THE PERFORMANCE OF THE AMERICAN CIVIL JURY: AN EMPIRICAL PERSPECTIVE

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> The contemporary debate over the jury is also one in which the ultimate prize is public opinion.... Law's growing prominence and complexity, its penetration into the interstices of daily life, have galvanized public attention. Articles about "hyperlexis," novel claims, soaring insurance rates, declining availability of coverage, overwhelming judicial caseloads, high legal costs, complex litigation, and interminable trials are common fare in the mass media. Some of this commentary is accurate; much of it is false or misleading. At the center of the contending arguments, however, is the jury's contribution to these conditions.[1]

Professor Schuck's comments provide a good introduction to this article. Over more than two decades, 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.[2] Juries have been said, variously, to be incompetent, capricious, unreliable, biased, sympathy-prone, confused, hostile to corporate defendants and doctors, gullible, excessively generous in awarding compensatory damages, and out of control when awarding punitive damages.

In *Reconstructing Justice: An Agenda for Trial Reform*, Franklin Strier has summarized these widely held views about the "intrinsic limitations" of the jury system.[3] He argues that much research supports the charge that juries are

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1. Peter H. Shuck, *Mapping the Debate on Jury Reform, in* VERDICT: ASSESSING THE CIVIL JURY SYSTEM 306 (Robert Litan ed., 1993) (footnotes omitted).

2. Reviews of these criticisms are contained in STEPHEN DANIELS & JOANNE MARTIN, CIVIL JURIES AND THE POLITICS OF REFORM (1995); and NEIL VIDMAR, MEDICAL MALPRACTICE AND THE AMERICAN JURY: CONFRONTING THE MYTHS ABOUT JURY INCOMPETENCE, DEEP POCKETS AND OUTRAGEOUS DAMAGE AWARDS (1995); and Marc Galanter, *Real World Torts: An Antidote to Anecdote.* 55 MD. L. REV. 1093 (1996) [hereinafter Galanter, *Antidote*]; Marc Galanter, *News from Nowhere: The Debased Debate on Civil Justice*, 71 DENV. U. L. REV. 77 (1993).

3. FRANKLIN STRIER, RECONSTRUCTING JUSTICE: AN AGENDA FOR TRIAL REFORM (1994).

incompetent: "jurors lack adequate memories for recalling trial testimony and have difficulties making decisions based on statistical or probabilistic information."[4] He adds that "[a]n especially perplexing task for lay jurors is to assimilate and select in some rational manner from the competing testimonies of *expert witnesses*. This 'battle of the experts' tends to confound fact finders, especially juries."[5]

Strier also argues that juries do not understand judicial instructions and have an inability to apply the facts to the law. He blames much of the problem on the

> dysfunctionalism resulting from the melding of the jury and adversary systems. Due process, which is the standard by which the fairness of our trials are gauged, presumes a jury capable of understanding the facts and applying the law. At the same time, the adversary system enables the attorney to exploit the weaknesses in jurors which would be generally unavailing against the judge, who is usually better educated, more sophisticated and less susceptible to attorney suasion. Attorneys commonly select ignorant and malleable jurors, obfuscate their fact finding, and befuddle with emotional appeals their ability to apply the law correctly.[6]

Few would argue that juries are perfect decisionmakers or that the adversary system is without serious flaws. However, an empirical researcher's task is to assess the degree and extent to which the flaws exist. A number of authors have pointed out that, by and large, many claims about juries are based on anecdotes that are unrepresentative or fabricated or on studies that are so badly flawed that they lack scientific validity.[7] Strier's analysis concludes with another assumption inherent in much criticism of the jury, namely that judges could do the job better. I will touch on this last point at several places in this article.

Starting from the middle of the 1970s, when contemporary criticism of the civil jury system began, a body of empirical research has increased to the point that we are able to obtain a better, though still incomplete, picture of that system. And the research often contradicts many of the commonly held beliefs about jury performance. This conference on the civil justice system provides an opportunity to systematically review what we know about the subject. My goal is to provide data that will assist in assessing the claims and charges that have been made.

I limit the scope of inquiry to empirical studies that bear on what civil juries do and how they perform. There are other issues involved in the debate about civil juries, such as their effects on the administration of justice, including costs;

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4. *Id.* at 111.
5. *Id.* at 112 (emphasis in original).
6. *Id.* at 140.
7. DANIELS & MARTIN, *supra* note 2; VIDMAR, *supra* note 2; Michael J. Saks, *Do We Really Know Anything About the Behavior of the Tort Litigation System—and Why Not?*, 140 U. PA. L. REV. 1147 (1992); Galanter, *Antidote*, *supra* note 2; Niel Vidmar, *Pap and Circumstance: What Jury Verdict Statistics Can Tell Us About Jury Behavior and the Tort System*, 28 SUFFOLK U. L. REV. 1205 (1994) [hereinafter Vidmar, *Pap and Circumstance*].

their effects on the perception of justice; and their role in injecting societal values into the legal system. The primary focus of this article, however, is the evaluation of the jury as a decisionmaker.

In order to provide a context for evaluating the specific claims made about juries, I begin with a profile of the incidence of civil jury trials and the types of cases that juries are asked to decide. The most visible part of the debate in recent years has centered on juries in the tort system, but we must keep in mind that juries are also used to decide other disputes, including business to business disputes such as antitrust litigation, breaches of contract and trademark violations. In fact, criticism of the competence of juries to decide complex antitrust matters preceded the more visible public debate about juries in the tort system by a number of years. Note also that the right to jury trial has been extended to cases involving civil rights, bankruptcy, civil penalties, and breach of duty.[8]

I. PROFILE OF JURY TRIALS: INCIDENCE, TYPE OF CASES AND WIN RATES

A. State Courts

The National Center for State Courts ("Center") has undertaken a project to develop a profile of litigation in state courts over time. At present, the published data, authored by Ostrom et al., are limited to a single year, 1992, but the findings provide a good snapshot of jury trials.[9] Based on a sampling of 75 of the nation's largest counties, Ostrom et al. estimated that 762,000 tort, contract and real property cases were disposed of by the courts of general jurisdiction in that year. Only 2% of these cases were decided by juries. The largest group of cases decided by juries involved torts, 79%, with contract cases constituting 18% and the remainder being real property cases.

Automobile and premises liability cases constituted roughly two out of three tort jury trials. The cases that are most visible in the mass media and fuel legislative debates involved much smaller proportions. Medical malpractice cases accounted for 11% of jury trials, product liability accounted for 3%, and mass toxic torts for 2%.

The Center study also showed that the actual trial rate varied by type of case. Automobile negligence and slander/libel cases resulted in jury trials only 1.9% of the time, whereas medical malpractice suits went to the jury 8.2% of the time. The trial rate for toxic substance torts was 6.5% and for product liability cases it was 2.9%.

The mean plaintiff win rate for all jury cases was 49%. However, this statistical average obscures considerable variation by type of case. In toxic

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8. *See* Joe Cecil et al., *Citizen Comprehension of Difficult Issues: Lessons from Civil Jury Trials*, 40 AM. U. L. REV. 727 (1991).

9. Brian Ostrom et al., *A Step Above Anecdote: A Profile of the Civil Jury in the 1990s*, 79 JUDICATURE 233 (1996).

substance trials plaintiffs prevailed 73% of the time, whereas in medical malpractice trials the win rate was 30%. Other cases varied between these figures: automobile negligence, 60%; professional malpractice, 50%; intentional torts, 46%; premises liability, 43%; and product liability, 40%. The data pertaining to non-tort cases decided by juries involved fraud, seller and buyer disputes, employment cases, leases, eminent domain and other real property disputes. Plaintiffs won 63% of contract cases and 31% of real property cases.

Plaintiff win rate data must be interpreted with extreme caution.[10] Not only do they obscure pretrial settlements from some defendants, perhaps leaving plaintiffs to pursue cases involving stronger or weaker cases of liability against defendants, they also ignore potential differences in the quantum and quality of expert evidence at trial, lawyering skills, the parties' or insurers' incentives to settle versus go to trial, and a number of other factors. Without knowledge about how and why the small percentage of trial cases emerge from the other lawsuits that are settled or dismissed, and without knowledge about actual trial evidence, win rates can provide us with only limited information. Win rate statistics may obscure other important dynamics of the litigation process as well. For instance, medical malpractice cases often involve multiple health care providers as defendants, and frequently some of these defendants settle before trial; the jury trial involves the dispute with the remaining defendants.[11] Similar settlements occur with unknown frequencies in other types of cases.

B. Federal Courts

In 1993, a total of 245,687 civil cases were terminated in U.S. District Courts.[12] Only 1.8%, or 4456, involved jury trials. The jury cases were about equally divided between federal question suits and diversity suits. Of the federal question suits, 51% involved civil rights issues, 8% involved tort actions, 1% involved the labor management relations act, 5% involved intellectual property issues, and the remainder involved a melange of other issues. Fifty-four percent of diversity cases involved tort actions and 42% involved contract actions.

Clermont and Eisenberg calculated data on plaintiff win rates in these courts between 1979 and 1989.[13] These rates varied substantially according to the type of case. The win rate in medical malpractice cases was consistent with the state court rates, that is about 30%. The win rate in asbestos cases was 42%, but the rate for other product liability cases was only 26%.

Clermont and Eisenberg also uncovered the fact that the win rates before juries were lower than when cases were tried before judges, but nothing substantial

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10. *See* VIDMAR, *supra* note 2; Vidmar, *Pap and Circumstance*, *supra* note 7.

11. *See* VIDMAR, *supra* note 2.

12. ADMIN. OFF. U.S. CTS., FEDERAL JUDICIAL CASELOAD STATISTICS, Mar. 31, 1997, tbl.C–4. *See* Marc Galanter, *The Regulatory Function of the Civil Jury*, *in* VERDICT: ASSESSING THE CIVIL JURY JUSTICE SYSTEM, *supra* note 1, at 61, 66 tbl.3.4 (reporting data for 1991).

13. Kevin Clermont & Theodore Eisenberg, *Trial by Jury or Judge: Transcending Empiricism*, 77 CORNELL L. REV. 1124 (1991).

can be validly inferred from this last finding because the cases tried to judges and juries are likely different. We have nothing but speculation about how the cases may differ, but these data also point out the difficulty of inferring much from verdict statistics absent some independent criteria to assess the validity of the juries' verdicts. One can as easily argue that plaintiffs should have won 100% of the cases before juries and judges or argue that none of the plaintiffs should have prevailed.[14]

II. GENERAL EVALUATIONS OF JURY PERFORMANCE

A. "Ordinary Trials"

The first major empirical study of civil juries was conducted as part of the University of Chicago Jury Project, which resulted in Harry Kalven and Hans Zeisel's *The American Jury* and other writings.[15] Along with the study of criminal juries, Kalven and Zeisel studied verdicts in over four thousand civil trials that occurred during the 1950s.[16] The basic methodology of the study was to ask the trial judge how he would have decided the case. The judges' opinions were compared to the jury verdict for each case. Judge and jury agreed on the issue of liability 78% of the time, precisely the same level of agreement found in criminal juries. The cases involving judge-jury disagreement were about evenly split between plaintiffs and defendants, contradicting the claim that juries tend to favor plaintiffs. When plaintiffs prevailed, the jury award was, on average, about 20% higher than what the judge would have awarded. Kalven and Zeisel appropriately cautioned that the judge's decision should not be considered an absolute criterion of jury performance since there is no "correct" answer to a trial.[17] However, the data did show that, much more often than not, judge and jury saw the case the same way. Moreover, in most instances of disagreement, the judges indicated that even though they would have decided the case differently, the jury's alternative verdict was reasonable.

The American Jury continues to be cited as a leading study of civil as well as criminal juries, but one criticism is that in the intervening forty plus years since the study was conducted, the nature of civil litigation and trial evidence has become more complex.[18] The composition of the jury pool has also become more representative, and some argue, often obliquely, that, as a consequence, the jury has become collectively less intelligent and partial to plaintiffs. Critics also blame jury consultants for helping to select juries that are sympathetic to plaintiffs. The claim about sympathies for plaintiffs appears to be contradicted at a general level by public opinion polls, and other studies suggesting that the contemporary

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14. For further elaboration of this reasoning, see Saks, *supra* note 7, at 1271–80.

15. HARRY KALVEN & HANS ZEISEL, THE AMERICAN JURY (1966) (articles and books resulting from the project are described in the book).

16. *Id. See also* Harry Kalven, *The Dignity of the Civil Jury*, 50 VA. L. REV. 1055 (1964).

17. KALVEN & ZEISEL, *supra* note 15, at 55.

18. *See* Cecil et al., *supra* note 8.

American public is concerned about a "litigation explosion" and is hostile to plaintiff lawyers.[19]

Strikingly, in the legislative and public debate about juries, the opinions of judges are seldom solicited even though judges are in a position to observe jury performance on a daily basis. In the early 1990s, Sentell surveyed state and federal judges and members of the plaintiff and defense bars in Georgia about their attitudes toward jury performance in negligence cases.[20] Kalven and Zeisel's research conclusions were used as the framework for constructing the survey items. Sentell found that the judges gave strong positive evaluations of juries with respect to their perceived competence and fairness. In fact, the judges indicated support for juries that equaled or exceeded the agreement found in the Kalven and Zeisel study. For example, even when the federal judges indicated that they might have decided in a direction opposite to the jury, 87% offered the opinion that juries were not pro-plaintiff (13% felt they sometimes were), and fully 94% endorsed the view that the juries understood the evidence. Seventy-six percent thought jury performance was thoroughly satisfactory and the remainder indicated that it would be improved if some procedural modifications were implemented. Fully 100% said that the jury adhered to the judge's instructions. However, 50% said that they believed that juries are influenced by the defendant's class, including deep pocket defendants. The views of the state judges were generally similar to those of the federal judges.

The Sentell findings are supported by a *National Law Journal* survey of a representative sample of 348 state and 57 federal judges in 1987.[21] Among these judges, 61% said they disagreed with civil jury verdicts no more often than 10% of the time; and two-thirds of them said jury awards were excessive in only a few or "virtually no" cases. A 1987 Louis Harris survey of 200 federal and 800 state judges found that almost all endorsed the view that juries seriously attempt to apply the law as the judge instructs them. Judges also opposed restrictions on the right to a jury trial.[22]

B. "Complex Trials"

While the above research seems to vindicate the jury in ordinary trials, it

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19. These surveys and other studies are reviewed in Valerie P. Hans, *Attitudes Toward the Civil Jury: A Crisis of Confidence?*, *in* VERDICT: ASSESSING THE CIVIL JURY SYSTEM, *supra* note 1, at 248; and Shari Seidman Diamond, *What Jurors Think: Expectations and Reactions of Citizens Who Serve as Jurors*, *in* VERDICT: ASSESSING THE CIVIL JURY SYSTEM, *supra* note 1, at 282.

20. Perry Sentell, *The Georgia Jury and Negligence: The View from the Bench*, 26 GEO. L. REV. 85 (1991); Perry Sentell, *The Georgia Jury and Negligence: The View from the (Federal) Bench*, 27 GEO. L. REV. 59 (1992).

21. *The View from the Bench A National Law Journal Poll*, NAT'L L.J., Aug. 10, 1987, at 1.

22. Louis Harris & Assocs., *Judges' Opinions On Procedural Issues: A Survey Of State And Federaltrial Judges Who Spend At Least Half Their Time On General Civil Cases*, 69 B.U. L. REV. 731 (198). The results are further discussed in John Setear, *Comments on Judges' Opinions on Procedural Issues*, 69 B.U. L. REV. 765 (1989).

does not speak to jury performance in complex cases. Many criticisms have centered on the jury in lengthy trials involving difficult matters of causation in products liability and medical malpractice cases or about intricate financial transactions in business cases.[23] Arguments against the jury in complex cases involve not only the claim that the evidence is too difficult for any layperson, but also the claim that the length of these trials is such that there is a tendency for better educated jurors to be excused from service, leaving the lowest common denominator to decide the "most important" cases.

1. Defining Complexity

The first issue to be addressed is the meaning of complexity.[24] In the jury context Richard Lempert drew attention to the fact that complexity probably has different dimensions.[25] He suggested three important dimensions that might be used to define complexity: trial length, voluminous evidence, and complex legal standards. Robert MacCoun also categorized complexity on three dimensions: dispute complexity, including the number of disputants and issues; evidence complexity, including the quantity, consistency, reliability, and technicality of evidence; and decision complexity, that is complexity involving legal issues and legal chains of logic.[26]

Larry Heuer and Steven Penrod attempted to empirically uncover judges' conceptions of complexity.[27] They obtained data from 103 judges from 33 states who rated recent civil and criminal trials over which they had presided, including some "complex" trials that the judges were asked to select. The ratings were made in response to the following questions: How complex was the evidence? How complex was the law? How complex were the lawyers' arguments? Additionally, the judges provided information on the number of witnesses, the trial duration, the number of charges or claims, the number of documents, and the number of parties. A statistical analysis called factor analysis was used to discover the relationships among these variables. It revealed three dimensions: complexity of evidence, quantity of evidence, and complexity of the law.

