there was no effect on punitive damages; Bornstein, 1999). Also, Bornstein (1999) found a number of studies that performed multiple experiments using different samples but replicated the major findings. Thus, there is very little empirical support for the notion that sample affects the outcomes of the experiments. Also, through the use of

the World Wide Web, the current investigation proposes to use both college undergraduates and adult community members from around the country as the sample in the experiments.

Utilizing the World Wide Web to gather participants introduces potential benefits as well as drawbacks. The Web-based research is accessible by a larger population, thereby allowing adult community residents across the country to participate at any time of the day. However, one drawback to this is potential sample bias because the sample is limited to those who have access to the Web (Studebaker, Robbennolt, Penrod, Pathak-Sharma, Groscup, & Devenport, 2002; Gosling, Vazire, Srivastava, & John, 2004). Although the typical Web-user tends to be young, white males, the population is becoming increasingly diverse as more people gain access daily. Moreover, the demographics of on-line participants are more representative of the general population than the undergraduate student population social scientific research tends to rely upon (Studebaker et al., 2002).

In addition, there is likely some self-selection and motivational differences between typical undergraduate and Web-based participants. Those participating via the Web have chosen to do (self-selected) mainly because of interest in the research or the subject matter (or less likely by the promise of some potential reward). Undergraduates are often required to participate; therefore, they may be less inclined to take the study seriously. A final comment about Web-based studies focuses on the validity of such research. Although some research supports that conducting research on the Web does not affect the results, future empirical research is needed that replicates the results from a project, such as this one, conducted the Web with that of different presentation media.

Fortunately, promising research is being conducted that compares Web-based samples and research with traditional samples and research. One recent study reveals that Internet findings generalize across presentation formats and that findings from Internet research are consistent with findings from traditional methods (Gosling et al., 2004).

Conclusion

Despite the several potential limitations to the current project, this research addresses a critical concern surrounding the civil jury: the (in)competence of jurors. Moreover, the focus on increasing juror competence and ultimately improving jurors' decisions makes this a worthwhile project. Finally, the plethora of results not only provides insight into how jurors determine liability and award damages but also indicates that revising judicial instructions may serve as a valuable procedural reform that can enhance decision-making. Surely, additional research is needed to further explore the complexity and distinctiveness of the civil jury and to test the myriad possible reforms but initial research like this investigation at least provides a preliminary glance. It is hoped that this project serves as a catalyst for future empirical investigations focusing on analyzing reforms and improving jurors' decisions.

Table 1

Percentages for Revenue by Wealth/Size Attitudes Interaction on Negligence

<u>REVENUE</u>	<u>ATTITUDES REGARDING WEALTH AND SIZE</u>	
	Above median	Below median
500 Million	77%	64%
50 Million	77%	77%

N=385

Note: Attitude factor is dichotomized by median split only for descriptive purposes; analyses tested the continuous measure.

Table 2

Percentages for Revenue by Wealth/Size Attitudes Interaction on Design Defect

<u>REVENUE</u>	<u>ATTITUDES REGARDING WEALTH AND SIZE</u>	
	Above median	Below median
500 Million	78%	63%
50 Million	75%	74%

N=384

Note: Attitude factor is dichotomized by median split only for descriptive purposes; analyses tested the continuous measure.

Table 3

Percentages for Representative by Anti-corporation Attitudes Interaction on Negligence

<u>REPRESENTATIVE</u>	<u>ANTI-CORPORATION ATTITUDES</u>	
	Above median	Below median
CEO	71%	75%
Engineer	79%	70%

N=385

Note: Attitude factor is dichotomized by median split only for descriptive purposes; analyses tested the continuous measure.

Table 4

Percentages for Representative by Anti-corporation Attitudes Interaction on Design Defect

<u>REPRESENTATIVE</u>	<u>ANTI-CORPORATION ATTITUDES</u>	
	Above median	Below median
CEO	71%	69%
Engineer	82%	69%

N=384

Note: Attitude factor is dichotomized by median split only for descriptive purposes; analyses tested the continuous measure.

Table 5

Natural Log of Compensatory Damages for Representative by Apology Interaction

<u>REPRESENTATIVE</u>	<u>APOLOGY</u>	
	No	Yes
CEO	10.74	11.86
Engineer	12.16	10.96

N=361

Table 6

Natural Log of Compensatory Damages for Representative by Anti-corporation Attitudes Interaction

<u>REPRESENTATIVE</u>	<u>ANTI-CORPORATION ATTITUDES</u>	
	Above median	Below median
CEO	11.05	11.46
Engineer	12.37	10.82

N=361

Note: Attitude factor is dichotomized by median split for descriptive purposes only; analyses tested the continuous measure.

Table 7

Natural Log of Punitive Damages for Representative by Anti-corporation Attitudes Interaction

<u>REVENUE</u>	<u>ATTITUDES REGARDING WEALTH AND SIZE</u>	
	Above median	Below median
500 Million	11.79	8.47
50 Million	9.75	10.31

N=360

Note: Attitude factor is dichotomized by median split only for descriptive purposes; analyses tested the continuous measure.

