

EMPIRICAL EVIDENCE ON THE DEEP POCKETS HYPOTHESIS: JURY AWARDS FOR PAIN AND SUFFERING IN MEDICAL MALPRACTICE CASES

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The jury system seems to show a desire for punitive [action] and retribution above and beyond the degree of injury—"let's get the rich doctor."¹

In real life, any theory will do as long as it gets the case to the jury, whose natural sympathies will usually produce a large judgment without much concern for the legal technicalities.²

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1. U.S. GENERAL ACCOUNTING OFFICE, *MEDICAL MALPRACTICE: CASE STUDY IN NORTH CAROLINA* 20 (1986) [hereinafter *N.C. CASE STUDY*] (alteration in original).

2. T.R.B., *The Tort Explosion*, *THE NEW REPUBLIC*, Nov. 18, 1985, at 4. The article further stated that "high settlements lead to skyrocketing insurance rates. And soon so much cost is being absorbed that the activity in question, be it practicing gynecology or manufacturing a vaccine or being on the city council, is no longer economically practicable." *Id.*

[J]urors have become accustomed to huge award requests, and they are more willing to reach into the deep pockets of malpractice insurers to compensate the victims generously—more willing than when they encounter the victims of automobile accidents, for in these cases the insurance premiums at risk are paid directly by jurors themselves.³

INTRODUCTION

The role of the jury in medical negligence cases ranks among the most contentious issues in contemporary debate about the merits of the tort system.⁴ As the above quotations demonstrate, a common complaint from all sides of the political spectrum is that jurors are biased against doctors and hospitals because they believe that someone ought to pay when a serious medical injury occurs and that doctors and hospitals have the “deep pockets” to provide the compensation. In this Article, I first review these claims and critique the prior empirical research alleged to support them. I then describe a controlled experiment that tested the hypothesis that jurors are prone to award excessive amounts for pain and suffering when the defendants are doctors or hospitals. Neither the prior research nor the experiment’s results support the deep pockets hypothesis. The final Parts of the Article discuss these findings in the context of other research as well as the debate about medical negligence and the tort system.

I. THE CLAIMS AND THE EVIDENCE: A CRITIQUE

A. *The Claims*

The three prefatory assertions about juries do not stand alone. Physicians, liability insurers, and commentators critical of the American tort system frequently raise the argument that juries are biased against doctors and hospitals. In a 1988 proposal advocating

3. PAUL C. WEILER, *MEDICAL MALPRACTICE ON TRIAL* 48 (1991).

4. See, e.g., Marc Galanter, *The Civil Jury as Regulator of the Litigation Process*, 1990 U. CHI. LEGAL F. 201 [hereinafter Galanter, *The Civil Jury*]; Marc Galanter, *Reading the Landscape of Disputes: What We Know and Don't Know (And Think We Know) About Our Allegedly Contentious and Litigious Society*, 31 UCLA L. REV. 4 (1983); 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); Neil Vidmar, *The Unfair Criticism of Medical Malpractice Juries*, 76 JUDICATURE 118 (1992).

a fault-based administrative system for medical malpractice as an alternative to the tort system, the American Medical Association (AMA) declared,

In the medical liability context, a source of at least some of the problem [sic] for physicians and other health care providers with the existing system appears to many to be the jury [Problems with the jury] include decisions that are not based on a thorough understanding of medical facts and awards that increase at an alarming rate and in a fashion that seems uniquely to disadvantage physicians as compared with other individuals who are found to have acted negligently

What makes the damage awards in professional liability lawsuits particularly disconcerting is the fact that *identical* injuries will command much higher recoveries in malpractice cases than in other tort suits, such as automobile accidents.⁵

The North Carolina Hospital Association claimed,

Often awards have little relationship to the seriousness of the injury. There is no way to predict how a jury will rule on a particular set of facts. Often awards bear no relationship to economic losses Today, juries often make awards regardless of the "fault" of anyone—out of sympathy for an injured person. More and more the public attitude is that insurance will compensate the injured party and the defendant will not sustain any loss Too often, juries appear to award on [the] basis of emotion as opposed to facts and/or realistic evaluation of case circumstances.⁶

In its annual report to Congress in 1991, the Physician Payment Review Commission stated,

Malpractice injuries seem to be compensated more than are comparable injuries arising from nonmedical settings. For example, researchers estimated that median awards for a leg amputation were \$199,999 in an automobile accident case, \$330,000 in a private property owner case, \$687,000 in a product liability case,

5. AMERICAN MEDICAL ASSOCIATION SPECIALTY SOCIETY MEDICAL LIABILITY PROJECT, A PROPOSED ALTERNATIVE TO THE CIVIL JUSTICE SYSTEM FOR RESOLVING MEDICAL LIABILITY DISPUTES: A FAULT-BASED, ADMINISTRATIVE SYSTEM 7-8, 9-10 (1988) [hereinafter, AMA PROPOSED ALTERNATIVE REPORT]. This report was rewritten to appear as a law review article. See Kirk Johnson et al., *A Fault-Based Administrative Alternative for Resolving Medical Malpractice Claims*, 42 VAND. L. REV. 1365 (1989).