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23. *See, e.g.*, Peter Sperlich, *The Case for Preserving Trial by Jury in Complex Civil Litigation*, 65 JUDICATURE 394 (1982); Douglas Ell, *The Right to an Incompetent Jury: Protracted Commercial Litigation and the Seventh Amendment*, 10 CONN. L. REV. 775 (1978); Kirk Johnson et al., *A Fault-Based Administrative Alternative for Resolving Medical Malpractice Claims*, 42 VAND. L. REV. 1365 (1989); Stephen Sugarman, *The Need To Reform Personal Injury Law Leaving Scientific Disputes to Scientists*, 248 SCI. 823 (1990). *See also* Cecil et al., *supra* note 8.

24. For detailed discussions of this issue see Peter H. Schuck, *Legal Complexity: Some Causes, Consequences, and Cures*, 42 DUKE L.J. 1 (1992); Jeffrey Stempel, *A More Complete Look at Complexity*, 40 ARIZ. L. REV. 781 (1998).

25. Richard Lempert, *Civil Juries and Complex Cases: Taking Stock After Twelve Years*, *in* VERDICT: ASSESSING THE CIVIL JURY SYSTEM, *supra* note 1, at 181.

26. Robert MacCoun, *Inside the Black Box: What Empirical Research Tells Us About Decision Making by Civil Juries*, *in* VERDICT: ASSESSING THE CIVIL JURY SYSTEM, *supra* note 1, at 137.

27. Larry Heuer & Steven Penrod, *Trial Complexity: A Field Investigation of Its Meaning and Effects*, 18 LAW & HUM. BEHAV. 29 (1994).

Policy discussions about complexity have often ignored or obfuscated these dimensions. In particular, the length of the trial has often been used as a proxy for complexity. Lempert speculated that length is probably not the most important dimension.[28] The Heuer and Penrod study indicated trial length was related to complexity and quantity of evidence.[29] This is probably no surprise, but it is important to draw attention to the fact that their findings also revealed that length alone is a poor proxy for complexity. While in many of the empirical studies described below no attempt was made to specifically distinguish dimensions of complexity, the multi-dimensionality of the concept should be kept in mind. At the end of the review of the empirical studies, I will add another consideration about trials involving complex evidence.

2. Empirical Findings

Two Federal Judicial Center studies bear on the claim about jury composition. In a sample of federal trials terminating between 1977 and 1979 Bermant et al. found a correlation between case complexity and trial length.[30] However, the correlation was not large. Moreover, the proportion of long trials, as defined by two different criterion measures, constituted a very small fraction of total civil cases. The second study compared the demographic characteristics of jurors serving in trials lasting twenty days or longer with those serving in trials of shorter duration.[31] No differences were found with respect to age or race, but jurors in longer trials were more likely to be unemployed, retired, female, unmarried, and less likely to have a college education.[32] However, the report also cautioned that while the differences were statistically significant, the magnitude of these differences were "nevertheless quite small."[33] The Bermant study also questioned judges and lawyers about their perception of jury decisions. Even though these informants said the cases contained difficult issues, they also said that the juries had made the correct decisions and had no difficulties in applying the appropriate legal standards to the facts. The Federal Judicial Center studies are more than two decades old, but, on the other hand, the criticisms leveled against juries at that time are the same as those set forth in the 1990s.

Austin studied two civil juries that heard the same antitrust case.[34] The second jury was necessary after the first had deadlocked. A central part of the case involved testimony about complex economic data.[35] In the second, trial the

28. Lempert, *supra* note 25, at 200.

29. *See* Heuer & Penrod, *supra* note 27.

30. Gordon Bermant et al., *Protracted Civil Trials: View from the Bench and Bar*, FED. JUD. CENTER (1981).

31. Joe Cecil et al., *Demographic Characteristics of Jurors in Protracted Civil Trials*, FED. JUD. CENTER (1982) (unpublished report on file with author).

32. *Id.*

33. *Id.*

34. ARTHUR AUSTIN, COMPLEX LITIGATION CONFRONTS THE JURY SYSTEM: A CASE STUDY (1985).

35. *Id.* at 32–34.

evidence was presented in a qualitatively different way.[36] Austin interviewed jurors from each of these trials extensively for their understanding of the issues, but he did not report the data systematically. He concluded that the juries had a basic comprehension of the facts of the case, but little comprehension of the economic evidence.[37]

Molly Selvin and Larry Picus interviewed jurors in an early Texas trial involving exposure to asbestos.[38] They concluded that the jurors failed to properly understand certain critical pieces of evidence. They also suggested that the jurors evaluated the expert evidence on the merits, but that their judgments were supplemented with impressions of the experts' personality and behavior. In post-trial interviews, the jurors had difficulty remembering the judge's instructions and reported considering extra-legal factors in their determination of liability and damages.

Lempert systematically examined reports of twelve complex trials, including some that were the focus of a study undertaken by the American Bar Association.[39] He drew attention to the different reasons by which cases may be classified as complex. Trial length, by itself, is not an adequate measure of trial complexity, nor is conflicting expert testimony. In two of the twelve cases, Lempert concluded that the expert evidence was so difficult and esoteric that only an expert in the field could adequately understand it. In other cases, the esoteric evidence was not the central part of the case. Lempert also raised the points that in many instances the reports of jury confusion are made by journalists who are not trained in social science interview methods and that sometimes the interviews take place weeks or months after the trial. The implication of the latter point is that memory decay may result in estimates of more confusion than actually existed at the time of the deliberations. Lempert also drew attention to the possibility that some jurors who were personally confused attributed confusion to all of the other jury members, but in fact the verdict emerged out of the leadership of the jury's most competent members. In his analysis of the twelve cases, Lempert concluded that there was no clear evidence of jury befuddlement and that, on balance, the decisions in the cases were defensible.

Stephen Adler's highly publicized book examining a number of high profile criminal and civil trials drew a conclusion that the current jury system is irrational,[40] but Lempert's criticisms can be applied to those conclusions. Indeed, I had personal knowledge of the *Liggett & Myers v. Brown and Williamson* case described by Adler that involved the Robinson-Patman Act and other matters. I would have drawn conclusions quite different than Adler drew from his interviews.

Joseph Sanders conducted interviews with jurors who decided one of the

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36. *Id.* at 43–54.

37. *Id.* at 99–104.

38. MOLLY SELVIN & LARRY PICUS, THE DEBATE OVER JURY PERFORMANCE: OBSERVATIONS FROM A RECENT ASBESTOS CASE (1987).

39. Lempert, *supra* note 25, at 183–90.

40. STEPHEN J. ADLER, THE JURY: TRIAL AND ERROR IN THE AMERICAN COURTROOM 218–42 (1994).

Bendectin cases, *Havener v. Merrell Dow Pharmaceuticals Inc.*, in favor of the plaintiffs. Sanders was thoroughly familiar with the issues in the case and questioned jurors in depth. He found a "substantial spread" in individual jurors' ability to summarize the scientific evidence.[41] Ability was positively related to occupation and education.[42] Sanders concluded that the jury's deliberations appeared to fall short of a full understanding of the case.[43] However, he also concluded that a substantial part of the jury's difficulty lay with the defense lawyers' presentation of the case and with the judge's instructions to the jury.[44] Sanders' conclusion is worth quoting because it is a thorough case analysis involving a trial in which the jury very arguably reached a verdict inconsistent with scientific evidence:

> Nothing in this article should cause one to infer any lack of effort or diligence on the part of the *Havener* jurors.... The *Havener* deliberations were centered about some of the evidence presented at trial. If it is true that they were not centered on the most probative evidence, it is also true that the jurors were pointed toward...[misleading] animal studies by both the judicial instructions and the evidentiary rules concerning the admissibility of research articles.[45]

Medical malpractice cases constitute another category of allegedly complex cases that have their own unique aspect; unlike the reasonable person standard applied in most tort cases, negligence is judged by a "standard of care" criterion.[46] For this reason, doctors and liability insurers argue that only doctors are competent to understand the complex medical issues and to decide on the standard of care is.[47] Although one might question whether physicians' self-interest as members of a guild of health service providers allows them to be objective, it is still interesting to consider the 1992 statement by a committee of the American Medical Association: "physicians probably apply the standard [of medical negligence] differently than do juries."[48]

A study by Mark Taragin and four other colleagues allows us to put the AMA assertion to an empirical test.[49] Taragin et al. obtained access to liability insurer files for lawsuits that occurred in New Jersey between 1987 and 1992. In each case of a medical incident, the insurer had one or more physicians assess the

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41. Joseph Sanders, *The Jury Decision in a Complex Case:* Havener v. Merrell Dow Pharmaceuticals, 16 JUST. SYS. J. 45, 57 (1993).

42. *Id.*

43. *Id.*

44. *Id.* at 58.

45. *Id.* at 65.

46. *See* VIDMAR, *supra* note 2, at 86; Neil Vidmar, *Are Juries Competent to Decide Liability in Tort Cases Involving Scientific/Medical Issues? Some Data from Medical Malpractice*, 43 EMORY L.J. 885 (1994).

47. Johnson et al., *supra* note 23.

48. PHYSICIAN PAYMENT REVIEW COMMISSION, ANNUAL REPORT TO CONGRESS 186 (1992).

49. Mark Taragin et al., *The Influence of Standard of Care and Severity of Injury on the Resolution of Medical Malpractice Claims*, 117 ANN. INTERNAL MED. 780 (1992).

case for negligence as part of a non-discoverable work product intended to assist in determining whether the case should be settled or defended. Of the 8231 cases in the study, 988 were eventually tried before a jury. Taragin et al. compared the jury verdicts with the doctors' negligence ratings. The data lend no support to the assertion that juries decide cases differently than doctors. Plaintiffs won 24% of the trials, but the verdicts tended to be consistent with the "neutral" physician ratings of negligence. That is, when plaintiffs won, the ratings tended to favor negligence or were ambiguous, and when plaintiffs lost, the ratings indicated no negligence had occurred or negligence was uncertain.[50]

The Taragin et al. findings are supported by two additional studies based on smaller samples of malpractice cases. Faber and White studied 465 malpractice cases involving a self-insured hospital.[51] Like the New Jersey study, the files contained non-discoverable assessments of negligence made by physicians. Only twenty-six cases went to jury trial, and the hospital prevailed in all but four of them.[52] Two of the plaintiff wins involved cases rated by the experts as "bad" medical care and the other two were rated as "ambiguous."[53] Thirteen of the remaining cases that were won by the defendants were rated as "good" care and the rest as "ambiguous."[54] Sloan et. al. examined a sample of 187 Florida medical malpractice cases involving serious injuries.[55] Thirty-seven of the cases went to trial. In contrast to liability insurer ratings used in the Taragin and Faber and White studies, the medical records were reviewed by panels of doctors working as part of the research team. Using Sloan et al.'s tables, I have calculated that plaintiffs won twenty-four of the thirty-seven cases. Of these, defendants were twice as likely to have been rated by the independent physicians as negligent and the reverse was true for cases in which plaintiffs lost.

In later sections of this article, I will describe studies indicating that many jurors hold attitudes favorable to defendants that may help explain some of the correspondence between jury verdicts and physician ratings, but the essential point here is that these three studies lend no support to the contention that juries will decide medical malpractice cases differently than doctors, at least if the doctors' decisions are made under relatively neutral conditions.

The judges in the Heuer and Penrod study of complex cases provided detailed information on 160 civil and criminal trials.[56] In addition, they provided data modeled after that obtained by Kalven and Zeisel in *The American Jury*. The judges were asked to indicate the degree to which they believed that the jury's

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50. *Id.*

51. Henry Farber & Michelle White, *A Comparison of Formal and Informal Dispute Resolution in Medical Malpractice*, 23 J. LEGAL STUD. 777 (1994) [hereinafter, Farber & White, *A Comparison*]; *see also* Henry Farber & Michelle White, *Medical Malpractice: An Empirical Examination of the Litigation Process*, 22 RAND J. ECON. 199 (1991) [hereinafter Farber & White, *Empirical Examination*].

52. Farber & White, *A Comparison*, *supra* note 51, at 802.

53. *Id.*

54. *Id.*

55. FRANK SLOAN ET AL., SUING FOR MEDICAL MALPRACTICE 17–30 (1993).

56. Heuer & Penrod, *supra* note 27.

verdict was legally correct and whether it was fair. They were also asked whether they were surprised by the verdict and whether they were satisfied with it. The ratings were combined into a single index of agreement. For the sixty-seven civil trials, judge and jury agreed on the verdict sixty-three percent of the time, and their cases of disagreement were split about equally between plaintiffs and defendants.[57] The cases of disagreement were not related to trial complexity. This suggests that when judge and jury disagreed, it was on grounds other than complexity.[58] The small sample size and the fact that the measures of judge satisfaction with the verdict did not distinguish between liability and damages limits further interpretation of the meaning of these data.

3. An Additional Comment About "Complex Cases"

One more thing needs to be said about the matter of defining complex cases. In debates over complexity it is easy to gloss over the central issues in the dispute, some of which may not be so complex despite the evidence and arguments taking place at trial. Lempert observed that in some of the twelve cases that he studied, the basic principles of the expert evidence would be relatively easy for laypersons to understand and in others the technical issues were not central to deciding the case.[59] I also drew attention to this matter in previous writings about medical malpractice cases.[60] In one case, the jury was treated to more than a full week of testimony involving a plaintiff who became rectally incontinent after a surgical operation that was intended to sever a nerve to her bladder in order to alleviate bladder incontinence. The jury heard conflicting testimony from urologists and neurosurgeons about cystometrograms and how to read them, locations of the third and fourth sacral nerves, nerve block tests, alternative treatment regimes, and other matters. Our interviews with the jurors revealed that the lawyers and doctors had educated the jurors to a degree that a majority of them understood the basic elements of the conflicting medical testimony. Yet the ultimate issue in the case was whether the plaintiff was fully informed about the risks of the elective surgery and, despite her denials of being told the risks, the defendants had persuasive evidence from the medical files that the facts were otherwise.[61] In fact many malpractice cases revolve around issues of who said or did what when: the "swearing match" that has traditionally been left to the wisdom of the layperson jury.

Similar issues arise in products liability cases. Among a number of articles on products liability published in *Science* that argued that juries were biased and incompetent to decide scientific issues,[62] one focused on *West v.*

57. *Id.* at 46.
58. *Id.* at 48–49.
59. Lempert, *supra* note 25.
60. VIDMAR, *supra* note 2.
61. *Id.*
62. *See, e.g.*, Stephen Sugarman, *The Need To Reform Personal Injury Law Leaving Scientific Disputes to Scientists*, 248 SCI. 823 (1990); Richard Mahoney & Stephen Littlejohn, *Innovation on Trial: Punitive Damages Versus New Products*, 246 SCI. 1395 (1989). See also DANIELS & MARTIN, *supra* note 2, for further discussions of these articles.

Johnson & Johnson Products, a case involving tampon-caused toxic shock syndrome.[63] The trial involved testimony about whether the plaintiff's illness was caused by toxic shock syndrome or scarlet fever and issues about whether Johnson & Johnson's laboratory could have discovered the cause of the reaction before the Center for Disease Control did. However, the central elements in the case involved whether the company should have instituted better follow-up and testing procedures and whether it should have taken steps to investigate more thoroughly after numerous consumer complaints that preceded the plaintiff's injury. The trial judge agreed with the jury's findings about liability. Similarly, in the now notorious McDonald's coffee spill case, a central issue involved the fact that McDonald's had received over seven hundred complaints about the coffee temperature but never consulted a burn specialist.[64] These issues would appear to be within the competence of laypersons to understand. In fact they are issues that involve human and organizational behavior and credibility that have always been considered within the special skills of the layperson jury: that is, what did the parties know, and when did they know it? What did they do and when did they do it?

III. DETERMINING LIABILITY

Even though general data comparing jury verdicts to other criteria lend no support to the charges about civil juries, it is also highly useful to consider studies bearing on specific claims about aspects of jury performance in determining liability and damages. The studies provide a window on juror reasoning processes that help to explain the general performance findings. They also provide ideas about how jury performance might be improved. In this section, I will address issues of jurors' scientific reasoning skills, responses to experts and extra-legal factors, understanding of legal instructions, bias and procedural complexity. Damage awards will be the subject of the following section.

A. Scientific Reasoning Skills

Interviews with jurors indicate that they recognize that they have difficulty with scientific and statistical testimony.[65] A number of experimental studies have indicated that jurors have difficulty in reasoning about statistical evidence, particularly statistics about base rates and the inferences that can be drawn from them.[66] It is worth noting that some critics have charged that jurors give scientific

63. Sugarman, *supra* note 62.

64. Liebeck v. McDonald's Restaurants P.T.S., Inc., No. CV–93–02419, 1995 WL 360309 (Dist. Ct. N.M. Aug. 18, 1994). See Samuel Gross & Kent Syverud, *Don't Try: Civil Jury Verdicts in a System Geared to Settlement*, 44 UCLA L. REV. 1, 4–5 (1996), for details and citations to additional commentary on this case.