Table 8
Total Effects for Study #1

	Negligence	Design Defect	Comp. Damages (all Ss)	Comp. Damages (if found liable)	Punitive Damages (Yes/No)	Punitive Damages (all Ss)	Punitive Damages (if found liable)
Main effects							
Product						-.12	-.12
Job		.14	-.14 _a ¹	-.18 _a ¹			
Representative		.12 _b					
Revenue				-.13			-.13
Apology				.11			
Litigation crisis attitudes	-.23 _a ^{1,2,3}	-.26 _a ^{1,2}	-.31 _a ^{1,2}	-.29 _a ^{1,2}	-.26 _a ^{1,2,3}	-.25 _a ^{1,2,3}	-.15 ^{1,3}
Attitudes about wealth & size	.17				.11		
Anti-corporate attitudes						.12	
Strict liability attitudes						.13	
Interactions							
Revenue X Standards for wealth & size	-.18	-.17			-.20	-.15	
Representative X Anti-corporation	.14	.19 _a	.16 _a				
Representative X Revenue		-.13 ¹	-.13 ¹	-.13			
Apology X Representative			-.12				
Job X Product						.10	
Size X Job							.13
Representative X Job						.14 ¹	
Mediators							
Comprehension	-.13				-.22 _a	.13	.18 _a
Outrage toward defendant	.24 _a	.15	.28 _a	.19 _a	.19 _a	.35 _a	.20 _a
Sympathy for defendant	-.16	-.16	-.14	-.12 _b	-.17 _a	-.14	

Note1: Sub-scripts indicate significance different from $p < .05$, where $a = p < .01$, $b = p < .06$, and $c =$ non-significant.

Note2: Super-scripts indicate mediation, where 1 = outrage toward defendant, 2 = sympathy for defendant, and 3 = total comprehension.

Table 9
Direct Effects for Study #1

	Negligence	Design Defect	Comp. Damages (all Ss)	Comp. Damages (if found liable)	Punitive Damages (Yes/No)	Punitive Damages (all Ss)	Punitive Damages (if found liable)
Main effects							
Product						-.10	-.11
Job		.11 _c	-.10	-.14			
Representative		.09 _c					
Revenue				-.11			-.13
Apology				.08 _c			
Litigation crisis attitudes	-.20	-.24	-.20 _a	-.21	-.12 _c	-.13	-.08 _c
Attitudes about wealth & size	.09 _c				.08 _c		
Anti-corporate attitudes						.10	
Strict liability attitudes						.11	
Interactions							
Revenue X Standards for wealth & size	-.06 _c	-.08 _c			-.08 _c	-.08 _c	
Representative X Anti-corporation	.13 _b	.16	.12				
Representative X Revenue		-.06 _c	-.09 _c	-.12			
Apology X Representative			-.10				
Job X Product						.09 _c	
Size X Job							.11
Representative X Job						.08 _c	

Note: Sub-scripts indicate significance different from $p < .05$, where $a = p < .01$, $b = p < .06$, and $c =$ non-significant.

Table 10

Mean Scores on Comprehension Measure per Instruction Manipulation for Study #2

JUDICIAL INSTRUCTIONS	COMPREHENSION MEASURE BREAKDOWN					
	General issues (3 questions)	Design defect issues (6 questions)	Compensatory damages (1 question)	Comprehension sub-total (first 10 questions)	Punitive damages (5 questions)	Comprehension total (15 total questions)
No instructions	.88 _a	2.43 _a	.58 _a	3.89 _a	2.04 _a	5.93 _a
Original judicial instructions	1.25 _b	2.68 _{ab}	.70 _{ab}	4.63 _b	2.55 _b	7.18 _b
Revised judicial instructions	1.44 _b	3.02 _b	.73 _b	5.19 _c	3.02 _c	8.21 _c

Note: Different sub-scripts indicate mean scores are significantly different from others in column, $p < .05$.

Table 11

Comprehension of Defect Issues by Trial Type Interaction (Percentage represents willingness to find defendant liable for negligence)

TRIAL TYPE	COMPREHENSION SCORE	
	Low	High
Unitary	77%	51%
Bifurcated	72%	59%

N=406

Note: Comprehension score is dichotomized by median split only for descriptive purposes; analyses tested the continuous measure.

Table 12

Square Root of Compensatory Damages for Trial Type by Job Interaction

TRIAL TYPE	PLAINTIFF JOB	
	Neurosurgeon	School-teacher
Unitary	1656.46	1393.85
Bifurcated	1800.08	1070.36

N=361

Table 13

Percentages for Interaction of Trial Type and Job on Decision to Award Punitive Damages

TRIAL TYPE	PLAINTIFF JOB	
	Neurosurgeon	School-teacher
Unitary	76%	75%
Bifurcated	68%	84%

N=390

Table 14

Natural Log of Punitive Damages for Trial Type by Comprehension for Compensatory Damages

<u>TRIAL TYPE</u>	<u>COMPREHENSION SCORE</u>	
	Low	High
Unitary	10.94	10.41
Bifurcated	11.06	10.08

N=406

Note: Comprehension score is dichotomized by median split only for descriptive purposes; analyses tested the continuous measure.

Table 15

Natural Log of Punitive Damages for Trial Type by Comprehension for Punitive Damages

<u>TRIAL TYPE</u>	<u>COMPREHENSION SCORE</u>	
	Low	High
Unitary	9.96	11.22
Bifurcated	12.63	10.52

N=406

Note: Comprehension score is dichotomized by median split only for descriptive purposes; analyses tested the continuous measure.

Table 16
Total Effects for Study #2

	Negligence	Design Defect	Comp. Damages (all Ss)	Comp. Damages (if found liable)	Punitive Damages (Yes/No)	Punitive Damages (all Ss)	Punitive Damages (if found liable)
Main effects							
Instructions	.14						
Trial Type						.12	.18 _a
Job			-.11	-.21 _a			
Revenue						-.12	-.14
Litigation crisis attitudes				-.12		-.12	-.14
Attitudes about wealth & size	.17						
Anti-corporate attitudes	.16		.14 ¹				
Interactions							
Trial Type X Job				-.18	.14	-.13	-.19 _a
Mediators							
Comprehension for defect issues	-.22 _a	-.23 _a			-.32 _a		
Comprehension for compensatory damages			-.11 ¹			-.21 _a	
Comprehension for punitive damages							.19 _a

Note1: Sub-scripts indicate significance different from $p < .05$, where $a = p < .01$, $b = p < .06$, and $c =$ non-significant.