65. *See* VIDMAR, *supra* note 2; Jane Goodman et al., *What Confuses Jurors in Complex Cases*, 21 TRIAL, Nov. 1985, at 65.

66. *See* William Thompson, *Are Juries Competent To Evaluate Statistical Evidence?*, 52 LAW & CONTEMP. PROBS. 9 (1989); David Faigman & A. J. Baglioni, *Bayes' Theorem in the Trial Process: Instructing Jurors on the Value of Statistical Evidence*, 12 LAW & HUM. BEHAV. 1 (1988); Brian C. Smith et al., *Jurors' Use of Probabilistic Evidence*, 20 LAW & HUM. BEHAV. 49 (1996).

evidence too much weight, while other have said that they do not give it enough weight.[67] It is difficult to assess such general and conflicting claims. The issue really turns on what jurors do in specific cases.

While it is important to not minimize problems with complex statistical evidence, some additional considerations need to be brought out in interpreting the research. First, the experimental studies have presented the statistical evidence as abstract problems. Juror understanding may be better when the statistics are contained in the context of the facts of an actual case. Also, the jury decision is based upon the deliberations of a group so that even though all jurors may not understand the statistics, those with better math skills may educate the others and be more influential during this part of the deliberations.

The third issue arises from the relative standards by which jury understanding can be assessed. Gary Wells tested the proposition that people are hesitant to make pro-plaintiff decisions when the plaintiff's evidence is based exclusively on purely probabilistic evidence.[68] His experiments involved vignettes presented to 740 students and 111 experienced trial judges. Neither the students nor the trial judges gave the evidence significant weight in reaching their decisions even when it was mathematically probative. Wells concluded that "people require more of evidence than merely that it affect their views of the ultimate fact; their views of the ultimate fact must also affect their perceptions of the evidence."[69] In other words, concrete evidence is given more weight by both judges and non-judges.

Other authors have drawn attention to the fact that there are numerous cases in which judges, including Supreme Court justices, have misunderstood scientific and statistical evidence despite having written documents and clerks to assist them.[70] A complicating factor was uncovered by Bermant et al. in the Federal Judicial Center study on complex cases.[71] Specifically, lawyers indicated that when they tried cases before juries, they attempted to cull and simplify the evidence; however, in bench trials the lawyers did not do so on the theory that the judge could sort it out. If this is true, bench trials may actually result in more complicated and difficult cases.

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67. *See, e.g.*, PETER HUBER, LIABILITY: THE LEGAL REVOLUTION AND ITS CONSEQUENCES 100–05 (1988) (stretched out science confirms those who want more tort deterrance) [hereinafter HUBER, LIABILITY]; PETER HUBER, GALILEO'S REVENGE: JUNK SCIENCE IN THE COURTROOM 214–28 (1991) (scientific evidence has a central affect on the way courts act); Johnson et al., *supra* note 23, at 1370 (juries lack expertice to evaluate expert testimony).

68. Gary Wells, *Naked Statistical Evidence of Liability: Is Subjective Probability Enough?*, 62 J. PERS. SOC. PSYCHOL. 739 (1992).

69. *Id.* at 749.

70. *See* Saks, *supra* note 7, at 1223–24. *See generally* THE EVOLVING ROLE OF STATISTICAL ASSESSMENTS AS EVIDENCE IN THE COURTS (Stephen Fienberg ed., 1989). For a discussion of the difficulty trial and appellate courts have with statistics in Title VII cases, see Richard Lempert, Befuddled Judges: Statistical Evidence in Title VII Cases (unpublished manuscript on file with author).

71. Bermant et al., *supra* note 30.

B. Experts, Credulity, and Extra-legal Factors

Juries, as noted earlier, are said to be misled by expert testimony: they are confused by the battle of experts; they respond to their impressions of the expert rather than the substance of the testimony; or they ignore the testimony altogether.[72] In her study of jurors who decided cases involving corporate defendants, Valerie Hans discovered that jurors were often quite skeptical of the experts.[73] The jurors discussed the credentials and motives of the experts. They were particularly harsh on experts whose focus was unclear. The majority of jurors tried to critically evaluate the content of the testimony and looked for points that, based on their own experience and reasoning, seemed unclear.[74] Hans and her co-author concluded that "[j]urors do not appear to be as naive as some commentators have assumed about the financial and other motives that may lead experts to become 'hired guns.'"[75] My interviews with jurors who decided medical malpractice cases uncovered a similar skepticism about experts; and, indeed, about the whole adversary process.[76]

The study of four complex trials (involving, respectively, anti-trust, sexual harassment, misappropriation of trade secrets, and criminal fraud involving insurance) sponsored by a Special Committee of the Litigation Section of the ABA also concluded that the jurors in the cases were not unduly impressed with experts and dismissed many of them as "hired guns."[77] Bridgeman and Marlowe[78] and Meyers[79] studied the effects of experts in criminal trials and also drew the conclusion that experts did not have undue impact on jury decisionmaking.

Experimental studies also lend little support to the claim of juror gullibility, but they do suggest some of the factors that influence juror decision making. Diamond and Casper, for example, conducted a realistic experiment involving jury eligible persons that decided an antitrust trial.[80] The nature of the expert testimony was varied: some juries heard expert testimony based on complex statistical analyses while others heard testimony involving a more concrete "yardstick" analysis. The statistical expert was seen as having greater expertise but lower clarity than the expert who used the "yardstick" analysis and, as a consequence, the form of expert evidence was not different in persuasiveness.

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72. *See supra* notes 30–58 and accompanying text.

73. Valerie P. Hans & Sanja Kutnjak Ivkovich, *Jurors and Experts*, 16 ADVOC. MAG. DEL. TRIAL LAW. 17 (1994).

74. *Id.*

75. *Id.*

76. *See* VIDMAR, *supra* note 2.

77. Special Committee on Jury Comprehension, *Jury Comprehension in Complex Cases*, 1990 A.B.A Sec. Litigation.

78. D. L. Bridgeman & D. Marlowe, *Jury Decision making: An Empirical Study Based on Actual Felony Trials*, 64 J. APPLIED PSYCHOL. 91 (1979).

79. Martha Myers, *Rule Departures and Making Law: Juries and Their Verdicts*, 13 L. & SOC'Y REV. 781 (1979).

80. Shari Seidman Diamond & Jonathan D. Casper, *Blindfolding the Jury to Verdict Consequences: Damages, Experts, and the Civil Jury*, 26 L. & SOC'Y REV. 401 (1992).

Cooper, Bennett and Sukel conducted a simulation experiment involving a products liability trial.[81] Jury-eligible adults viewed a videotape in which two scientists provided evidence on whether chemicals could have caused a plaintiff's illness. The experiment varied the strength of the expert's credentials and the complexity of the testimony. The jurors were more persuaded by highly-credentialed experts, but only when the testimony was complex. When the testimony was less complex, they relied primarily on the content of the testimony rather than credentials. Schklar and Diamond have recently conducted a simulation that investigates how jurors react to probabilistic DNA evidence.[82] They found that the jurors incorrectly aggregated separate estimates of probabilities associated with the tests.[83] Those errors appeared to be in large part attributable to the jurors' pre-existing beliefs about the probability of labratory errors and intentional tampering with the labratory samples, which in turn, affected the weight that was given to the DNA match. The study suggested juror wariness about the credibility of the experts who calculate the numbers, the persons who conduct the actual tests, the trustworthiness of the police or others who collect the actual samples, and other alternative interpretations of the DNA match.[84]

A number of other experimental studies have examined the effects of experts in criminal trial contexts. These studies also lend little support to the assertion that jurors uncritically accept expert evidence.[85]

Implicitly or explicitly, the assertions about juror gullibility are comparing the reactions of jurors to an alternative decision maker, namely the judge. As Strier indicated, it is assumed that because of the judge's higher degree of education and experience judges will be more critical and analytical in evaluating expert testimony.[86]

In a leading article on expert evidence, Gross drew attention to *Wells v. Ortho Pharmaceutical Corp.*, a products liability bench trial that involved two weeks of technical and conflicting expert testimony.[87] In his written opinion, the judge stated that he attempted to evaluate "the rationality and internal consistency" of each expert's testimony, but candidly admitted that he was forced to use other criteria: "The Court paid close attention to each expert's demeanor and tone. Perhaps most important, the Court did its best to ascertain the motives, biases, and

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81. Joel Cooper et al., *Complex Scientific Testimony: How Do Jurors Make Decisions?*, 20 LAW & HUM. BEHAV. 39 (1996).

82. Jason Schklar & Shari Diamond, *Juror Reactions to DNA Evidence: Errors and Expectancies*, 23 LAW & HUM. BEHAV. (forthcoming 1998).

83. *Id.*

84. *Id.*

85. *See* Neil Vidmar & Regina Schuller, *Juries and Expert Evidence: Social Framework Testimony*, 52 LAW & CONTEMP. PROBS., Autumn 1989, at 133; Margaret Kovera et al., *Expert Testimony in Child Sexual Abuse Cases*, 18 LAW & HUM. BEHAV. 653 (1994); Neil Vidmar, *Assessing the Impact of Statistical Evidence, A Social Science Perspective*, *in* THE EVOLVING ROLE OF STATISTICAL ASSESSMENTS AS EVIDENCE IN THE COURTS, *supra* note 70, at 296–97.

86. *See supra* note 3 and accompanying text.

87. Samuel Gross, *Expert Evidence*, 1991 WIS. L. REV. 1113.

interests that might have influenced each expert's opinions."[88]

The decision in the case closely followed this analysis. Gross pointed out that while the judge's decision favoring the plaintiff was carefully reasoned, it was scientifically wrong.[89] The judge had relied on the testimony of four pharmacists and a teratologist whose opinions were based upon misreading of epidemiological literature.[90] The important point of this case anecdote is to draw attention to the oftentimes ignored fact that judges, too, may not understand the evidence and rely heavily on impressions. Scrutiny of jury decision making needs to be contrasted with judicial decision making in complex cases. In this regard, consider two additional studies.

Landsman and Rakos compared the effects of potentially biasing information on jurors and judges.[91] A total of 88 Ohio judges and 104 Ohio jurors read a synopsis of a products liability case and rendered a verdict about liability. Some of the judges and jurors were exposed to legally objectionable facts in the case they read, but half of each of the judges and jurors were told that the material was inadmissible and should be set aside, while the other half received no instructions. There was also a control condition that omitted the objectionable facts. Compared to the control condition, jurors' verdicts were adversely affected by the inadmissible evidence; the verdicts of jurors admonished to disregard it were not different from those who had not been admonished. The standard argument in favor of judges is that, due to their training and experience, the judges should be better able than the jurors in their ability to set facts aside. However, the judges who were exposed to the inadmissible material were no better able to disregard the evidence than the jurors.

Howe and Loftus compared state circuit judges and students in the ways that they assigned blame to a hypothetical offender who assaulted another person.[92] The experiment varied the degree of intention of the offender and the seriousness of the outcome. There was considerable variability among both judges and students in the manner that they weighed the factors, but there were no overall differences between the student and judge participants in the study.

No one can reasonably dispute that expert evidence in some trials is highly difficult and confusing. However, even before the *Daubert*[93] decision, judges were exercising their screening powers to remove suspect expert testimony from the trial, and this gatekeeping role has increased.[94] Regardless, jurors will still

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88. *Id.* at 1121.

89. *Id.* at 1122.

90. *Id.* at 1123.

91. Stephen Landsman & Richard Rakos, *A Preliminary Inquiry Into the Effect of Potentially Biasing Information on Judges and Jurors in Civil Litigation*, 12 BEHAV. SCI. & L. 113 (1994).

92. Edmund Howe & Thomas Loftus, *Integration of Intention and Outcome Information by Students and Circuit Court Judges: Design Economy and Individual Differences*, 22 J. APPLIED SOC. PSYCHOL. 102 (1992).

93. Daubert v. Merrell Dow Pharm., Inc., 509 U.S. 579 (1993).

94. *See generally* DAVID L. FAIGMAN ET AL., MODERN SCIENTIFIC EVIDENCE: THE LAW AND SCIENCE OF EXPERT TESTIMONY (1997).

be faced with difficult evidence and charges that they decide cases wrongly. The research reviewed in this section does indicate, however, that jurors have a healthy skepticism about expert evidence. The research also raises questions about the ability of average trial judges to do a better job, particularly when at least some jurors may have specialized backgrounds and educations, with respect to the technical issues, that are superior to that of a judge.

C. Understanding Instructions

Numerous studies have concluded that juries have difficulty understanding legal instructions.[95] Selvin and Picus' case study of the Texas toxic tort trial uncovered several instances in which jurors did not understand the instructions.[96] Many of the studies of juror comprehension have been concerned with criminal trials, but they provide insight on the problems that likely attend civil jury trials. Ellsworth, for example, conducted a jury experiment involving some complex issues bearing on decisions in death penalty cases.[97] She analyzed the deliberations and concluded that while the juries performed well in sorting out the facts, the jurors' understanding of the legal instructions was poor and, moreover, was not substantially improved by the deliberation process.[98]

Most researchers who have studied jury comprehension of legal instructions, however, have concluded that the problem lies not in basic conceptual barriers to understanding but rather in the arcane concepts and abstruse syntax that characterize many instructions. A study by Charrow and Charrow found that jurors often did not understand words and phrases in standard legal instructions.[99] Rewritten instructions improved comprehension. Sales and Alfini conducted similar research with Michigan's pattern jury instructions on negligence.[100] They found that the pattern instructions in use at the time of the study produced about the same level of jury understanding as no instructions at all.[101] However, a set of revised instructions produced greater levels of comprehension. Severance and Loftus[102] and Diamond and Levy[103] have undertaken research with criminal jury

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95. For a review of these studies see Peter English & Bruce Sales, *A Ceiling or Consistency Effect for the Comprehension of Jury Instructions*, 3 PSYCHOL. PUB. POL'Y & L. 381 (1997) and Joel Lieberman & Bruce Sales, *What Social Psychology Teaches Us About the Jury Instruction Process*, 3 PSYCHOL. PUB. POL'Y & L. 589 (1997).

96. SELVIN & PICUS, *supra* note 38, at 52–54, 62–63.

97. Phoebe C. Ellsworth, *Are Twelve Heads Better Than One?* 52 LAW & CONTEMP. PROBS., Autumn 1989, at 205.

98. *Id.* at 223.

99. Robert P. Charrow & Veda Charrow, *Making Legal Language Understandable*, 79 COLUM. L. REV 1306 (1979).

100. AMIRAM ELWORK ET AL., MAKING JURY INSTRUCTIONS UNDERSTANDABLE 13 (1982); Amiram Elwork et al., *Juridic Decisions: In Ignorance of the Law or in Light of It*, 1 LAW & HUM. BEHAV. 163 (1977).

101. ELWORK ET AL., *supra* note 100, at 13–14

102. Lawrence J. Severance & Elizabeth F. Loftus, *Improving the Ability of Jurors to Comprehend and Apply Criminal Jury Instructions*, 17 L. & SOC'Y REV. 153 (1982).

103. Shari Seidman Diamond & Judith N. Levi, *Improving Decisions on Death by*

instructions and also found that revisions can improve juror comprehension.

Simon and Mahan studied juror understanding of standards of proof.[104] Laypersons and judges were asked to express their understanding of the various standards of legal proof in quantitative terms. The judges expressed "preponderance of evidence" as a probability of a little more than half, but laypersons expressed it in probabilities that were much closer to those they used for the "reasonable doubt" standard.[105] In a series of experimental studies involving civil cases, Kagehiro found that judicial instructions involving non-quantified standards of proof often did not achieve their intended effects.[106] However, when the instructions were accompanied by a quantified definition of certainty levels, jurors did respond appropriately; that is, as the burden became more strict, verdicts favoring plaintiffs became less frequent. The artificial nature of the Kagehiro studies restricts the generalizability of the findings to real world trials. There are also legal policy reasons to avoid quantification of burdens of proof. However, her studies do raise questions about the adequacy of jury instructions on burdens of proof. Additionally, experimental studies of the content of jury deliberations indicated that only a very small percentage of the total discussion time was devoted to burdens of proof.[107]

Note should be made of a current debate on the extent to which revisions to instructions can cure all comprehension problems.[108] Several authors, working with criminal law instructions, have argued that there may be a "ceiling effect," that is, improvement in the language of instructions can only improve comprehension to a certain extent.[109] Psychological research on juror decision-making has clearly shown that jurors do not approach their task with a blank slate, as jury law often assumes.[110] Rather, jurors come to trial with certain beliefs, and expectations associated with those beliefs, that influence the way they perceive and integrate evidence and instructions and ultimately arrive at a judgment about an appropriate verdict. These belief structures, which psychologists refer to as schema or cognitive prototypes, influence the way jurors develop stories about the contested legal events. Research indicates that jurors' prior beliefs sometimes are in conflict

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Revising and Testing Jury Instructions, 79 JUDICATURE 224 (1996).

104. Rita James Simon & Linda Mahan, *Quantifying Burdens of Proof: A View from the Bench, the Jury, and the Classroom*, 5 L. & SOC'Y. REV. 319 (1971).

105. *Id.* at 325.

106. Dorothy K. Kagehiro, *Defining the Standard of Proof in Jury Instructions*, 1 PSYCHOL. SCI. 194 (1990).

107. Ellsworth, *supra* note 97, at 221.

108. *See* English & Sales, *supra* note 95.

109. *Id.*

110. Nancy Pennington & Reid Hastie, *A Cognitive Theory of Juror Decision Making: The Story Model*, 13 CARDOZO L. REV. 519 (1991); Deanna Kuhn et al., *How Well Do Jurors Reason? Competence Dimensions of Individual Variations in a Juror Reasoning Task*, 5 PSYCHOL. SCI. 289 (1994); NORMAN FINKEL, COMMONSENSE JUSTICE: JUROR'S NOTIONS OF THE LAW (1995); John F. Manzo, *"You Wouldn't Take a Seven-Year-Old and Ask Him All These Questions": Juror's Use of Practical Reasoning in Supporting Their Arguments*, 19 L. & SOC. INQUIRY 639 (1994).

with the legal requirements.[111] As a consequence, their pre-existing prototypes about law override legal instructions. However, English and Sales have recently challenged this view with an insightful critique of the studies used as a basis for hypothesizing a ceiling effect.[112] They suggest that more careful attention to revising instructions than is typically given by judges and committees that develop pattern instructions can overcome the juror limitations. The ceiling effect controversy will require more research before it can be resolved.

Finally, research has indicated that other procedural innovations may improve juror comprehension of instructions.[113] Experimental studies have found that when jurors are given pre-instructions about the law at the beginning of the trial, they appear better able to understand the evidence and apply the law to it at the end of the trial. Pre-instructions appear to be used with greater frequency in courts.[114] However, a survey of California judges by Smith indicated that while the judges saw advantages to pre-instructions they also saw disadvantages. The most important perceived disadvantages were that the judge often does not know what substantive instructions are appropriate at the start of the trial and that the procedure may cause burdensome delays.[115]

D. Jury Bias for Plaintiffs

Numerous sources have made the claim that juries are biased in favor of very seriously injured plaintiffs.[116] The basic reasoning behind this allegation is that it is natural for jurors to have sympathy for severely injured plaintiffs. A variety of studies using different methodologies do not support the claim.

Viscusi examined 10,784 product liability closed claims compiled by the Insurance Services Offices, an insurance industry organization.[117] The cases came from lawsuits terminated between mid-1976 and mid-1977, and included cases from all fifty states. About 4% of the cases were decided at trial.[118] Plaintiffs won 37% of the cases, a figure roughly comparable to more recent data, already discussed, showing around a 40% win rate.[119] Viscusi's analyses found no statistically significant relationship between the size of the plaintiff's claimed economic loss and the verdict. He did conclude that the liability doctrine under

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111. Vicki Smith, *Prototypes in the Courtroom: Lay Representations of Legal Concepts*, 61 J. PERSONALITY SOC. PSYCHOL. 857 (1991); Vicki Smith, *When Prior Knowledge and Law Collide: Helping Jurors Use the Law*, 17 LAW & HUM. BEHAV. 507 (1993).

112. English & Sales, *supra* note 95.

113. Elwork et al., *supra* note 100.

114. *See* JURY TRIAL INNOVATIONS 161–65 (G. Thomas Munsterman et al., eds., 1997); B. Michael Dann & George Logan III, *Jury Reform: The Arizona Experience*, 79 JUDICATURE, 280 (1996).

115. Vicki Smith, *The Feasibility of Pretrial Instructions in Substantive Law: A Survey of Judges*, 14 LAW & HUM. BEHAV. 235 (1990).

116. See VIDMAR, *supra* note 2, at 11–22, for a review of these claims.

117. W. KIP VISCUSI, REFORMING PRODUCTS LIABILITY (1991).

118. *Id.* at 44.

119. *Id.* at 49. *See supra* note 9 and accompanying text.

which the case was decided did have an impact, and he estimated that strict liability doctrines increased a plaintiff's chance of success by 20%.[120]

Daniels and Martin examined a large number of product liability and medical malpractice verdicts in a number of jurisdictions around the country.[121] Severity of injury was not related to win rates in product liability cases, although it was related in malpractice cases. However, a more thorough analysis by those authors indicated that determining causality of a relation between severity and win rates is a very complicated matter, highly confounded by the way cases are litigated and emerge out of the litigation process.

The Taragin et al. study of New Jersey medical malpractice trials, discussed above,[122] found no statistically significant relationship between the severity of a plaintiff's injury and the jury's verdict on liability. Farber and White's study[123] of hospital malpractice lawsuits also found no relationship between severity of injury and the chances of prevailing at trial. These results supplement other findings comparing verdicts with physician's ratings of negligence.[124]

Hans and her colleagues have undertaken a series of studies that help to further explain why the above data are not supportive of the "jury sympathy" hypothesis.[125] The studies were concerned with cases involving claims by individuals against corporate defendants, and involved interviews with jurors who decided actual cases, surveys of juror attitudes and experimental studies that manipulated key variables bearing on the sympathy hypothesis. Her findings all pointed toward the same conclusion, namely that the general public from which the jury pool is drawn is "quite suspicious of, and sometimes downright hostile to, civil plaintiffs."[126] Interviews with jurors found that more than 80% believed that there are too many frivolous lawsuits, and only about one-third endorsed the view that plaintiffs have legitimate grievances. Jurors indicated that deliberations often centered around the behavior of the plaintiff and speculation about his or her possible motives in bringing the lawsuit rather than on the behavior of the defendant:

> Jurors often took a dim view of plaintiffs who did not comport with high standards of credibility and behavior, including those who did not act or appear as injured as they claimed, those with preexisting medical conditions, and those who acted or failed to act in ways that contributed to their own injuries.[127]

Hans characterized these attitudes as blaming the victim.

My research involving interviews with jurors who decided medical

120. VISCUSI, *supra* note 117, at 51.
121. DANIELS & MARTIN, *supra* note 2.
122. Taragin et al., *supra* note 49.
123. Farber & White, *Empirical Examination*, *supra* note 51.
124. *See supra* notes 46–58 and accompanying text.
125. *See* Valerie P. Hans, *The Contested Role of the Civil Jury in Business Litigation*, 79 JUDICATURE 242 (1996) (reviewing her program of research).
126. *Id.* at 244.
127. *Id.* at 244–45.

malpractice cases is entirely consistent with Hans' conclusion.[128] In one case study, the jurors indicated that they carefully analyzed the plaintiff's credibility and the character and financial incentives of the plaintiff's lawyer. They also fussed over the financial consequences for the doctor and the doctor's practice at the same time that they expressed grief over a severely retarded child and sympathy for its parents. These findings are quite consistent with other studies that contradict popular media portrayals of modern American culture as pro-plaintiff. In fact, Engle's important work indicates that conservative ideological beliefs against getting something for nothing are still embedded in American culture.[129] Of course, juries do render verdicts for plaintiffs. Interviews with jurors indicate that sometimes elements of sympathy for plaintiffs play a part in deliberations; as well as feelings of anger when a defendant has behaved egregiously.[130] However, there is no data to support the position that this occurs with regularity. Indeed, the evidence on relationships between injury severity and verdicts from juror interviews is not supportive of the claim.

E. Corporate Responsibility

Although research does not support the pro-plaintiff bias claim, emerging evidence does suggest that juries may apply a "reasonable corporation" standard rather than a "reasonable person" standard in judging the behavior of corporate defendants. Hans' research is seminal in this regard.[131] Even though many of the jurors that she interviewed had been instructed by a judge that a corporation should be treated the same as an individual, about 42% said a different standard should be applied.[132] In her surveys of the general population, about 64% of respondents said a different standard should be applied.[133] They explained that a business' engagement in commercial enterprise and the greater potential effect of its actions were relevant to their views for a higher standard.[134] Hans followed these findings with a series of jury simulation experiments that varied the identity of the defendant between that of an individual, a for-profit business or a non-profit business. All other facts were the same. For-profit businesses were more often judged negligent compared to individuals and non-profit businesses.[135] The jurors also applied similar logic to individuals and corporations with respect to the elements of negligence, but, at the same time, they expressed a need for corporations to be held to higher standards.[136]

MacCoun has extended the Hans findings in a series of simulation

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128. VIDMAR, *supra* note 2, at 237–48.

129. David M. Engle, *The Ovenbird's Song: Insiders, Outsiders, and Personal Injuries in an American Community*, 18 LAW & SOC. REV. 551 (1984).

130. *See* VIDMAR, *supra* note 2; Steve Cohen, *Malpractice: Behind at $26-Million Award to a Boy Injured in Surgery*, *in* VIDMAR, *supra* note 2, at 95–110.

131. *See* Hans, *supra* note 125.

132. *Id.* at 246.

133. *Id.*

134. *Id.* at 246–47.

135. *Id.* at 247.

136. *Id.*

experiments involving persons called for jury duty.[137] A first experiment varied whether the defendant was a poor individual, a wealthy individual, or a corporation. Corporations were more often judged liable than individuals.[138] In a second experiment, awards were larger against wealthy individuals who were engaged in commercial rather than personal activities, and awards were larger against corporations than against wealthy individuals.[139] MacCoun concluded that the likely explanation for the differences lies in jurors' views about the special risks and responsibilities of commercial activity.[140] He speculated that jurors believe that commercial gain may tempt people or groups to cut corners in the pursuit of profit.[141] Additional research by Hamilton and Sanders indicates that similar attitudes toward corporate responsibility are present in Russia and Japan, although cultural and legal contexts affect the ways they are expressed.[142]

In short, there is emerging evidence that the public believes business corporations should be held to higher standards of responsibility than individuals. The studies also suggest that the basis of these beliefs is not an anti-business attitude per se, but rather involves concerns about motives and risk-taking in commercial enterprises. This issue is also relevant to claims about damages and the so-called deep pockets hypothesis that will be discussed later.

F. Procedural Complexity

Mass tort and other multi-party litigation involves a number of procedural complexities, as typified in the Selvin and Picus study.[143] These cases include requirements that the jury renders decisions on causation, liability, and damages for multiple plaintiffs, multiple defendants, or both. The general information load on the juries usually also increases because there are more expert witnesses and other evidence.

One procedural device intended to reduce trial complexity is the division of the trial into separate components so that the jury makes decisions in sequence. Often described with the generic title "bifurcation," a trial, depending on the case, might actually be divided into a number of stages wherein the jury hears only evidence bearing on separate components at issue: causation, liability, compensatory damages, punitive liability, and punitive damages. Bifurcation has been recommended as a way to make decisionmaking more rational. It may also save court time since a vote in favor of the defendant at one stage will preclude trying the additional issues. Bifurcation is controversial. Advocates insist that it

137. Robert J. MacCoun, *Differential Treatment of Corporate Defendants by Juries: An Examination of the "Deep Pockets" Hypothesis*, 30 L. & SOC'Y REV. 121 (1996).

138. *Id.* at 127–34.

139. *Id.* at 134–39.

140. *Id.* at 141.

141. *Id.*

142. V. Lee Hamilton & Joseph Sanders, *Corporate Crime Through Citizens' Eyes: Stratification and Responsibility in the United States, Russia and Japan*, 30 L. & SOC'Y. REV. 513 (1996).

143. SELVIN & PICUS, *supra* note 38.

makes decision-making more systematic and rational. Opponents argue that it tilts the trial in favor of defendants because the jury does not have the opportunity to hear the full story bearing on liability.

In an early study conducted in the 1950s, Zeisel and Callahan examined unitary and bifurcated personal injury trials in a federal court in the Northern District of Illinois.[144] Bifurcation into a liability phase before damage evidence was presented led to about a 25% savings in trial time compared to unitary trials.[145] When a bifurcated procedure was ordered, plaintiffs obtained a settlement in 32% of cases and prevailed before juries in another 12% for a total "prevail rate" of 44%.[146] In contrast, plaintiffs in unitary trials received a settlement 24% of the time and won at trial in 42% of the cases for an overall "prevail rate" of 66%.[147] These findings are consistent with the hypothesis that defendants are more likely to prevail with bifurcated procedures, but there are no criteria to assess the quality of the verdicts under the two alternative procedures. Additionally, the cases were not randomly assigned to procedures and therefore the results may have been due to selection effects.

Horowitz and Bordens conducted a mock jury experiment that avoided some of the problems with the Zeisel and Callahan study.[148] Jury-eligible citizens listened to an audio tape of a toxic tort trial involving four plaintiffs portrayed by professional actors in a courtroom setting and deliberated in six-person juries. The experiment varied three factors: whether the trial was unitary or bifurcated with regard to liability and compensatory damages, the order of decisions, and the number of decisions the jurors were required to make. In contrast to trials that split the decisions into stages, significantly more verdicts in favor of plaintiffs resulted when causation, liability and damages were heard in a unitary trial. However, while the unitary trial resulted in more responsibility assigned to the defendant, compensatory damage awards were significantly larger in the bifurcated trial conditions.[149] In examining the deliberations, Horowitz and Bordens found that in the unitary conditions, the jurors used the totality of evidence in reaching their verdicts.[150]

Landsman et al. conducted another experimental study of bifurcation that focused on punitive damages.[151] Using professional actors they videotaped a constructed trial involving a toxic substance. The study involved jury-eligible Illinois citizens, some of whom deliberated as six-person juries while others responded only as individual jurors. The primary decisions of interest were their

144. Hans Zeisel & Thomas Callahan, *Split Trials and Time Savings: A Statistical Analysis*, 76 HARV. L. REV. 1606 (1963).

145. *Id.* at 1611.

146. *Id.* at 1612.

147. *Id.*

148. Irwin A. Horowitz & Kenneth S. Bordens, *An Experimental Investigation of Procedural Issues in Complex Tort Trials*, 14 LAW & HUM. BEHAV. 269 (1990).

149. *Id.* at 283–84.

150. *Id.* at 282.

151. Stephan Landsman et al., *Be Careful What You Wish For: The Paradoxical Effects of Bifurcating Claims for Punitive Damages*, 1997 WIS. L. REV. 297 (1998).

verdicts on liability, compensatory damages, liability for punitive damages, and amount of punitive damages. In some versions of the trial, the evidence on liability was weak and in others it was moderate. Approximately two-thirds of the jurors or juries heard unitary versions of the trial involving evidence on compensatory liability and damages and punitive liability and damages. The other jurors and juries were exposed to a bifurcated procedure in which they heard testimony about liability and compensatory damages; only if they decided the defendant was liable did they hear evidence pertaining to punitive liability and damages.

Consider first the individual responses of jurors. Bifurcation significantly reduced juror willingness to find the defendant liable: 43% of jurors in bifurcated trials decided for the plaintiff in the bifurcated condition versus 55% in the unitary condition. This finding suggests that jurors were influenced by punitive case facts in deciding compensatory liability despite instructions against using them. In bifurcated trials, the size of compensatory awards did not differ by strength of evidence, but in unitary trials, when the evidence was close, the compensatory awards were larger. However, opposite effects were found with punitive damages. While 75% of jurors in the unitary trial condition found against the defendant, fully 92% did so in the bifurcated condition. Moreover, the average punitive award in the bifurcated condition was about four times larger than in the unitary condition. Even when the data were adjusted to eliminate outlier awards, the bifurcated trials yielded awards that were double those in unitary trials. Verdicts from deliberating juries in the experiment were not so pronounced. In both unitary and bifurcated conditions plaintiffs prevailed less frequently. However, when plaintiffs did win, the pattern of fixing punitive damages was similar to the findings with individual jurors; that is, punitive damages in bifurcated trials were larger.

In short, the three studies seem to support the hypothesis that bifurcated trials will result in more defense wins on the issue of liability. On the other hand, they indicate that when plaintiffs do prevail, the defendant is subject to greater financial exposure, sometimes substantially greater exposure. The Horowitz and Bordens and Landsman et. al. experiments provide some tentative insights into why this may be so. Jurors cannot expunge claims about injuries and egregious behavior when deciding liability in unitary trials. On the other hand, hearing all the bad news about the defendant at one time in a unitary trial may soften judgments about the extent of harm and, in consequence, lessen the dollar amounts assessed for that harm.