Note2: Effects are for square root of damage awards. Super-scripts indicate significance for natural log of damage awards, $1 = p < .05$, and $2 = p < .01$.

Table 17

Mean Scores on Comprehension Measure per Instruction manipulation for Study #3

JUDICIAL INSTRUCTIONS	COMPREHENSION MEASURE BREAKDOWN					
	General issues (3 questions)	Design defect issues (6 questions)	Compensatory damages (1 question)	Comprehension sub-total (first 10 questions)	Punitive damages (5 questions)	Comprehension total (15 total questions)
Original judicial instructions	1.37 _a	3.07 _a	.81 _a	5.25 _a	2.32 _a	7.57 _a
Revised judicial instructions	1.92 _b	4.15 _b	.85 _a	6.92 _b	3.23 _b	10.15 _b

Note: Different sub-scripts indicate mean scores are significantly different from others in column, $p < .05$.

Table 18

Square Root of Compensatory Damages for Revenue by Litigation Crisis Attitudes Interaction

REVENUE	LITIGATION CRISIS ATTITUDES	
	Above median	Below median
500 Million	360.06	676.69
50 Million	427.85	305.95

N=522

Note: Attitude factor is dichotomized by median split only for descriptive purposes; analyses tested the continuous measure.

Table 19

Natural Log of Compensatory Damages for Judicial Instructions by Litigation Crisis Attitudes Interaction

INSTRUCTIONS	LITIGATION CRISIS ATTITUDES	
	Above median	Below median
Original	6.37	7.98
Revised	6.52	7.21

N=522

Note: Attitude factor is dichotomized by median split only for descriptive purposes; analyses tested the continuous measure.

Table 20

Natural Log of Compensatory Damages for Injury Severity by Strict Liability Attitudes Interaction

EXTENT OF INJURY	STRICT LIABILITY ATTITUDES	
	Above median	Below median
Severe	8.29	6.07
Mild	6.38	5.46

N=522

Note: Attitude factor is dichotomized by median split only for descriptive purposes; analyses tested the continuous measure.

Table 21

Raw Mean of Compensatory Damages for Injury Severity by Comprehension for Compensatory Damages Interaction

<u>EXTENT OF INJURY</u>	<u>COMPREHENSION SCORE</u>	
	Low	High
Severe	\$793,380	\$1,662,526
Mild	\$337,229	\$77,388

N=522

Note: Comprehension score is dichotomized by median split only for descriptive purposes; analyses tested the continuous measure.

Table 22

Natural Log of Punitive Damages for Injury Severity by Litigation Crisis Attitudes Interaction

<u>EXTENT OF INJURY</u>	<u>LITIGATION CRISIS ATTITUDES</u>	
	Above median	Below median
Severe	5.93	7.43
Mild	5.39	5.73

N=522

Note: Attitude factor is dichotomized by median split only for descriptive purposes; analyses tested the continuous measure.

Table 23

Natural Log of Punitive Damages for Defendant Revenue by Litigation Crisis Attitudes Interaction

<u>REVENUE</u>	<u>LITIGATION CRISIS ATTITUDES</u>	
	Above median	Below median
500 Million	5.60	7.71
50 Million	5.50	5.42

N=522

Note: Attitude factor is dichotomized by median split only for descriptive purposes; analyses tested the continuous measure.

Table 24
Total Effects for Study #3

	Design Defect	Comp. Damages (all Ss)	Comp. Damages (if found liable)	Punitive Damages (Yes/No)	Punitive Damages (all Ss)	Punitive Damages (if found liable)
Main effects						
Injury Severity		-.25 _a	-.38 _a		-.22 _a	-.21 _a
Conduct	-.18 _a	-.14				
Revenue			-.15		-.16 _a	-.25 _a
Litigation crisis attitudes	-.18 _a	-.15		-.18 _a	-.17 _a	-.10 _b
Strict liability attitudes	.18 _a	.17 _a	.12 ¹	.21 _a	.19 _a	.20 ¹
Attitudes about wealth and size				-.13		
Anti-corporate attitudes		.10 ¹				
Interactions						
Litigation crisis attitudes X Revenue	.15 _a	.14			.13	.15 ¹
Litigation crisis attitudes X Instructions		-.09	-.11			-.13
Litigation crisis attitudes X Injury severity					.10	
Strict liability attitudes X Injury severity		-.11 _a				
Injury severity X Revenue			.19 ¹		.14	.23 _a
Injury severity X Conduct						-.18
Mediators						
Comprehension for defect issues	-.13 _a	-.14 ¹		-.14	.22 _b	
Comprehension for punitive damages				-.12		
Revenue X Comprehension for punitive damages				-.22	-.24 ¹	-.25
Revenue X Comprehension for general issues						-.31 _a

Note1: Sub-scripts indicate significance different from $p < .05$, where $a = p < .01$, $b = p < .06$, and $c =$ non-significant.

Note2: Effects are for square root of damage awards. Super-scripts indicate significance for natural log of damage awards, $1 = p < .05$, and $2 = p < .01$.