In a series of additional experiments, Horowitz and his colleagues examined other issues related to trial complexity by using the same basic experimental paradigm and trial materials.[152] Horowitz and Bordens examined the effects of the severity of injury of the four plaintiffs. Their study also varied the size of the distal plaintiff population: some jurors learned that there were twenty-six other plaintiffs, while other jurors learned that there were "many hundreds" of other plaintiffs, while still other jurors were given no information about other

152. Irwin A. Horowitz & Kenneth S. Bordens, *Effects of Outlier Presence, Plaintiff Population Size and Aggregation of Plaintiffs on Simulated Jury Decisions*, 12 LAW & HUM. BEHAV. 209 (1988).

plaintiffs. As the number of plaintiffs in the distal population increased, fault was increasingly attached to the defendant. Fault was a major variable in the award of compensatory and punitive damages. The presence of a plaintiff with severe injuries, compared to other plaintiffs, increased the amounts of punitive awards as well as their variability.[153] The juries appeared to use the outlier as a threshold test: if the jury decided that the company was liable for the outlier's injuries, all plaintiffs benefitted, particularly the plaintiff with the weakest case.[154]

In another experiment Horowitz et al. varied the number of plaintiffs, the number of expert witnesses and the complexity of the language used by the experts.[155] The jurors responded individually without deliberating. Contrary to the evidence, an increase in the number of plaintiffs decreased the amount of blameworthiness to the defendants.[156] While the two studies are not exactly comparable, these findings seem to contradict the findings in the earlier Horowitz and Bordens study.[157]

Two other studies by Horowitz and his colleagues indicated that negative effects of evidence complexity were partially offset when the jurors had access to transcripts of the evidence, were allowed to take notes, or received pre-instructions before hearing the evidence.[158]

Bordens and Horowitz[159] have also examined the jury decisions in *Cimino v. Raymark Industries*[160] in the context of their experiments involving outlier cases and sizes of plaintiff cases. Recall that *Cimino* is Judge Parker's innovative case in the Eastern District of Texas involving consolidation of over two thousand asbestos claims. A random sample of 160 cases, involving five subsamples of disease categories was selected: mesothelioma, lung cancer, other cancers, asbestosis, and pleural diseases. The cases within each of the categories were randomly divided into approximate halves and assigned to two different juries for decisions on liability and damages, starting with the most serious injuries (mesothelioma) and concluding with the less serious injuries (pleural diseases). The average verdicts within each category for these "bellweather" cases were then awarded to the remaining cases. Although the *Cimino* procedure raises some important issues about individualized justice, Saks and Blanck have correctly argued that not only is

153. *Id.* at 226.

154. *Id.*

155. Irwin A. Horowitz et al., *Effects of Trial Complexity on Decision Making*, 81 J. APPLIED PSYCHOL. 757 (1996).

156. *Id.* at 765.

157. Horowitz & Bordens, *supra* note 152.

158. Lynne ForsterLee et al., *Effects of Notetaking on Verdicts and Evidence Processing in a Civil Trial*, 18 LAW & HUM. BEHAV. 567 (1994); Lynne ForsterLee & Irwin Haeres, *Enhancing Juror Competence in a Complex Trial*, 11 APPLIED COGNITIVE PSYCHO. 305 (1997).

159. Kenneth Bordens & Irwin Horowitz, *The Limits of Sampling and Consolidation in Mass Tort Trials: Justice Improved or Justice Altered?*, 22 LAW & PSYCHOL. REV. 43 (1998).

160. 751 F. Supp. 649 (W.D. Tex 1990) *rev'd*, Cimino v. Raymark Inds. Nos. 93-4452–93-4611, 1998 WL 480147 (5th Cir. Aug. 17, 1998).

it an efficient means of litigation management, in theory, it can reduce bias and enhance the accuracy of jury decisions.[161]

The Bordens and Horowitz analyses, however, raise some serious concerns regarding the implementation of sampling theory in consolidation trials. They argue that because both juries decided the most serious cases first, the number of plaintiff verdicts may have increased and so may have the awards.[162] Furthermore, they also found differences between the juries in the amounts of awards that were given and different patterns of awards for future versus past pain and suffereing.[163] Strikingly, some differences in the samples of the cases that the two juries decided roughly mirror outlier conditions in the simulation experiments. The award differences between the two *Cimino* juries, moreover, are in the direction that would be predicted from the earlier experiments. Among other suggestions, Bordens and Horowitz argue that juries in consolidation trials should only decide cases involving one category of seriousness.[164] Otherwise, the result, in their catchy phrase, may be "justice skewed rather than justice improved."[165] At the very least, their study of *Cimino* draws attention to the need for careful consideration of case sampling and how juries are assigned to decide the bellweather cases.

The most important practical significance of the Horowitz and Landsman et al. experiments is the demonstration that procedural complexity probably does affect the process by which juries reach decisions and ultimately verdicts.[166] Whether the changes are positive or negative depends on which perspective one takes, but they do raise the desirability of aids to assist the jury and, at the same time, caution about what additional consequences may result from changes in procedures.

IV. DAMAGES

Damages are the issues that engage the media and fuel the public and legislative debate about the need for tort reform. Studies clearly show that media reports are selective in the reporting of trial outcomes.[167] Media coverage is heavily skewed toward reporting plaintiff wins and large damage awards. Unfortunately, this bias in reporting fuels legislative debate and public perceptions of the jury

161. Michael J. Saks & Peter Blanck, *Justice Improved: The Unrecognized Benefits of Aggregation and Sampling in the Trials of Mass Torts*, 44 STAN. L. REV. 815 (1992).

162. Bordens & Horowitz, *supra* note 159, at 60–63.

163. *Id.* at 52.

164. *Id.* at 62.

165. *Id.* at 66.

166. Similar results have been found with respect to procedural complexity in criminal trials. *See, e.g.*, Irwin Horowitz et al., *A Comparison of Verdicts Obtained in Severed and Joined Criminal Trials*, 10 J. APPLIED SOC. PSYCHOL. 444 (1980).

167. Daniel S. Bailis & Robert J. MacCoun, *Estimating Liability Risks with the Media as Your Guide: A Content Analysis of Media Coverage of Tort Litigation*, 20 LAW & HUM. BEHAV. 419 (1996); Oscar Chase, *Helping Jurors Determine Pain and Suffering Awards*, 23 HOFSTRA L. REV. 763, at 771–74 (1995).

system. Additionally, some research studies on damages that were published in the mid-1980s were badly flawed from a methodological perspective and added to scholarly and public confusion.[168] More recent research presents a very different picture of what juries do.

This section first reviews research on overall compensatory damage awards, including their relation to severity and economic loss and the issues relating to increasing awards, unreliability, and deep pockets. Next, general, or "non-economic," damages as a special category of compensatory damages are considered. Then, punitive damages are discussed. Finally, I consider the largely ignored issue of post-trial adjustments to jury awards and present some new data on the degree and extent of post-trial adjustments. Post-trial adjustments are an important topic because they are relevant to much of the debate about the magnitude of jury awards.

A. Total Damage Awards

1. Profiles of Awards

Most of the systematic research on compensatory damages has involved tort claims, although Ostrom et al.'s National Center for State Courts Study also included data on other types of cases. Ostrom et al. concluded that of the urban state courts that they studied, the typical jury award in 1992 was "modest."[169] The median jury verdict, including punitive damages, was $52,000. However, because of some very high awards, the arithmetic mean of those awards was $455,000. In fact, 85% of all awards were less than the mean. About 8% of awards exceeded $1 million. When the authors "trimmed" the outlier awards—that is, eliminated the top and bottom 5% of awards—the mean award was $159,000. The amount of awards varied by type of case. Some of the findings are summarized in Table 1. Medical malpractice, product liability and toxic torts had the largest median and mean awards. In fact, almost one out of every four medical malpractice awards and almost one in seven product liability awards exceeded $1 million. In contrast, automobile and premises liability cases had much lower mean and median awards. Ostrom et. al. took note of the fact that the awards they reported did not take into account post-trial reductions. This qualification has usually been omitted in other studies of awards, but it is an important one, as I will discuss shortly.

Bovbjerg et al. reported data on a sample of almost nine hundred cases that had means and medians that were somewhat higher than the Ostrom et al. data.[170] Daniels and Martin reported median awards for product liability and medical malpractice cases that are roughly similar to those reported by Ostrom et

168. *See* Vidmar, *Pap and Circumstance*, *supra* note 7; Neil Vidmar, *Empirical Evidence on the Deep Pockets Hypothesis: Jury Awards for Pain and Suffering in Medical Malpractice Cases*, 43 DUKE L.J. 217, 224–41 (1993) [hereinafter Vidmar, *Deep Pockets*].

169. Ostrom et al., *supra* note 9.

170. Randall R. Bovbjerg et al., *Valuing Life and Limb in Tort: Scheduling "Pain and Suffering"*, 83 NW. U. L. REV. 908 (1989).

al.[171] Viscusi's study of products liability awards suggests mean figures that, adjusted for inflation, are somewhat higher than those reported by Ostrom et al.[172] It is difficult to make direct comparisons between these studies because of the different data samples. The Ostrom et al. study involves the most representative sampling. However, it is restricted to state courts, whereas the other studies included trials in federal courts as well as state courts.

2. Inflation in Awards

Starting in the early 1980s, a series of studies from Rand's Institute for Civil Justice compared jury awards in Cook County, Illinois and San Francisco over a period of twenty-five years.[173] The data showed that both median and mean awards increased at a near exponential rate over the period. With few qualifications, the authors of those reports concluded that, even with adjustments for inflation, juries were awarding more over time. Relying on a different set of verdict report data, Viscusi similarly concluded that awards were increasing.[174] The Rand and Viscusi studies and some similar studies have been cited as proof of increasing jury irresponsibility that have helped bring on a so-called "tort crisis."[175]

The conclusions drawn from these studies have been extensively critiqued independently by both Saks and myself,[176] so I will only summarize the primary argument. The conclusions that juries increased their awards over time *cannot* be made from the verdict report data absent some other information. It is not possible to conclude whether juries were deciding cases differently *or deciding different cases.* To the extent that changes in litigation patterns occur, different types of cases may go to juries over the time periods. Litigation patterns include the number and types of cases coming into the legal system, settlement rates, and a host of other factors. Moreover, there is substantial evidence to indicate that these patterns do frequently change. Even though the awards may increase with time, the different case mix may explain the changes in mean and median awards (or win rates). For instance, consider a hypothetical example. At "Time 1" the cases going before juries include a mix of low value cases and high value cases. The average jury award will be a sum of those two types of awards divided by the number of cases. Now consider that between "Time 1" and "Time 2" alternative dispute resolution is introduced and many of the low value cases settle rather than go to trial. At "Time 2" juries are only deciding high value cases. The average award at "Time 2" will naturally be higher since juries are only deciding high value cases.[177]

There are other problems with some of the data sets used in the studies, but there is an additional problem for those who wish to ignore these

171. DANIELS & MARTIN, *supra* note 2.
172. *See* VISCUSI, *supra* note 117, at 97.
173. MARK A. PETERSON, CIVIL JURIES IN THE 1980S (1987).
174. VISCUSI, *supra* note 117.
175. *See* HUBER, LIABILITY, *supra* note 67, at 3–10; Johnson et al., *supra* note 23, at 1373–75.
176. Saks, *supra* note 7; Vidmar, *Pap and Circumstance*, *supra* note 7.
177. *See* Vidmar, *Pap and Circumstance*, *supra* note 7.

methodological caveats and insist on asserting that awards are continuing to spiral. Recent data from those same verdict sources suggest that mean and median awards are decreasing.[178]

3. Deep Pocket Effects

The Ostrom et al. data, as summarized in Table 1, clearly show that awards in product liability and medical malpractice cases are higher than in other cases, particularly automobile negligence cases. These differences have been documented in other studies, including the Rand studies.[179] Moreover, the differences remain even when severity of injury is taken into consideration. The findings have been interpreted as evidence of a "deep pockets" effect; namely, that juries give larger awards when the defendant is wealthy.[180] Like the statistics purporting to show an increase in awards over time, they are open to plausible alternative explanations that I have explored in depth elsewhere.[181] Insofar as the trial evidence is concerned, comparing cases between automobile negligence and medical malpractice or products liability is like comparing apples and oranges. The rate at which auto negligence cases go to trial differs from the other two types of cases and so do plaintiff win-rates at trial. Equally important, auto negligence cases, on average, differ from the other cases in a number of ways. An incomplete list of difference between these cases and medical malpractice cases is as follows: number of defendants; absence or presence of a professional relationship between the parties; quantum of expert testimony, including evidence on damages; generalist versus specialist lawyers; nature and quantum of alternative theories of liability; absence or presence of documentary evidence bearing on defendant behavior.[182] A similar type of list can be developed for product liability trials.

Because of the confounding of these variables in the real world, I conducted a simulation study to provide clarification.[183] Persons awaiting jury duty were given a detailed account of a trial involving a serious injury in which defendant liability was stipulated. Jurors were asked to award an amount for pain and suffering. For some jurors the cause of the injury was automobile negligence and for others it was medical malpractice. The experiment also varied whether the defendants were individuals (drivers or doctors) or corporations (the driver's company or a hospital). There were no statistically significant differences between the conditions. In short, type of defendant made no difference.

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178. *See, e.g.*, *The Civil Trial Court Network Project*, 19 ST. CT. J., 1 (1995); John Kirkton, CHICAGO DAILY L. BULL., Feb. 1, 1995, at 2; Russell Moran, *System Self-Corrects Tort "Flaws"*, N.J. LAW., Mar. 13, 1995, at 6.

179. PETERSON, *supra* note 126 at 20–25; Randall R. Bovbjerg et al., *Juries and Justice: Are Malpractice and Other Personal Injuries Created Equal?*, 54 LAW & CONTEMP. PROBS., Winter & Spring 1991, at 5.

180. HUBER, LIABILITY, *supra* note 67.

181. Vidmar, *Pap and Circumstance*, *supra* note 7; Vidmar, *Deep Pockets*, *supra* note 168.

182. *See* Vidmar, *Deep Pockets*, *supra* note 168, at 231–33.

183. *Id.*

Hans also explored the deep pockets hypothesis through a series of studies that involved interviews with jurors, surveys, and experiments.[184] Jurors tended to deny that they were generous with awards against corporations because of the corporations wealth. However, in an experiment that varied whether the defendant was an individual or a corporation, substantially larger awards were given to plaintiffs in the corporate condition (a finding different than that in my experiment). However, it appeared that the differences were due in large part to the different standard of responsibility by which corporations were judged. Consequently, in a follow-up study, Hans provided information about the financial status of the individual or corporation and varied the wealth of the defendant. Defendant assets had no impact on judgments of negligence or amount of awards.

MacCoun's research, based on jury simulations, also found no evidence of wealth per se having an effect on jury awards.[185] He did find that when the individual or corporate defendant was engaged in commercial activity, awards were higher than when no profits were involved.[186]

Thus, the empirical studies indicated that corporations are held to different standards of responsibility, and this may, in turn, affect damage awards. One additional intriguing finding comes from Hans' interviews with jurors. She found some evidence that when the defendant was not wealthy, jurors reported adjusting awards downward to accommodate the defendant's ability to pay. She labeled this effect the "shallow pockets" hypothesis.[187] Its implication is that jurors do adjust for wealth but in a downward rather than upward direction. This finding is in contradiction to the deep pockets hypothesis.

Current research findings do not allow us to rule out the deep pockets hypothesis as a factor in jury awards, but it has anything but solid empirical support. Moreover, to the extent that corporations are treated differently, if indeed they are treated differently, the explanation probably lies with complex juror judgments about responsibility rather than anti-business sentiments.

4. Variability of Awards with Injuries

The studies by Bovbjerg et al.,[188] Daniels and Martin,[189] and Viscusi[190] compared the amounts awarded by juries against the seriousness of the plaintiff's injuries as defined by the National Association of Insurance Commissioners' nine-point scale of injury seriousness.[191] Awards in all three studies were positively related to the seriousness of the plaintiff injury, except that death resulted in a lesser amount than grave injury. These data are consistent with a conclusion that

184. Hans, *supra* note 125, at 247–48.
185. MacCoun, *supra* note 137, at 140–43.
186. *Id.* at 140–42.
187. Valerie Hans, *Illusions and Realities in Jurors' Treatment of Corporate Defendants*, 42 DEPAUL L. REV. (forthcoming Fall 1998).
188. Bovbjerg et al., *supra* note 170.
189. DANIELS & MARTIN, *supra* note 2, at 128, 169.
190. VISCUSI, *supra* note 117.
191. DANIELS & MARTIN, supra note 2, at 128.

jury awards have a degree of rationality to them.

However, Bovbjerg et al., Viscusi, and Sloan et al. offered an additional conclusion, namely that awards at the low end of injury seriousness are overcompensated while those at the high end are undercompensated.[192] This may be the case, but recent research of my own has raised a serious problem with the NAIC scale that would temper the conclusion with regard to injuries at the low end of the scale.[193] The scale is devised to assess physical injuries. Emotional injuries are rated as a 1 on the scale and temporary injuries receive a 2 or 3. However, in assessing injuries in medical malpractice cases, I have uncovered numerous instances where the injury to the plaintiff was alleged to be rape or some other form of sexual assault by the health care provider. In other cases, the claim was medical treatment had caused psychosis or severe neurosis. Most observers would consider these anything but minor injuries. It is not clear how the researchers in the above studies coded such cases, but to the extent that the injuries were classified as minor, the reported relationships between seriousness ratings and awards are misleading.

Another conclusion from the data set forth by Bovbjerg et al.[194] and Viscusi[195] is that juries are unreliable in setting damages. Within categories of injury severity, awards were highly variable; that is, they exhibited a large range of dollar amounts. Those authors acknowledged that some of the variability could be due to differences in actual economic losses between plaintiffs.[196] In fact, this is a very plausible explanation. A seventy-year-old plaintiff who suffers a severe injury is actuarily likely to require many fewer years of medical treatment than a seven-year-old child; an unmarried store clerk will have demonstrably lower estimates of future economic losses than an executive with a $200,000 per annum salary and four dependents. In fact, the only way to conclude anything about the rationality of awards is to compare those awards with actual loss as Dazon and Sloan have done.

Danzon studied a sample of insurers' claim files for California medical malpractice cases that were closed during 1974 and 1976. Approximately 7% went to trial and plaintiffs prevailed 28% of the time. She compared the awards with estimates of economic losses, injury severity, and age of the plaintiff. The analyses led her to conclude that in general jury awards were related to the magnitude of plaintiffs' losses.[197]

Sloan et al. conducted detailed analyses of a sample of malpractice cases

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192. Bovbjerg et al., *supra* note 170 at 922–23, 975; VISCUSI, *supra* note 117 at 87–116; SLOAN ET AL., *supra* note 55, at 188.

193. Neil Vidmar et al., *Jury Awards in Medical Malpractice: A Profile of Awards, Proportions for General Damages, and Post-Verdict Adjustments*, 42 DEPAUL L. REV. (forthcoming Fall 1998).

194. Bovbjerg et al., *supra* note 170, at 919–24.

195. VISCUSI, *supra* note 117, at 87–116.

196. *See* Bovbjerg et al., *supra* note 170, at 923–24.

197. PATRICIA M. DANZON, MEDICAL MALPRACTICE: THEORY, EVIDENCE, AND PUBLIC POLICY 40–42 (1985).

involving birth and emergency room injuries.[198] Within categories of injury seriousness, actual economic loss was highly variable. Another possible source of variability in awards is the way the case is tried by the lawyers, including how they demonstrate economic and non-economic losses at trial. Indeed, in my study of medical malpractice cases in North Carolina I uncovered the fact that often defendants proffered no evidence on damages and that plaintiff lawyers differed a great deal in the quality and quantum of evidence that they put before the jury.[199]

None of this should lead to the conclusion that juries have no random variability in their awards, nor should we expect variability to be absent. Human variability is inherent in the task assigned to the jury. Experts called by the opposing sides offer widely differing estimates of economic losses. In fact other specialist professionals also show considerable variability in their judgments. Williams randomly assigned a number of experienced trial lawyers to the role of plaintiff or defendant lawyer and asked them to value the case.[200] All participants had the same case and documents. Lawyers assigned to represent plaintiffs showed great variability in their estimates of the worth of the case, and so did lawyers assigned to represent defendants. Similarly, Saks has drawn attention to the fact that experienced claims adjusters show great variability in their valuations of damages.[201]

There are strong arguments to be made for comparing jury awards against the actual evidence that jurors hear. There are also strong arguments for comparing variability in their decisions with those that could be made by alternative decision makers.

B. General, or Non-economic, Damages

Along with punitive damages, the non-economic component of damages, or general damages, often labeled simply as "pain and suffering," has been at the center of the tort reform debate. "Pain and suffering" has been said to constitute more than 50% and as much as 80% of jury awards, and to be highly variable and frequently capricious.[202] In some states, arbitrary legislative limits have been placed on the total amount that can be awarded for general damages. Various alternative solutions have been proposed to assist jurors in valuing these damages.[203] One involves providing jurors with a matrix of values that would fix damages according to seriousness of injury and age of plaintiff. A second approach is to provide jurors with a set of scenarios with associated dollar values that would

198. SLOAN ET AL., *supra* note 55, at 187–210. The sample included settled and tried cases.

199. VIDMAR, *supra* note 2, at 197–98.

200. GERALD R. WILLIAMS, LEGAL NEGOTIATION AND SETTLEMENT 7 (1983).

201. Saks, *supra* note 7, at 1214–15, 1222.

202. See VIDMAR, *supra* note 2, at 200–01, for a discussion of these claims. *See also* Neil Vidmar & Jeffrey J. Rice, *Assessments of Noneconomic Damage Awards in Medical Negligence: A Comparison of Jurors with Legal Professionals*, 78 IOWA L. REV. 883 (1993).

203. *See* Bovbjerg et al., *supra* note 170, at 953–56.

serve as non-binding benchmarks for the jury. Another solution is a variation on the total cap implemented by some states, but, rather than a single arbitrary limit, awards would be capped according to a system of flexible floors and ceilings that vary with severity of injury and plaintiff age. Debate on reforms has taken place without consideration of what juries actually do and why they do it. Researchers have been slow to study these issues, but recent studies provide intriguing insights about the problem.

1. Proportions of Awards

Several studies attempted to estimate what the authors labeled "pain and suffering" awards, but, as will be explained in a moment, should have been called general damages. Relying on verdict reports or closed claim files the researchers made estimates of special damages from the reports and subtracted that figure from the total award to obtain an estimate of the non-economic portion of the award. I have previously challenged the reliability of the samples from which the data were drawn and also methodological problems with the just described procedure of estimating the non-economic component.[204] Regardless, I will briefly summarize the conclusions of those studies before describing a recently completed study that involves a different way of assessing this component of compensatory damages and raises serious objections to characterizing it as solely "pain and suffering."

Danzon combined several disparate data sets of verdict reports in medical malpractice cases for her study.[205] She concluded that of those plaintiffs who received a large damage award at trial, 51% received a general damages award exceeding $100,000. Viscusi estimated the general damages component in a sample of product liability cases obtained from the Insurance Services Office, a private industry group.[206] He concluded that while the general damages component of awards varied by type of loss, it averaged close to 70% of the total award. Bovbjerg et al.'s study of a sample of personal injury cases concluded that there was even greater variability in the "pain and suffering" portion of jury awards within categories of injury severity than for the total damage award.[207] Those authors did not report the percentage of awards that was for general damages, but from their tables, I estimate it to be around 26%.[208]

The serious problem with the estimates in these studies involves the fact that the economic portion of the award may be very unreliable since it is obtained from sources that vary from case-to-case and thus unknown bias and variability is

204. Vidmar, *Pap and Circumstance*, *supra* note 7; Vidmar, *Deep Pockets*, *supra* note 168.

205. Patricia Danzon, *Report on Awards for Noneconomic Loss*, *in* FLORIDA MEDICAL MALPRACTICE POLICY GUIDEBOOK (Henry G. Manne ed., 1985).

206. VISCUSI, *supra* note 117, at 103–04. *See also* W. Kip Viscusi, *Pain and Suffering in Product Liability Cases: Systematic Compensation or Capricious Awards?*, 8 INT'L REV. L. & ECON. 203 (1988).

207. Bovbjerg et al., *supra* note 170.

208. *See* Vidmar, *Pap and Circumstance*, *supra* note 7, at 1228.

introduced in the estimates of non-economic components.[209] Two collaborators and I attempted to avoid this problem by studying three states that require the jury to specify each component of the compensatory award.[210] Thus, rather than estimating the non-economic component of awards or rely on one or more of the opposing legal counsel to provide estimates of economic damages, the exact figures for all elements of the award are specified on a special verdict sheet.

We chose three jurisdictions that have these requirements for special verdicts and also have data bases that report the verdicts in their entirety. The three jurisdictions are New York, Florida, and California. Our data set includes medical malpractice, product liability, and automobile negligence cases, but at this point, only the data involving medical malpractice cases have been analyzed. The New York data are limited to New York City and surrounding counties from 1985 through 1997 and were adjusted to 1995 dollars. Overall, the non-economic portion of the malpractice awards averaged 59%. There was some variability in this proportion in relation to injury seriousness: grave injuries and death averaged 4%1 and 46% respectively. In the sample of Florida malpractice cases, the average non economic component was 54%, and in California it was 60%. Thus, these more reliable figures are, at least for medical malpractice cases, consistent with the figures of the methodologically flawed studies.

The meaning of these figures must, however, be interpreted cautiously. Specifically, closer examination of the elements of the awards indicates that they often entail more than just "pain and suffering." Juries awarded sums for "loss of parental guidance," "permanent injury," "loss of parental companionship," "emotional distress," past and future "disfigurement," and "human damages." These are not necessarily pure "pain and suffering," although their calculation into dollars that will make the person "whole" requires a human judgment that is more akin to pain and suffering than the fiduciary accounting required for special damages. In interviews with jurors who decided actual cases and in experiments that asked jury-eligible citizens to explain their reasoning for awards,[211] I discovered that jurors viewed some of these same types of elements as having economic aspects. For example, in a vignette involving a woman whose face was severely disfigured but who subsequently returned to work, jurors considered the potential impact of the disfigurement on her chances for job advancement—and even if her emotional distress would allow her to continue to work—and on the stability of her marriage. With regard to the marriage issue, jurors interviewed after an actual jury trial involving a woman who suffered moderate brain damage frankly discussed the potential consequences for her current marriage and the fact that divorced women often suffer severe drops in income and lifestyle. Jury verdict statistics provide no insight as to what was discussed in the jury room, but these other findings strongly hint that jurors consider economic factors in their awards for general damages. In short, characterizing all general damage awards as "pain

209. *Id.*

210. Vidmar et al., *supra* note 193.

211. *See* VIDMAR, *supra* note 2; Vidmar & Rice, *supra* note 170; Vidmar et al., *Damage Awards & Jurors' Responsibility Ascriptions in Medical Versus Automobile Negligence Cases*, 12 BEHAV. SCI. & L., Spring 1994, at 149.

and suffering" is inappropriate.

A third consideration involves the variability of general damage awards. Recall that Bovbjerg et al. observed that there was considerable variability of "pain and suffering" within levels of injury severity and ascribed its likely cause to jury unreliability.[212] There is a plausible alternative hypothesis to this interpretation, namely that the jury was responding to the projected length or the intensity of the plaintiff's suffering. Even with severity held constant, a child of age ten has many more years of enduring pain or emotional distress from disfigurement than a fifty or seventy-year-old person. Similarly, the intensity of pain and suffering may differ greatly in plaintiffs with injuries that are, on the surface, similar. One person with an amputated limb may have severe "phantom limb" pain while another experiences no pain. The jury will hear testimony bearing on these differences in the two trials, but the differences will not be reflected in the verdict reports. My study with Gross and Rose also found variation within categories of injury severity.[213] Our data did allow a partial test of the duration of suffering hypothesis, though not intensity of suffering. There was an inverse relationship between plaintiffs' ages and amounts awarded for general damages. That is, younger plaintiffs got more. The above findings raise serious questions about journalistic, legislative, and scholarly commentary based on verdict statistics that is highly critical of jury awards. Verdict statistics are extremely limited in what they can tell us about jury behavior because they provide no information on the evidence the jurors heard and saw and how they used it in their decisions.

2. Juries Versus Judges

As Strier's discussion reported at the beginning of this article exemplifies, it is often assumed that judges can do a better job in determining pain and suffering awards than jurors.[214] Presumably their legal training makes them less susceptible to emotional appeals. Additionally, they have a perspective encompassing prior cases to serve as guidelines, whereas the jurors, as one-time decisionmakers, have no such perspective. My students and I put the assertion of legal training and experience to two empirical tests that did focus on pain and suffering and disfigurement.

In the first study, we provided two groups of jurors awaiting jury duty with a detailed description of a female patient who had suffered a severe burn on the knee.[215] The accident resulted in considerable pain and left a permanent large, disfiguring scar, but there were no permanent effects on mobility. The doctor admitted liability and the only decisions were how much the plaintiff should receive for her past pain and present and future disfigurement. Twenty-one practicing senior lawyers, six of whom were former judges, were given the same materials and asked to make the same decisions. The median and mean damage awards for the jurors and professionals were virtually the same, around $50,000.

212. Bovbjerg et al., *supra* note 170.
213. Vidmar et al., *supra* note 193.
214. *See supra* notes 3–6 and accompanying text.
215. Vidmar & Rice, *supra* note 202.

The range of the awards for the jurors was between $11,000 and $197,000. The range for the legal professionals was from $22,000 to $82,000. These last findings suggest that the professionals showed substantial variability, but certainly less than the jurors acting as individuals. However, damage awards are not rendered by individual jurors but by some combination of them, usually twelve or six, who combine their perspectives. When we modeled the jury decision-making process, the data showed that a jury composed of twelve persons would, on average, yield more reliable, that is, less variable, damage awards than a single judge in a bench trial. Six person juries were estimated to be more variable than twelve-person juries, but they were still superior to individual judges.[216]

The second study involved different groups of jurors and senior lawyers.[217] The case involved substantially greater damage claims for pain and suffering. The experiment also varied whether the cause of the accident was ascribed to automobile negligence or to medical malpractice and whether the defendant was a single individual (driver or doctor) or a corporation (company or hospital). Both the jurors and the legal professionals gave higher awards in the medical negligence case than in the automobile case, but, similar to the first study, there were no differences between jurors and professionals. Also, like the first study, estimates of variability of awards indicated that, on average, juries would give less variable awards than a single, randomly selected judge in a bench trial.

Taken together, these two studies yield no support for the assertion that judges would provide lower or more reliable pain and suffering awards than juries. In fact, the data on reliability suggest that juries are superior to judges.

C. Juror Decisionmaking Processes in Compensatory Awards

The above studies provide only a few insights into how jurors arrive at their damage awards, but knowledge of juror and jury decision making processes is crucial to attempts to provide jurors with guidance on these matters. Judicial instructions regarding general damages are, in reality, quite vague and frustrating to jurors.[218] Typical instructions suggest only "fair compensation" or "a reasonable amount."[219] In my interviews with jurors who decided medical malpractice cases, this was one of their most frequent complaints. Hans' interviews with jurors indicated that a common concern was that plaintiffs should not get more than they deserved.[220] On claims for loss of consortium, for example, jurors applied standards of proof that appeared much stricter than those provided by the law.

Greene proposed several hypothetical models by which jurors may arrive

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216. For more discussion of the jury size differences, see *infra* text accompanying notes 287–91.

217. This study with David Landau is described in VIDMAR, *supra* note 2, at 229–34.

218. *See* VIDMAR, *supra* note 2, at 189, 241.

219. See 3 EDWARD J. DEVITT ET AL., FEDERAL JURY PRACTICE INSTRUCTIONS §§ 85.01–85.21 (1987 & Supp. 1997).

220. Hans, *supra* note 125, at 244–46. *See also* Hans, *supra* note 187.

at their awards.[221] The first she labeled the anchoring model.[222] The *ad damnums* suggested by the plaintiff's lawyer, (and perhaps the amount proposed by the defendant's lawyer) serve as the anchoring points around which deliberations take place.[223] Broeder conducted interviews with jurors in eleven personal injury cases and concluded that the *ad damnum* did influence the award to some degree.[224] An experiment by Malouff and Schutte involving summaries of two personal injury cases varied the amounts requested by plaintiff lawyers while holding constant the amount suggested by the defense.[225] In one of the cases, the more the plaintiff requested, the more the simulating jurors awarded. However, in the other case the most extreme plaintiff request resulted in an average award lower than a more moderate request. The data did not allow exploration of the cause of this last result, but is consistent with other research suggesting that extreme requests produce a "boomerang effect." An unpublished experiment by Zuehl, described by Greene,[226] also varied the *ad damnum* provided to jurors in a personal injury case. The results indicated that the *ad damnum* served as an upper boundary to the awards.

An experiment by Raitz et al. presented jurors with transcripts of a wrongful termination suit.[227] Some jurors received no expert testimony on damages, some received a figure from an economist for the plaintiff, and some received testimony from the plaintiff's economist and from the defendant's economist. The data showed that jurors did rely heavily on the expert evidence in arriving at their awards. Rather than compromising between the high and low amounts suggested by the opposing experts, the jurors tended to choose one expert's figures. Since the study did not have the jurors deliberate, it did not address how between-juror differences are reconciled.

A second model discussed by Greene,[228] is the "component sums" approach in which jurors add the specific sums. Interviews with jurors and experimental research indicates that this may be a common jury behavior. The third model involves the Gestalt approach in which the jury does not show as much concern with the single components as with a general figure that seems "about right."[229] In some of my juror interviews I found that a form of mixed model was used: jurors engaged in a rather strict accounting of the components as suggested

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221. Edith Greene, *On Juries and Damage Awards: The Process of Decision Making*, 52 LAW & CONTEMP. PROBS., Autumn 1989, at 225.