Table 25

Percentages for Interaction of Defendant Conduct and Judicial Instruction on Liability Verdicts

<u>REPREHENSIBILITY OF CONDUCT</u>	<u>JUDICIAL INSTRUCTIONS</u>	
	Original	Revised
Low	54%	51%
High	62%	68%

N=522

Table 26

Percentages for Interaction of Defendant Conduct and Judicial Instruction on Decision to Award Punitive Damages

<u>REPREHENSIBILITY OF CONDUCT</u>	<u>JUDICIAL INSTRUCTIONS</u>	
	Original	Revised
Low	45%	42%
High	51%	55%

N=522

Table 27

Raw Mean of Compensatory Damages for Defendant Revenue by Judicial Instruction Interaction

<u>REVENUE</u>	<u>JUDICIAL INSTRUCTIONS</u>	
	Original	Revised
500 million	\$1,745,824	\$1,105,469
50 million	\$2,443,132	\$992,825

N=522

Figure 1

Mediation of litigation crisis attitudes on negligence verdicts by sympathy for defendant

Figure 2

Mediation of litigation crisis attitudes on design defect verdicts by sympathy for defendant

Figure 3

Mediation of litigation crisis attitudes on compensatory damages by outrage for defendant

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Appendix A
Attitudinal Measure from Study One

Please fill in the circle next to each of the following statements, indicating whether you agree or disagree with the statement on a scale from 1 to 9, where 1 represents that you "strongly disagree" with the statement and 9 represents that you "strongly agree" with the statement.

	Strongly Disagree								Strongly Agree
	1	2	3	4	5	6	7	8	9
1. People are too quick to sue.									
2. There should be a cap on punitive damage amounts.									
3. A company should never be excused from compensating consumers injured by its products.									
4. Because of juries, injured people are unduly profiting from their misfortune.									
5. A defendant that apologizes should be treated more leniently than one who does not apologize.									
6. Jury awards are too large.									
7. A company that exposes a consumer to a risk in using its product should always be held liable in a trial.									
8. The plaintiff's job should not matter when determining liability.									
	1	2	3	4	5	6	7	8	9

9. Corporations will do anything for profit.									
10. Outrageous monetary awards in liability cases are ruining our society.									
11. Big, wealthy corporations don't care about consumers.									
12. Most people who sue in court have legitimate grievances.									
13. Wealthier defendants should pay more than less wealthy defendants.									
14. The CEO of a corporate defendant should be present at trial.									
15. A corporation should be held to a higher standard of responsibility than an individual.									
16. Larger companies should pay more than smaller companies if someone is injured by their product.									

Appendix B
Case Summary from Study One

Based on the following evidence, your task is to decide whether Pontack Motor Corporation is liable for the death of Ronald Stevens because a design defect existed in his car. PLEASE READ THE FOLLOWING CAREFULLY:

A product is defective when the foreseeable risks of harm posed by the product could have been reduced or avoided by the adoption of a reasonable alternative design by the seller or other distributor, and the omission of the alternative design renders the product not reasonably safe.

On October 23, 2002, Ronald Stevens was driving his 2000 Pontack Seara family sedan on an off-ramp of Interstate 101 in California. Witnesses stated that Stevens' car was stopped at a red light for approximately two minutes when a fire erupted from under the hood when the vehicle stopped. The fire quickly spread to the passenger compartment and then the rear of the vehicle. Ronald Stevens was killed in the fire. His estate is suing the manufacturer of the car, Pontack Motor Corporation.

The plaintiff presented the following evidence:

Carl Rung, a fire origin and cause expert specializing in vehicle fires, inspected the remains of the Seara in order to determine the potential causes of the fire. Rung testified that, in his opinion, the rubber fuel lines in the Seara were defective and ultimately caused the fire. The fuel lines extend from the gas tank in the rear of the vehicle to the engine compartment in the front of the car. Rung testified that the fuel lines in the Seara were composed of flexible rubber, which tends to harden and crack over time. Cracks in the rubber fuel lines allowed leakage of fuel and flammable vapors to build up in the engine compartment. Rung testified that when the car is in motion, airflow serves to ventilate and cool the engine compartment, such that flammable vapors do not collect under the hood in sufficient quantities to pose a problem. However, when the car slows down or stops, the air-cooling effect ceases, the flammable fuel vapors collect in the engine compartment and may ignite in the presence on any spark. Rung also stated that he had seen similar instances of vehicle fires caused by leaks in rubber fuel lines. Rung explained that fuel lines made of high-grade metal such as high tensile stainless steel or aluminum are more expensive than rubber fuel lines but are much less likely to deteriorate over time or leak.

The plaintiff also produced Pontack documents describing the pre-sale design of the fuel system in the Pontack Seara. From these documents, the plaintiff showed that Pontack estimated that, if the company sold 250,000 cars per year with the rubber hose assembly,

there could be up to approximately 20 fires per year due to fuel leaks, and that these fires could result in 1 death per year. The company estimated that lawsuits and settlements resulting from these fires would cost the company approximately 13.85 million dollars (\$13,850,000) per year. Pontack used the values set by the National Highway Traffic Safety Administration and calculated that the average lawsuit from a death would cost 3.5 million dollars (\$3,500,000) and from each non-fatal fire would cost \$550,000. Pontack decided not to change its use of the rubber fuel lines before it placed the Seara on the market.