222. *Id.* at 234–35.

223. *See also* John Malouff & Nicola S. Schutte, *Shaping Juror Attitudes: Effects of Requesting Different Damage Amounts in Personal Injury Trials*, 129 J. SOC. PSYCHOL. 491 (1989).

224. Dale W. Broeder, *The University of Chicago Jury Project*, 38 NEB. L. REV. 744, 756–60 (1959).

225. Malouff & Schutte, *supra* note 223.

226. Greene, *supra* note 221, at 234.

227. Allan Raitz et al., *Determining Damages: The Influence of Expert Testimony on Jurors' Decision Making*, 14 LAW & HUM. BEHAV. 385 (1990). *See also* Jane Goodman et al., *Runaway Verdicts or Reasoned Determinations: Mock Juror Strategies in Awarding Damages*, 29 JURIMETRICS J. 285 (1989).

228. Greene, *supra* note 221, at 236–38.

229. *Id.* at 235–36.

by expert witnesses but then adjusted the final amount to comport with what they thought was the "right" figure.[230]

Wiggins and Breckler investigated an interesting issue with respect to jurisdictions that have mandated that jurors return special verdicts for each element of the damage award rather than require the jury to return only a general verdict on damages.[231] They explored the hypothesis that requiring the jury to focus on each element of damages may cause awards to be higher than if the jury is allowed to adjust the figures toward a more general award that "feels right." This hypothesis would be consistent with the other research indicating that many jurors have concerns regarding plaintiffs being over compensated for injuries. In an experiment testing the hypothesis in a case involving claims for both compensatory and punitive damages Wiggins and Breckler found no differences in the total awards but did find differences in how the damages were allocated. The percentage of the award allocated for compensatory damages was larger for jurors who had been given special verdict forms.[232]

Diamond and Casper's experiment involving a price fixing trial provides additional insight about jury award making process.[233] They found that the expert's perceived expertise, trustworthiness, and clarity all influenced the willingness of jurors to rely on testimony about the amount of damage awards. Their results suggest that the most influential experts will be those who are high on all of these characteristics and that a lack of clarity can cause the jurors to shift away from content to these other dimensions in arriving at their awards. Diamond and Casper's study also explored the influence of deliberations on jury awards.[234] They found that the best predictor of awards was the median of the individual jurors' pre-deliberation awards, a finding also reported by Sonaike involving a personal injury case.[235] However, Diamond and Casper found that deliberation increased the award by about 26%.[236] In contrast, an experiment by Kaplan and Miller involving a products liability case found no influence of deliberation on compensatory awards, although deliberation did inflate punitive awards.[237] In contrast, recall that the experiment by Landsman et al. found a moderating effect of deliberation on juror decisions favoring liability for punitive damages (but some effects remained on the amounts awarded when liability was found).

Saks and his colleagues have conducted several recent studies bearing specifically on decision making about pain and suffering. Wissler et al. conducted

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230. *See* VIDMAR, *supra* note 2.

231. Elizabeth C. Wiggins & Steven J. Breckler, *Special Verdicts as Guides to Jury Decision Making*, 14 LAW & PSYCHOL. REV. 1 (1990).

232. *Id.* at 30.

233. Diamond & Casper, *supra* note 80.

234. *Id.* at 553–57.

235. S. Femi Sonaike, *The Influence of Jury Deliberation on Juror Perception of Trial, Credibility, and Damage Awards*, 1978 BYU L. REV. 889.

236. Diamond & Casper, *supra* note 80 at 553.

237. Martin F. Kaplan & Charles E. Miller, *Group Decision Making and Normative Versus Informational Influence: Effects of Type of Issue and Assigned Decision Rule*, 53 J. PERSONALITY & SOC. PSYCHOL. 306 (1987).

two experiments using psychology students as simulating jurors who decided a series of personal injury cases.[238] Seriousness of the plaintiff's injury was related to perceptions of the amount of harm suffered and to the amount of the award for pain and suffering. In both experiments the degree of the plaintiff's perceived disability and mental suffering were stronger predictors of awards than pain and disfigurement.

In another set of experiments, Hart et al. found that, in contrast to injuries consistent with commonly held beliefs about the causes of injuries, pain and suffering awards were larger and more variable when the injury was caused by unusual circumstances.[239]

A last study by Saks et al.[240] compared methods of providing guidance on pain and suffering awards to simulating jurors. Four conditions involved providing jurors with information about average past awards, with information about intervals of past awards, with a combination of averages and intervals, and with a cluster of examples of past awards. The experiment also had a "no-guidance" control condition and a condition involving a cap on awards. Saks et al. found that all of the jury guidance conditions reduced variability of awards in comparison to the control conditions.[241]

1. Extra-Legal Influences

Interviews with jurors and experimental studies indicate that in their deliberations some juries do consider attorney fees, taxation, and whether the loss is covered by insurance.[242] The effects of this discussion on awards is uncertain. In some interviews, jurors indicate that discussions took place, but then decided that the issue was irrelevant. A common assumption is that if jurors believe the defendant has insurance, the award to the plaintiff will be raised. An early study conducted as part of the Chicago Jury Project found that jurors awarded larger amounts for damages when they learned that the defendant was covered by insurance. However, some interviews with jurors have suggested an opposite dynamic, namely that if the jurors believe that the defendant does not have insurance, the award will be reduced out of concern for the defendant's ability to pay.[243] With respect to lawyer fees, it is noteworthy that in the Vidmar studies[244] comparing the awards of senior lawyers and judges with jurors in medical malpractice cases, the lawyers indicated that they explicitly calculated an equitable

238. Roselle Wissler et al., *Explaining "Pain and Suffering" Awards: The Role of Injury Characteristics and Fault Attributions*, 21 LAW & HUM. BEHAV. 181 (1997).

239. Allen J. Hart et al., *Injuries, Prior Beliefs and Damage Awards*, 15 BEHAV. SCI. & L. 63 (1992).

240. Michael Saks et al., *Reducing Variability in Civil Jury Awards*, 21 LAW & HUM. BEHAV. 243 (1997).

241. *Id.* at 253–55.

242. *See* Greene, *supra* note 221, at 241–45; Hans, *supra* note 187; VIDMAR, *supra* note 2, at 238.

243. VIDMAR, *supra* note 2, at 218; Hans, *supra* note 187.

244. Vidmar & Rice, *supra* note 202; VIDMAR, *supra* note 2, at 229–34.

award for the plaintiff and then increased it to account for attorney fees. Few jurors in the study explicitly offered this explanation for their awards. Diamond et al. discussed a number of potential consequences of informing or not informing jurors of information that they might deem relevant to their decisions.[245]

There is no reliable data on the effects of comparative negligence rules on awards. Some early research involving decisions under contributory negligence rules suggested that jurors adjusted for comparative negligence in calculating their awards.[246] It is possible that in some instances under comparative negligence instructions, juries decide that the plaintiff has some percentage of contributory negligence and adjust their award to account for it, not realizing that the judge will further adjust the award downward by the verdict of comparative negligence. Diamond et al. conducted a survey of 192 registered voters in Illinois.[247] Only 2 respondents were aware that damages were automatically trebled in antitrust cases.[248] This finding would suggest that damage awards would not ordinarily be affected by this factor unless a curious juror learned about the rule from an outside source and conveyed it to the other jurors.

D. Punitive Damages

The issue of punitive damages is intertwined with debate about their doctrinal appropriateness, and this conflict has additionally colored views about the role of juries in assessing those awards. I limit the discussion here to what juries do.

Daniels and Martin[249] and Rustad[250] conducted the first important studies of the incidence of punitive damages. I will, however, use the National Center for State Courts research by Ostrom et al.[251] because they provide the most recent and most representative study of punitive damages and because their data are consistent with the earlier research. The study found that punitive damages were awarded in 6% of all general civil cases involving a monetary award, but for a small number of jurisdictions the figure was around 10%. The total number of punitive awards in the 75 largest counties in 1992 was estimated at 381.

Punitive awards occurred most frequently in contract cases—13% of the time. Punitives were awarded in only 4% of tort cases when the plaintiff received compensatory damages. To put this in perspective, contract cases constituted about 20% of jury trials, but resulted in 48% of all punitive awards. In product liability

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245. Shari Seidman Diamond et al., *Blindfolding the Jury*, 52 LAW & CONTEMP. PROBS., Autumn 1989, at 247.

246. *See* Broeder, *supra* note 224, at 758–59; Harry Kalven, Jr., *The Jury, the Law and the Personal Injury Damage Award*, 19 OHIO ST. L.J. 158, 167–68.

247. *See* Diamond et al., *supra* note 245.

248. *Id.* at 259.

249. DANIELS & MARTIN, *supra* note 2, at 199–243. *See also* Stephen Daniels & Joanne Martin, *Myth and Reality in Punitive Damages*, 75 MINN. L. REV. 1 (1990).

250. Michael Rustad, *In Defense of Punitive Damages in Products Liability: Testing Tort Anecdotes with Empirical Data*, 78 IOWA L. REV. 1 (1992).

251. Ostrom et al., *supra* note 9.

trials, excluding toxic torts, punitives were awarded only 2% of the time. They were awarded in 7% of toxic tort trials. Only 3% of malpractice cases involved punitive damages. Moreover, the research of Koenig and Rustad indicates that many of the malpractice cases with punitive awards involve issues of sexual assault by the health care provider or other egregious offenses.[252]

The Ostrom et al. data also indicate that while the median award for all cases was only $50,000, the arithmetic mean, at $859,000, was 17 times larger. Tort case punitive awards had a median of $38,000 and a mean of $590,000. In 1992, there were 13 toxic tort cases in state courts and they had a median punitive award of $1.7 million. Of 46 employment discrimination cases in which punitive damages were awarded, the median was $179,000, but the mean was $2.9 million.[253]

Another way to inquire about punitive awards is to compare their magnitude to the size of compensatory damages. Only 21% of punitives were more than twice the amount of the compensatories. Toxic torts, non-medical professional malpractice, and employment cases were most likely to produce punitive awards exceeding two times compensatory damages. Only 7% of all punitive damage awards exceeded $250,000 and were more than twice the compensatory award.[254] Ostrom et al. estimated that a cap on punitive based on a formula of the larger of $250,000 or two times compensators would have an impact primarily on non-medical professional malpractice, employment discrimination and fraud cases.[255] Such limits would not have affected any of the toxic tort cases in 1992.

Daniels and Martin addressed the claim that punitive awards have become more frequent in recent years.[256] They examined trends in urban sites in four different states from 1970 to 1990. There was some variation between these sites that may or may not have been a statistical aberration, but there was no evidence of a general upward trend in their incidence.

Mention needs to be made regarding two studies on punitive damages that were sponsored, in part, by the Exxon corporation. Hastie et al.[257] conducted an experiment in which simulated jurors responded, first as individuals and then as deliberating juries, to synopses of one of four cases in which appeals courts held that punitive damages were legally inappropriate. In two of the four cases, the trial judge allowed the jury to decide punitive damages; in the other two cases, the trial judge had ruled against punitives.[258] In the experiment, the simulating jurors were

252. Thomas Koenig & Michael Rustad, *His and Her Tort Reform: Gender Injustice in Disguise*, 70 WASH. L. REV. 1 (1995).

253. Ostrom et al., *supra* note 9, at 239 fig.11 (dollar amounts have been rounded up).

254. *Id.* at 240.

255. *Id.*

256. DANIELS & MARTIN, *supra* note 2, at 222–27.

257. Reid Hastie et al., *Study of Juror and Judge Judgments in Civil Cases: Deciding Liability for Punitive Damages*, 22 LAW & HUM. BEVAH. 287 (1998).

258. *Id.* at 291. The actual cases were as follows: Anderson v. Whittaker Corp., 692 F. Supp. 734 (D. Mich. 1987); Harper v. Zapata Off-Shore Co., 563 F. Supp. 576 (E.D. La. 1983); *In re* Marine Sulfur Queen, 460 F.2d 89 (2d Cir. 1972); and Jardel Co. v.

presented with a summary of facts bearing on one of the cases plus instructions on punitive damages. The instructions stated that the judge's instructions were the law.[259] The jurors were then asked only to indicate if they believed punitive damages were "proper" given the facts of the case. The jurors' decisions were made in a truncated, bifurcation format, that is, they were not asked to decide whether compensatory damages should be awarded but only to render a decision about whether it was proper to award punitive damages. The authors summarized their main conclusion with the following statement: "Most of the mock juries decided that the consideration of punitive damages was warranted, although appellate and trial judges had concluded that they were not warranted."[260] The findings were ascribed to jurors' failure to comprehend the instructions.[261] There are a number of reasons to strongly disagree with the Hastie et al. conclusions and their relevance to jury policy.

First of all, the experiment studied the wrong thing. The mock jurors were asked to render judgments on an issue that the appellate courts ruled should never be put to a jury, given the fact patterns of these particular cases. Legal questions are in the province of the judge. Only after the trial judge has made a decision as to whether the law permits punitives under the unique facts of the case is the jury instructed on the law, told to consider the evidence, and asked to render a verdict about punitive damages. In other words, the Hastie et al. juries were asked to make a *legal* decision, not a fact decision. It is, therefore, questionable as to why the four cases were chosen for the research study rather than cases with a fact pattern and an appropriate verdict issue that would help determine how well or poorly juries performed in cases where punitive damages are permitted.

Additionally, the authors' statement that trial judges had decided that the punitives were inappropriate is factually incorrect. In two of the cases, the trial judge had decided that punitives were warranted and put the matter to the jury.[262] In the other two cases, there were sufficient legal grounds for the plaintiffs' lawyers to make serious arguments to the appeal courts for the application of punitives under the specific fact conditions.[263] Strikingly, the authors of the article comment solely on alleged limitations of the jury but make no mention of the fact that two trial judges also misunderstood the law and permitted the juries to decide the issue. If the same standard is applied to judges as to juries, then two of the four trial judges in the sample of cases also failed the test.

Although the above two considerations are sufficient to make the study irrelevant to the understanding of jury behavior, another three points are worth comment. The data collected in the study show that in one of the four cases more of the juries decided that punitives were inappropriate under the law that decided

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Hughes 523 A.2d 518 (Del. 1987).

259. Hastie et al., *supra* note 257, at 292, 310.

260. *Id.* at 287.

261. *Id.* at 304. "One dramatic finding was the low level of comprehension and memory for information conveyed in instructions on the law." *Id.*

262. *See Harper*; *Jardel.*

263. *See Anderson* 692 F. Supp. at 774–76; *Marine Sulfer Queen* 460 F.2d at 105.

that they were appropriate. The authors of the study actually concede this point but then obscure it by discussing the aggregate findings.[264] Additionally, the fact that the instructions to the simulating jurors stated that the judicial instructions were "law"[265] could easily have been interpreted by them as indicating that the "correct" answer is that the punitives were appropriate.[266] This is particularly possible since the study essentially asked the jurors to make a legal judgment about whether punitives were proper. Finally, the fact that the jurors were asked to make their judgment without first considering compensatory damages,[267] as they ordinarily would in a real trial, may have influenced the outcome in some unknown way.[268]

In the second study, Viscusi and Hastie[269] compared the performance of a sample of jury-eligible citizens with the performance of a sample of judges on a hypothetical problem involving a fact situation that carried the degree of foresight or hindsight that the defendant could have had about the possibility of an accident. The foresight condition was the proper condition to apply punitive damages. The judges performed better than the jurors on the task and the authors concluded that juries perform poorly. However, while the data also showed that a substantial number of judges got the problem wrong, this fact was minimized in the discussion of the results. Even more important is the fact that the sample of judges was a select group who were voluntarily taking a course in economics and law;[270] therefore, it is likely that they would have a greater propensity to deal with the particular problem of logic posed in the experiment than a representative sample of trial judges. To make a fair comparison with juries, the study should have compared the answers of a random sample of "ordinary" trial judges with answers produced by a sample of deliberating jurors since jury verdicts combine the perspectives and insights of between six and twelve persons, whereas judges decide as individuals.[271]

Given the controversy about punitive damages in the Supreme Court,[272] it

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264. See Hastie et al., *supra* note 257, at 297–98, 304–06.

265. *Id.* at 292.

266. This is a methodological problem that social psychologists have long recognized and even given it a label, namely "demand characteristics." Knowing that they are in an experiment, people make guesses about the purpose of the research and modify their answers or other behaviors in response to these guesses. *See* J. MERRILL CARLSMITH ET AL., METHODS OF RESEARCH IN SOCIAL PSYCHOLOGY 280–81 (1976).

267. Hastie et al., *supra* note 257, at 289 ("[O]ur mock jurors did not first decide on compensatory damages awards before deciding on punitive damages, as they would in trials that involve punitive damages.").