The plaintiff also presented the testimony of expert economist Mark Dougherty regarding compensatory and punitive damages. Dougherty testified that Stevens' annual income as a neurosurgeon schoolteacher was \$250,000 a year \$50,000 a year. Given that Stevens was expected to work for 20 more years, Dougherty testified that his family should receive 5 million dollars (\$5,000,000) 1 million dollars (\$1,000,000) in lost earnings. Dougherty also testified that any compensatory damages awarded should include \$10,000 for funeral expenses, and that \$1,000,000 was a common amount to award for the mental and emotional pain and suffering as well as loss of consortium his family must face in his absence. Thus, Dougherty claimed that at least 6 million dollars (\$6,000,000) 2 million dollars (\$2,000,000) should be awarded to the estate of Ronald Stevens for compensatory damages. Dougherty also stated that if the jury found the defendant's conduct reprehensible enough to award Stevens' family punitive damages, then the jury should consider the financial status of the corporation.

Dougherty said, "Pontack Motor Corporation is one of the largest smallest automotive manufacturing corporations in the country, with branches in 40 states with branches in 4 states . Also, Pontack's annual net revenue is 500 million dollars per year 50 million dollars per year. Both of these things should be kept in mind when determining the amount of punitive damages necessary to properly punish Pontack and to deter them from such misconduct in the future."

The defendant presented the following evidence:

Martin Stempler, the CEO of Pontack Motor Corporation an associate mechanical and electrical engineer who works on the fuel systems for Pontack Motor Corporation , testified that he disagreed with Rung's opinion that the rubber hose assembly caused the fire. Stempler testified, based in part on the witness statements relating how the fire progressed, that the source of the fire must have been a catastrophic release of fuel, and that small cracks in the flexible rubber fuel line could not have been the source of fuel, in the form of vapor or aerosol, that would permit the kind of fire that resulted. Based in part on his inspection of the photographs of the remains of the fuel lines and witness statements, he concluded that the rubber fuel lines did not crack because they were made of rubber, but instead ruptured because of a clog caused by poor engine maintenance, which is not the fault of Pontack.

Stempler stated that failure to check and replace the fuel filters in a timely manner could allow deposits to accumulate in the fuel lines, potentially clogging them and contributing to a sudden rupture in the line. He also stated that he found a low-quality fuel in the engine, below that which is recommended in the Owner's Manual, which allows more deposits to form. Stempler also presented maintenance reports from the mechanic who regularly worked on the Stevens' car. The reports showed that a maintenance check-up was performed three months ago, without a filter replacement, and the mechanic reports did not indicate any problems with the fuel lines. Stempler pointed out that fuel lines that leak do so slowly and gradually, and there would have likely been indications of cracks forming in the rubber lines that any mechanic would have seen.

Stempler also testified about a series of tests that the company does on the fuel systems in its cars to test for leaks before any car is distributed. Stempler testified that Pontack utilizes a ultra-violet leak detection system, which involves filling the rubber lines with a chemical dye and then using ultraviolet light to detect if the tracer dye leaks through at any point in the fuel lines. The company also submerges their rubber fuel lines in several liquids of varying density (e.g., water, gasoline) and never found bubbles or other indications of leakage in the rubber lines. Finally, the company tests the fuel lines by filling them with Leak Detective, a product specifically designed to test for gas leaks, and found no Leak Detective on the outside of the fuel lines. Still, Stempler conceded that, over extended periods of time, normal deterioration of the rubber hose assembly could potentially lead to fuel leaks, as described in the company's documents presented by the plaintiff.

Before finishing his testimony, Stempler faced the family of Ronald Stevens and said, "I am truly, deeply sorry for your loss. My heart goes out to you in this time of tragedy and I offer my sincerest condolences regarding this unfortunate and terrible accident."

The plaintiff made the following arguments:

"Ladies and gentlemen, you must determine whether the design of Ronald Stevens' Seara was defective. The expert testimony in this case and company documents have shown that the flexible rubber fuel lines in the Pontack Seara is defective. A product is defective when a reasonable alternative design is possible, the company does not adopt that design, and thus the product is not reasonably safe. Here, Pontack knew of the ability to make the fuel lines out of high grade metal, which would be safer and less likely to leak. The level of risk that the company exposed customers to is not reasonable, and therefore the product was defective and should not have been sold. In compensation of Ronald Stevens' death, we ask for 6 million dollars (\$6,000,000). In order to punish the company for its outrageous behavior, we ask that you find them also liable for punitive damages in the amount of 25 million dollars (\$20,000,000) 10 million dollars (\$10,000,000). This figure should be made in light of the reprehensibility of the defendant's conduct and the company's financial situation."

The defense made the following arguments:

“Ladies and gentlemen, the evidence in this case has not shown conclusively that the rubber fuel lines in Ronald Stevens’ car were defective. Reports from Stevens’ mechanic did not show any indication of leaks in the fuel lines. And witness statements regarding how the fire progressed suggest a catastrophic release of fuel as the cause of the fire, which would not result from small leaks in the fuel lines as alleged by the plaintiff. Moreover, normal deterioration of the fuel lines does not mean the car is defective. Failure to properly maintain the car is the more likely cause of this tragic accident. Every product brings with it some level of risk, which is normal and does not make the company responsible. The safety tests conducted by Pontack demonstrated that the car was safe, that the rubber fuel lines worked correctly and did not leak, and that Pontack was not reckless in its conduct.”

Please respond whether you agree or disagree with the following statements on a scale from 1 to 9, where 1 represents that you "strongly disagree" with the statement and 9 represents that you "strongly agree" with the statement.

	Strongly Disagree								Strongly Agree
	1	2	3	4	5	6	7	8	9
1. The defendant ignored a serious problem associated with its product.									
2. The defendant's actions anger me.									
3. I feel sympathy for the Pontack Corporation.									
4. I did not believe Martin Stempler because he works for Pontack Corporation.									
5. Pontack Corporation is concerned about the safety of its cars.									
6. The defendant's decisions were immoral.									
	1	2	3	4	5	6	7	8	9

The defense made the following arguments:

“Ladies and gentlemen, the evidence in this case has not shown conclusively that the rubber fuel lines in Ronald Stevens’ car were defective. Reports from Stevens’ mechanic did not show any indication of leaks in the fuel lines. And witness statements regarding how the fire progressed suggest a catastrophic release of fuel as the cause of the fire, which would not result from small leaks in the fuel lines as alleged by the plaintiff. Moreover, normal deterioration of the fuel lines does not mean the car is defective. Failure to properly maintain the car is the more likely cause of this tragic accident. Every product brings with it some level of risk, which is normal and does not make the company responsible. The safety tests conducted by Pontack demonstrated that the car was safe, that the rubber fuel lines worked correctly and did not leak, and that Pontack was not reckless in its conduct.”

Please respond whether you agree or disagree with the following statements on a scale from 1 to 9, where 1 represents that you "strongly disagree" with the statement and 9 represents that you "strongly agree" with the statement.

	Strongly Disagree								Strongly Agree
	1	2	3	4	5	6	7	8	9
1. The defendant ignored a serious problem associated with its product.									
2. The defendant's actions anger me.									
3. I feel sympathy for the Pontack Corporation.									
4. I did not believe Martin Stempler because he works for Pontack Corporation.									
5. Pontack Corporation is concerned about the safety of its cars.									
6. The defendant's decisions were immoral.									
	1	2	3	4	5	6	7	8	9

7. I feel sympathy for the Ronald Stevens.									
8. The defendant should be punished.									
9. The defendant is a large corporation.									

Appendix C
Original Instructions used in Study One

Please read the following instructions given by the judge very carefully:

The plaintiff alleges that (1) the defendant was negligent and (2) a design defect exists in the defendant's product.

In a civil case such as this one, the burden of proof is on the plaintiff to establish his/her case by a preponderance of the evidence. When I say that the plaintiff has the burden of proof, I mean that the evidence must satisfy you that the proposition on which the plaintiff has the burden of proof has been established by evidence which outweighs the evidence against it. Proof by a preponderance of the evidence means proof that something is more likely than not. It means that certain evidence, when compared to the evidence opposed to it, has the more convincing force and makes you believe that something is more likely true than not. If the plaintiff fails to meet his or her burden of proof or if the evidence weighs so evenly that you are unable to say that there is a preponderance on either side, you must resolve the question against the party who has the burden of proof in favor of the opposing party.

I. Negligence

The plaintiff claims that the Pontack Corporation was negligent in its design of the Seara. Negligence is the lack of ordinary care; that is, the failure to do an act which a reasonably careful and prudent person would do, or the doing of an act which a reasonably careful and prudent person would not do, under the same or similar circumstances to protect others from bodily injury. A manufacturer is negligent if it fails to use a reasonable amount of care, skill and diligence in designing and supplying the product that a reasonably careful manufacturer would use in similar circumstances to avoid exposing others to a foreseeable risk of harm. In determining whether Pontack Corporation used reasonable care, you should balance what Pontack knew or should have known about the likelihood and severity of potential harm from the product against the burden of taking safety measures to reduce or avoid the harm. A company must reasonably anticipate the environment in which the product is normally used and must design the product to minimize foreseeable risks of harm that may result from using the product in such an environment.

Although a company has a duty to exercise reasonable care, the company is not required to design a product that is foolproof or incapable of producing injury. To prove that Pontack Corporation was negligent, the plaintiff must prove by a preponderance of the evidence that Pontack failed to use reasonable care, skill, and diligence in designing its product and that this breach of duty was the proximate cause of the plaintiff's injuries.

II. Product Liability – Design Defect

The plaintiff also claims that the Seara was a defective product. A product is defective when the foreseeable risks of harm posed by the product could have been reduced or avoided by the adoption of a reasonable alternative design, and the omission of the alternative design renders the product not reasonably safe. In this charge when I refer to a reasonably safe product I mean a product that is reasonably fit, suitable and safe for its intended or reasonably foreseeable uses. The plaintiff must also prove that the alleged design defect was the proximate cause of injury.

In proving a defect in the design of a product, the plaintiff need not prove that Pontack knew that the accident in this case could happen as it did. Knowledge of the dangers of the product is legally placed upon the manufacturer/seller. The question for you to decide is whether, assuming the defendant knew the dangers of the product, it was nevertheless reasonably careful in the manner in which it designed the Seara.

You are to decide whether the safety benefits from altering the design as proposed by the plaintiff were greater than the resulting costs or disadvantages caused by the proposed design, including any diminished usefulness or diminished safety. If the failure to incorporate a practical and technically feasible safer alternative design made the Seara not reasonably safe, then the product was designed in a defective manner. If, on the other hand, the plaintiff has not proven there existed a practical and technically feasible safer alternative, or if you find that the Seara as designed was reasonably safe, then the product was not designed in a defective manner.

III. Damages—Compensatory

If you find in favor of the plaintiff, you should award as actual damages, insofar as they have been proved by a preponderance of the evidence and insofar as they were caused by the defendant's negligence, an amount which will reasonably compensate for his/her injuries, past and future, that were proximately caused by the defendant's actions. This compensation is called "compensatory damages." The amount of damages must include an award for each item of harm that was caused by Pontack's wrongful conduct, even if the particular harm could not have been anticipated. You must attempt to put the plaintiff in the same position, as far as money can do it, that he/she would have been in had the injury not occurred. There is often no mathematical formula in making this determination. Instead, you must use human experience and apply sound common sense in determining the amount of your verdict.