268. The Landsman et al. study suggests a complex relationship between decisions on compensatory damages and punitives awards. *See* Landsman et al., *supra* note 110, at 335–39.

269. Reid Hastie & W. Kip Viscusi, *What Juries Can't Do Well: The Jury's Performance as a Risk Manager*, 41 ARIZ. L. REV. 901 (1998).

270. Personal communication to the author by Reid Hastie (Apr. 18, 1998).

271. For review of this logic, see text accompanying *supra* notes 165–68.

272. *See* BMW of North Am., Inc. v. Gore, 116 S. Ct. 1589 (1996); Honda Motor Co. v. Oldberg, 114 S. Ct. 2331 (1994); Pacific Mutual Life Ins. Co. v. Haslip, 499 U.S. 1 (1991); TXO Prod. Corp. v. Allianced Resources Corp., 113 S. Ct 2711 (1993). *See also*

is clear that much more needs to be learned about how juries decide punitive damages and about procedural innovations or guidelines that might assist them in rendering their decisions. However, it is important to put actual decisions and proposed reforms in context. Theodore Eisenberg and Martin Wells recently conducted a study involving caps on awards of punitive damages following the decision in *BMW of North America, Inc. v. Gore*.[273] Their conclusion is as follows:

> The available data suggests that a capping system should not try to affect the mass of awards. No credible evidence supports the claim that punitive damages are awarded frequently, that when they are awarded they are unrelated to compensatory damages, or that punitive damages are systematically awarded to inappropriate cases. All the evidence suggests just the opposite.[274]

Based on their empirical findings, those authors suggest that any reforms should be directed to the relatively rare instances of extreme awards, not punitive damages in general.

V. POST-TRIAL ADJUSTMENTS TO JURY AWARDS

Often overlooked or ignored in the political debate and in jury research itself is the fact that jury verdicts are not the final outcome of trials. The jury system is embedded in the broader legal system. Judges may enter a j.n.o.v. judgment or exercise addittitur or remittitur. The jury award may be reduced by an assessment of comparative negligence or by set asides involving payments or settlements from collateral sources. In some jurisdictions, a statutory cap on the amount that can be awarded may result in a reduced payment. Finally, the threat of additional litigation costs and delay of payment or the risk of having the verdict overturned may induce settlement for a lesser amount than the award.

Only a few empirical studies have examined the differences between verdict and payment to plaintiffs in any detail, but they yield some very important insights about the actual financial outcomes of jury awards.

Ostrom et al. explored attempts of post-trial changes to verdicts in a sample of cases from twenty-seven courts.[275] A motion challenging the verdict was actively filed in nearly half of the cases. However, the study provided no information about outcomes except that only ten percent of motions for a new trial were successful.

Broder reviewed a sample of 198 jury awards of $1 million or more that

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Symposium, *The Future of Punitive Damages*, 1998 WIS. L. REV. 1.

273. Theodore Eisenberg & Martin Wells, *Punitive Awards After BMW, a New Capping System, and the Reported Opinion Bias*, 1998 WIS. L. REV. 387. *See also* Theodore Eisenberg et al., *The Predictability of Punitive Damages*, 26 J. LEGAL STUD. 623 (1987).

274. Eisenberg & Wells, supra note 273, at 417.

275. Brian Ostrom et al., *So the Verdict Is in—What Happens Next? The Continuing Story of Tort Awards in the State Courts*, 16 JUST. SYS. J. 97 (1993).

occurred between 1984 and 1985.[276] Plaintiffs received the original jury award in just slightly more than a quarter of the cases. On average, the final aggregate disbursement to plaintiffs was 57% lower than the original verdict. The amount of the reduction varied by case type. Medical malpractice awards, for example, were reduced by 27% on average. However, the average statistic obscures the fact that larger awards were reduced more than smaller awards. Broder's report did not indicate whether the reduction was made by the trial judge or an appeal court or whether it resulted from post-verdict settlements or inability to collect from the defendant.

Shanley and Peterson examined a sample of 161 verdicts from Cook County, Illinois and San Francisco that were returned during 1982 and 1984.[277] Of this number, 41 cases resulted in plaintiffs prevailing at trial, a win rate of 25%. The authors concluded that the actual payout of the awards was reduced in a significant number of cases. A paucity of methodological details and data in the report prevents closer scrutiny of their data.

The Vidmar et al. study of medical malpractice verdicts in New York, Florida, and California extends our insight into the post-trial award adjustment process.[278] In New York City and its surrounding counties, plaintiffs prevailed in 52% of trials in the sample of trials that took place between 1985 and 1997. This win rate is much higher than the national average of around 30%, and it probably reflects some unique characteristics of New York's litigation process. The median award of these cases in 1995 dollars was $1,230,000. The mean was $4,392,709. This discrepancy between median and mean is due to some very large awards. The verdict reports from which these data were derived also contained information on post-trial adjustments involving judicial reductions, set asides, comparative negligence, and settlements. When we recalculated the data to reflect these changes, we found that the median award was $896,745 and the mean was $2,713,419. Described another way, the median payment to plaintiffs was 73% of the original jury verdict. The mean payment was approximately 62% of the verdict. Moreover, because the verdict reports do not trace trial outcomes beyond a short period following the trial, we strongly suspect that these are very conservative estimates of downward adjustments because other cases likely settled further along in the appeal process.

For the sample of Florida malpractice cases, the plaintiff win rate was approximately 44%. This, too, is higher than the national average, but we suspect that in addition to unique trial selection factors in the Florida litigation process, the verdict reports may have been a slightly biased sample. In any event, the median verdict was $390,300 and the mean was $1,276,607. When we recalculated the data to account for post-trial adjustments, the median Florida award was $361,200 and the mean was $1,175,010. Thus, the adjustments lowered the median and mean

276. Ivy E. Broder, *Characteristics of Million Dollar Awards: Jury Verdicts and Final Disbursements*, 11 JUST. SYS. J., Spring 1986, at 349.

277. MICHAEL SHANLEY & MARK PETERSON, POST TRIAL ADJUSTMENTS TO JURY AWARDS (1987).

278. Vidmar et al., *supra* note 193.

7% and 8%, respectively. In the sample of California cases, the plaintiff win rate was around 22%. The median verdict was $344,250 and the mean was $1,720,126. The post-trial adjustments resulted in a median of $310,650 and the mean was $1,542,601. Thus, both median and mean were reduced by about 10%. Unlike the other two states, California has a statutory cap on pain and suffering of $250,000. In addition to other reasons for adjustments, an estimated 13% of the cases were reduced because they exceeded this limit.

There are a number of things about these data that are suggestive. The first is that, as already mentioned, they are probably conservative estimates since they deal only with resolution of the case in a short period following the verdict. Another is that the largest percentage of downward adjustments occurred in New York, which had the largest initial awards. There are a number of reasons for believing that the three data sets are not comparable but, nevertheless, an interesting hypothesis is that post-trial adjustments were greater in New York because the awards were larger in the first place. In other words, adjustment mechanisms "kicked in" when awards appeared to be inflated. Within each of the three state jurisdictions, the largest downward adjustments tended to be made against the largest verdicts. The verdict reports on adjustments did not give reliable details about which elements of the award were adjusted downward, but it is reasonable to speculate that they involved the general damages components. This suggests that the ultimate proportions of payments for general damages are lower than the proportions of the jury verdicts.

The data also provides some insights about how judges assessed the juries' verdicts on liability. The New York data revealed only 3% of verdicts were set aside; in Florida and California the figure was under 1%. The Ostrom et al. study indicated that only 10% of motions for a new trial were successful.[279] It appears that trial judges who hear the same testimony as the juries do not tend to conclude that juries render legally erroneous verdicts. Readers should take note that the Vidmar et al. findings only involve medical malpractice cases. A sample of product liability and automobile negligence cases from those same states has been collected, but the data have not yet been analyzed. Hence, caution needs to be exercised in generalizing these findings about post-trial adjustments.

VI. MAGNITUDE OF LOSS AND VARIABILITY OF JURY AWARDS

Much of the debate on jury awards has centered on the absolute magnitude of the awards without reference to actual economic and non-economic losses incurred by plaintiffs. These issues were discussed earlier in this article but deserve separate consideration even if it is slightly repetitive. Economic loss is one standard against which the reasonableness of jury verdicts can be assessed. Gross and Syverud have compared verdicts to settlement offers in an attempt to study the settlement process,[280] but settlements may be discounted for various reasons, including the risks associated with trial. I also reported some very sketchy data

279. Ostrom et al., *supra* note 9, at 113.
280. Gross & Syverud, *supra* note 64.

comparing settlements to verdicts in medical malpractice trials,[281] but this data is open to the same criticism. Other studies have reported estimates of damages by insurers, but these are not trustworthy data because insurers have incentives to underestimate damages.

Sloan and his colleagues have, to my knowledge, conducted the only systematic research into damages that provides an independent estimate of actual economic losses resulting from injuries.[282] Working with a total sample of 187 Florida medical malpractice cases involving birth injuries or emergency room injuries that were closed in 1989 and 1990, Sloan and his colleagues interviewed claimants and obtained medical and financial records bearing on economic losses in each case. The estimates included past and future costs of health care, including surgical operations, hospitalization, long-term care facilities, and private duty nursing. Past and future income losses and "non-market" losses such as household production involving cooking and child care for dependents and survivors were included. Also included were family members' loss of earnings resulting from the need to care for injured persons, alterations to homes, special transport vehicles, and special schools. The figures were adjusted to take into account government benefits and services that would ordinarily be provided at no cost to the patient. The calculations also considered life expectancy. The financial losses were calculated from government and other regularly used sources in terms of 1998 dollars. In short, the calculations involved all of the kinds of data that economists and other experts provide juries at trial. No amounts were included for general damages such as pain and suffering or loss of enjoyment of life.

The results provide some important general insights about the magnitudes of jury awards and their variability within categories of injury seriousness. For children who were injured but survived, the average total economic loss was estimated at over $1,500,000 in 1989 dollars. For some of the more seriously injured children, the estimated costs up to 20 years of age were over $2 million. For persons who survived emergency room negligence, the estimated economic losses averaged $670,000 in 1989 dollars, but for some of the more seriously injured persons the average costs were around $1,300,000. For persons who died during or shortly after treatment, the average loss to their estate was estimated at $520,000. Even when non-market losses were subtracted from these latter figures, the balances remained in the hundreds of thousands of dollars. Sloan et al. indicated that because many records were missing from their data economic losses were "seriously underestimated."[283]

Another very important finding from the Sloan et al. research is that there was considerable variability of estimated losses within categories of injury severity.[284] This result offers one plausible explanation for variability of awards: there is considerable variability in actual economic loss.

The similar argument has already been made with respect to variability in

281. *See, e.g.*, VIDMAR, *supra* note 2.
282. SLOAN ET AL., *supra* note 55, at 123–52.
283. *Id.* at 138 tbl.7.2, 143 tbl.7.4.
284. *Id.* at 124.

non-economic losses.[285] To repeat, this variability too has been over-simplified in discussions about jury verdicts. Consider some additional examples from the Vidmar et. al. study of New York medical malpractice verdicts.[286] In one case, a fourteen-year-old boy was rendered a quadriplegic. His years of enduring that condition are projected by mortality tables to be many more than the fifty-two year-old woman who suffered an equally serious injury. Similarly, the amount for loss of parental care and nurturance of five young children whose mother died from a misdiagnosed ectopic pregnancy will in aggregate be many times greater than a woman who died when her children were grown. In short, like economic damages, the reasonableness and variability of jury awards has to be assessed on a case-by-case basis.

Jury unreliability or unreasonableness cannot be ruled out as factors in jury damage awards. However, as the above discussion makes abundantly clear, the complexity of the issues have been much over-simplified.

VII. JURY SIZE

In the 1970s, a series of decisions by the United States Supreme Court sanctioned juries smaller than twelve-persons.[287] The empirical underpinnings of those decisions involved several methodologically inadequate studies and a misreading of a classic social psychology experiment.[288] Recently, Saks and Marti reviewed 17 studies comparing six-and twelve-person juries that have been conducted since those decisions.[289] Only four of the studies involved civil jury awards, but the results suggest that smaller juries will, on average, produce larger awards. This finding is consistent with predictions that smaller juries will, on average, have more variable or dispersed awards; in turn, when some large awards are in the sample of trials decided by juries, they will skew the distribution and result in higher mean awards.[290] Saks and Marti's study also indicates that larger juries will contain more members of minority groups, deliberate longer, and possibly recall trial testimony more accurately. One cost, however, is that larger juries are somewhat less likely to reach unanimous agreement on the verdict. In the federal courts, there appears to be a voluntary trend to increase the size of juries from six persons in some cases, but a 1995 recommended revision to Rule 48 of the Federal Rules of Civil Procedure that would have required twelve-person juries was rejected by the Judicial Conference.[291] Social scientists, who have commented on the issue, appear unanimous in their opinions that larger juries are superior to smaller juries with respect to determinations of liability, guilt, and damages.

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285. *See supra* notes 204–13 and accompanying text.

286. Vidmar et al., *supra* note 193.

287. *See* Michael J. Saks, *The Smaller the Jury, the Greater the Unpredictability*, 79 JUDICATURE 263 (1996).

288. *Id.* at 264–65. *See also* MICHAEL J. SAKS & REID HASTIE, SOCIAL PSYCHOLOGY IN COURTS (1978).

289. Michael J. Saks & Mollie Marti, *A Meta-Analysis of the Effects of Jury Size*, 21 LAW & HUM. BEHAV. 451 (1997).

290. *See* Saks, *supra* note 287, at 263.

291. *Id.* at 465.

VIII. CONCLUSION

Research findings bearing on the performance of civil juries yield little support for the extreme claims charging juries with poor and irresponsible performance. Trial judges agree with jury decisions most of the time and strongly support the jury system. On the issue of negligence, there is no evidence to support the claim that juries decide cases less competently than judges and some reason to suspect that the combined judgments of jurors, enhanced through the deliberation process, may be as good or better than those that would be rendered by a randomly selected judge. Juries in medical malpractice trials, frequent targets of critics, tend to render decisions that are consistent with independent assessments of health care providers. Nor does research support claims that juries are consistently moved by sympathy for plaintiffs or against deep pocket defendants. Indeed, there is evidence that juries frequently have concerns about the motives of plaintiffs in bringing lawsuits. Even in allegedly "complex" cases, jury verdicts are often defensible when examined against the evidence produced at trial. There are findings suggesting that juries may hold corporations to higher standards of conduct than individuals, but these attitudes appear to not be based on anti-business sentiments.

Systematic studies of jury damage awards indicate that, on average, awards are rather modest. Comparisons of compensatory awards against assessments of seriousness of injuries and economic losses indicate that awards tend to be consistent with actual losses. Some findings indicate that variability in awards may be as likely due to variability in trial evidence as to jury unreliability. Comparisons of jurors and judges with respect to assessments of damages for "pain and suffering" show that their respective decisionmaking processes are similar. Punitive damages are awarded with much less frequency and the awards are, on average, much more modest than is commonly portrayed in the mass media. Some juries do produce outlier awards that cannot easily be justified by legal criteria, but studies of post-verdict adjustment processes, such as judicial reductions and settlements between the parties, tend to very substantially alter the awards downward, particularly the larger awards. In fact, one of the most important lessons from this review is that a main focus of researchers and policy makers should be on what is ultimately paid to plaintiffs rather than jury awards. The jury system is embedded in a larger system that has corrective mechanisms for wayward jury verdicts.

Although research vindicates the jury system of the most serious claims made against it, many more issues need to be studied. Nothing in this review suggests that attempts to improve jury performance should be discouraged. Jurors themselves have complaints about testimony, judicial instructions, and lack of guidance when they are asked to decide "pain and suffering" and other forms of general damages. Various courts, particularly in the State of Arizona, have introduced many trial reforms to assist the jury in its task. Similar experimentation should be encouraged in other jurisdictions around the country. However, research on some of the trial procedures used in complex litigation provides a strong lesson that innovations should be carefully designed and then evaluated through empirical research after they are implemented. The studies indicate that procedures such as

bifurcating trials, joinder of parties or issues, and reductions in jury size may in fact produce results that are the opposite of what was intended. In short, experiment, but evaluate and be prepared to conclude that the reform just did not produce the expected outcome.

TABLE 1

Jury Awards (In Thousands) and Percent over $1 Million by Case Type (1992) in The National Center for State Courts Study

CASE TYPE	MEDIAN	MEAN	% OVER $1 MIL.
All Torts	$51	$408	8%
Product Liability	260	1484	15
Medical Malpractice	201	1057	25
Professional Malpractice	156	727	14
Toxic Substance	101	530	13
Other Torts	65	526	11
Premises Liability	57	391	5
International	54	232	7
Automobile	29	229	4
Slander/Libel	25	220	14
All Contracts	57	620	7
Real Property	55	325	5
All Cases	52	455	8

From Ostrom et al., *supra* note 9, at 238 fig.8.