In a personal injury action, there are two general types of damages with which you must be concerned: economic and noneconomic damages. Economic damages are monies awarded as compensation for monetary losses and expenses which the plaintiff has incurred, or is reasonably likely to incur in the future. Noneconomic damages are monies awarded as compensation for non-monetary losses and injuries which the plaintiff has suffered, or is reasonably likely to suffer in the future. They are awarded for such

things as physical pain and suffering, mental and emotional pain and suffering, loss of consortium, and a diminution of the ability to enjoy life's pleasures.

IV. Damages—Punitive

The plaintiff also seeks punitive (exemplary) damages, based on the defendant's disregard of the risk associated with its product when the defendant designed the cars. The plaintiff is not automatically entitled to punitive damages solely because you have found that the defendant liable. However, if you do award the plaintiff actual (compensatory) damages on the claims of negligence, then you should consider whether punitive damages should be assessed against the defendant. The purposes of punitive damages are to punish a wrongdoer for the conduct that harmed the plaintiff and to serve as an example to others.

If you find that the injury complained of was attended by circumstances of malice, then you may assess a reasonable sum as punitive damages. An act is maliciously done if it is conduct which is carried on by the defendant with a willful and knowing disregard for the safety of others and the defendant's conduct was a gross deviation from the level of care which an ordinary person would exert in the same or similar circumstances. A person acts with knowing disregard when he or she is aware of the probable dangerous consequences of his or her conduct and deliberately fails to avoid those consequences.

There is no fixed standard for determining the amount of punitive damages, and you are not required to award any punitive damages. If you decide to award punitive damages, you should consider the following in determining the amount: (1) The reprehensibility of the conduct of the defendant and (2) The amount of punitive damages which will have a deterrent effect on the defendant in light of the defendant's financial condition.

Appendix D
Revised Instructions used in Study Two

Please read the following judicial instructions very carefully:

The plaintiff claims that (1) the defendant was negligent and (2) a design defect exists in the defendant's product.

In a civil case such as this one, the burden of proof is on the plaintiff to establish his/her case by a preponderance of the evidence. Proof by a preponderance of the evidence means that something is more likely true than not. It means that certain evidence is more convincing than other evidence and makes you believe that something is more likely true than not. If the plaintiff fails to meet his/her burden of proof, or if the evidence weighs evenly on both sides, your verdict must be in favor of the defendant.

I. Negligence

The plaintiff claims that the Pontack Corporation was negligent in its design of the X5. Negligence is the lack of ordinary care; that is, failure to do something a reasonably careful person would do, or doing something a reasonably careful person would not do under similar circumstances to protect others from bodily injury. A manufacturer is negligent if it fails to use a reasonable amount of care, skill and diligence in designing and supplying the product in order to avoid exposing others to a foreseeable risk of harm. In determining whether Pontack Corporation used reasonable care, you should balance what Pontack knew or should have known about potential harm from the product against the safety measures taken by Pontack to reduce or avoid potential harm. A company must anticipate the environment in which the product is normally used and must design the product to minimize foreseeable risks of harm that could result from using the product in such an environment.

Although a company has a duty to exercise reasonable care, the company is not required to design a product that is foolproof or injury-proof. To prove that Pontack Corporation was negligent, the plaintiff must show that it is more likely than not that Pontack failed to use reasonable care, skill, and diligence in designing its product, which played a large part in causing the plaintiff's injuries.

II. Product Liability – Design Defect

The plaintiff also claims that the X5 was a defective product. A product is defective when the potential risks of harm caused by the product could have been reduced by using a reasonable alternative design. Failing to use the alternative design makes the product not reasonably safe. A reasonably safe product is one that is reasonably suitable and safe for its intended uses. Also, the plaintiff must prove that the alleged design defect played a large part in causing the plaintiff's injuries.

You must decide if the safety benefits from the alternative design proposed by the plaintiff outweigh the costs or disadvantages caused by altering the design, including any reduction in usefulness or safety. If the failure to use a practical and safer alternative design made the X5 not reasonably safe, then the product was designed in a defective manner. If, on the other hand, the plaintiff has not proven there existed a practical and safer alternative, or if you find that the X5 as designed was reasonably safe, then the product was not designed in a defective manner.

III. Damages—Compensatory

If you find in favor of the plaintiff on either claim of negligence or design defect, you should award an amount for compensatory damages that will reasonably compensate the plaintiff for his/her injuries and losses, both past and future, which were caused by the defendant's actions. Therefore, you should only consider the plaintiff's injuries when deciding compensatory damages. You must attempt to put the plaintiff in the same position that he/she would have been in if the injury never occurred, as far as money can do so. There is often no mathematical formula in making this determination. Instead, you must use human experience and apply sound common sense in determining the amount for compensatory damages.

In a personal injury action, there are two general types of compensatory damages: economic and non-economic damages. Economic damages are monies awarded as compensation for monetary losses and expenses that the plaintiff has incurred, or is likely to incur in the future. Non-economic damages are monies awarded as compensation for non-monetary losses and injuries that the plaintiff has suffered, or is likely to suffer in the future. Such damages are awarded for such things as physical, mental, or emotional pain and suffering, loss of companionship, and a lessening of the ability to enjoy life's pleasures.

IV. Damages—Punitive

The plaintiff also seeks punitive damages, based on the claim that the defendant ignored the risks associated with its product. The plaintiff is not automatically entitled to punitive damages just because you found the defendant negligent or liable. However, if you do award the plaintiff compensatory damages, then you should consider whether or not punitive damages should be assessed against the defendant. The purposes of punitive damages are to punish a wrongdoer for the conduct that harmed the plaintiff and to deter the defendant and others from engaging in similar misconduct.

If you find that the defendant's conduct was malicious, then you may assess a reasonable sum as punitive damages. An act is maliciously done if it is conducted with a willful and knowing disregard for the safety of others and is a gross deviation from the level of care an ordinary person would use in similar circumstances. A person acts with knowing disregard when he/she is aware of the potentially dangerous consequences of his/her conduct but fails to avoid those consequences.

There is no fixed standard for determining the amount of punitive damages and you are not required to award punitive damages. If you decide to award punitive damages, you should consider the following in determining the amount: (1) The malicious conduct of the defendant and (2) The defendant's financial condition so that the punitive damages will have a deterrent effect on the defendant. Therefore, you should only consider the defendant when determining punitive damages and not consider the plaintiff.

Appendix E
Instruction Comprehension Measure

Please answer the following questions about the decision you are about to make.

1. Who has the burden of proof in a civil case?

- ☐ (a) The defendant ☒ (b) The plaintiff ☐ (c) The judge ☐ (d) The jury

2. Suppose the jury is discussing the standard of proof in the civil case and juror # 2 wants to know what “proof by a preponderance of the evidence” means. You tell him:

- ☐ (a) No doubt is left that the claims made by the plaintiff are true.
☐ (b) No doubt is left that the claims made by the plaintiff are false.
☒ (c) The claims made by the plaintiff are more likely true than not.
☐ (d) None of the above.

3. What happens when the evidence weighs evenly on both sides?

- ☐ (a) The plaintiff wins.
☐ (b) The lawsuit is retried.
☐ (c) The judge decides who wins.
☒ (d) The defendant wins.

4. In this case, the plaintiff claims that the Pontack Seara was defectively designed. According to the legal standard, a product is defective if:

- ☒ (a) The product is not reasonably safe.
☐ (b) The product is unreasonably dangerous.
☐ (c) The product does not perform as a reasonable consumer would expect.
☐ (d) The product caused any injury.

5. Assume the jury is considering the alleged design defect of the product. Juror #2 says that any plaintiff injured by a product deserves to be awarded damages. How would you respond:

- ☐ (a) He’s right and the defendant should pay compensatory damages.
☒ (b) He’s wrong because the law does not require the defendant to

make a product that is never defective.

☐ (c) He's right and the defendant should be ordered to pay punitive damages.

☐ (d) He's wrong because the plaintiff may have contributed to her injury.

6. A company is not required to design a product that is foolproof or injury-proof.

☒ (a) True ☐ (b) False

7. Assume that the plaintiff proves that the defendant knew that his/her product was potentially defective and capable of causing injuries. Which of the following is true:

☐ (a) The defendant is automatically found to be at fault in causing the plaintiff's injuries.

☐ (b) The defendant must explain his/her conduct in distributing the potentially defective product.

☐ (c) The defendant must pay money to compensate the plaintiff for his/her injuries.

☒ (d) The plaintiff must still prove that the product defect played a large role in causing his/her injuries.

8. In product liability cases, a plaintiff must prove that:

☐ (a) There exists a design with less risk of harm.

☐ (b) The safety benefits from a design change outweigh the resulting costs of altering the design.

☐ (c) Failing to use an alternative design renders the product unsafe.

☒ (d) All of the above.

9. Suppose that your jury determines that the product was designed as reasonably safe. The next step would be:

☐ (a) conclude that the defendant's product was defective.

☐ (b) determine if the defendant was negligent.

☐ (c) assess the amount of punitive damages awarded to the plaintiff.

☒ (d) reject the claim that the defendant's product was defective.

10. Assume that Juror #5 want to know how to award compensatory damages. You tell her that the rule of compensatory damages is:

- ☐ (a) to give whatever amount the plaintiff requests.
- ☒ (b) that the amount should be based on all past and future injuries and losses suffered by the plaintiff due to the defendant's conduct.
- ☐ (c) that the amount should be based on the defendant's wealth.
- ☐ (d) that the judge will provide them with a reasonable figure that the jury can adjust as they see fit.

11. A plaintiff is automatically entitled to punitive damages if the jury finds the defendant liable.

- ☐ (a) True
- ☒ (b) False

12. One purpose of punitive damages is to punish the defendant. Another purpose of punitive damages is to:

- ☐ (a) Compensate the plaintiff for pain and suffering.
- ☐ (b) Compensate the plaintiff for his/her medical bills and lawyer fees.
- ☒ (c) Deter the defendant and others from engaging in misconduct in the future.
- ☐ (d) Bankrupt the defendant so s/he cannot engage in misconduct in the future.

13. Suppose the jury is discussing the definition of malicious conduct. Juror #1 wants to know what it means to act with "knowing disregard." You tell him it means that someone acted:

- ☒ (a) with awareness of the potentially harmful consequences but failed to avoid them anyway.
- ☐ (b) to intentionally misrepresent or conceal something.
- ☐ (c) so despicably that such actions would sicken reasonable people.
- ☐ (d) none of the above.

14. The jury should consider the financial condition of the defendant when deciding punitive damages.

- ☒ (a) True ☐ (b) False

15. How should you factor in the severity of the plaintiff's injuries when deciding whether or not to award punitive damages?

- ☐ (a) you should double the cost of the plaintiff's medical bills to determine an amount.
- ☐ (b) you should consider the plaintiff's pain and suffering that have occurred or will occur as a result of the injury.
- ☒ (c) you should not consider the plaintiff's injuries for punitive damages.
- ☐ (d) you should consider the effect of the plaintiff's injury on his/her family.

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