6. N.C. CASE STUDY, *supra* note 1, at 21-22.

\$754,000 in a medical malpractice case against a physician, and \$761,000 in a Workmen's compensation case. The disparities may be due to jurors' knowledge that physicians are heavily insured or that the claimant's legal fees must be taken out of the judgment. This does not indicate which is the appropriate level of compensation, only that payments are inconsistent across contexts.⁷

In a twenty-minute videotape produced in 1992 by The Manhattan Institute for Policy Research, C. Everett Koop, former Surgeon General of the United States, relates a hypothetical situation in which a child is born with cerebral palsy. Although the doctor has no control over the condition, the family seeks to blame him. Dr. Koop goes on to say that "if they attempt to sue their physician they're very likely to find a sympathetic jury that will award something to that family not necessarily because they think the doctor is guilty of negligence or malpractice but because their sympathy for the family dictates it."⁸

Claims about the deep pockets effect also extend to products liability, government defendants, and other types of cases in which critics assert that jury sympathies lie with injured parties and against defendants who have the ability to pay large sums. In *Liability: The Legal Revolution and Its Consequences*, popular writer and critic of the tort liability system, Peter Huber, wrote of legal outcomes in the 1970s and 1980s that "judges and juries were, for the most part, committed to running a generous sort of charity. If the new tort system cannot find a careless defendant after an accident, it will often settle for a merely wealthy one."⁹ Huber also offered an explanation: "The only human reaction to the individual tragedy, viewed close up, is unbounded generosity, which any large corporation or insurer can surely afford to under-

7. PHYSICIAN PAYMENT REVIEW COMMISSION, ANNUAL REPORT TO CONGRESS—(1991) (citing PATRICIA DANZON, MEDICAL MALPRACTICE 53–56 (1985)). Danzon reported data from Cook County, Illinois compiled in Rand Corporation reports authored by Mark Peterson, George Priest, and Michael G. Shanley. See MARK A. PETERSON & GEORGE L. PRIEST, THE RAND CORPORATION, THE CIVIL JURY: TRENDS IN TRIALS AND VERDICTS, COOK COUNTY, ILLINOIS, 1960–1979 (1982); MICHAEL G. SHANLEY & MARK A. PETERSON, THE RAND CORPORATION, COMPARATIVE JUSTICE: CIVIL JURY VERDICTS IN SAN FRANCISCO AND COOK COUNTY, 1959–1980, (1983). I will address and critique these studies in Section I(B).

8. LIABILITY: INJUSTICE FOR ALL (Manhattan Institute for Policy Research 1992).

9. PETER HUBER, LIABILITY: THE LEGAL REVOLUTION AND ITS CONSEQUENCES 12 (1989).

write."¹⁰ Judicial opinions, law reviews, and scientific journals express similar opinions.¹¹

In the context of medical malpractice, four overlapping empirical assertions have been made: (1) juries give larger awards in malpractice cases than in other types of cases, particularly automobile negligence cases, even when injuries are objectively similar—the deep pockets hypothesis; (2) the rates of plaintiff victories in malpractice cases have increased in recent years; (3) the sizes of awards have increased; and (4) the awards for non-economic damages such as pain and suffering in particular are out of control.

With respect to this last assertion, Weiler writes, "[T]he most troublesome feature of large tort verdicts is the amount of damages awarded for pain and suffering, not for direct medical costs."¹² The AMA Proposed Alternative Report, drawing on a study by Patricia Danzon, asserted that "for larger claims . . . non-economic injury is often the largest component of the award."¹³ The 1992 Annual Report to Congress of the Physician Payment Review Commission states,

10. *Id.* at 185.

11. *See, e.g.,* Renslow v. Mennonite Hosp., 367 N.E.2d 1250, 1265 (Ill. 1977) (Ryon, J., dissenting) (arguing that "sympathetic juries and an increasingly efficient plaintiff's bar have managed to inflate the size of verdicts" and commenting on the "deep pockets" phenomenon); Albert W. Alschuler, *Mediation with a Mugger: The Shortage of Adjudicative Services and the Need for a Two-Tier Trial System in Civil Cases*, 99 HARV. L. REV. 1808 (1986); Dorsey D. Ellis, *Punitive Damages, Due Process, and the Jury*, 40 ALA. L. REV. 975 (1989); Kirk B. Johnson, *Beyond Tort Reform*, 257 JAMA 827 (1987); Richard E. Leahy, *Rational Health Policy and the Legal Standard of Care: A Call for Judicial Deference to Medical Malpractice Guidelines*, 77 CAL. L. REV. 1483 (1989); Richard J. Mahoney & Stephen E. Littlejohn, *Innovation on Trial: Punitive Damages Versus New Products*, 246 SCIENCE 1395 (1989). Clark Havighurst asserts,

Although it is customary in our adversary system to regard a jury trial as a "black box" the outcomes of which (on nonlegal questions) are granted a powerful presumption of legitimacy, realism compels recognition that juries are often poorly positioned to choose reliably between the well argued, but often highly confusing, theories of the two sides' experts. As a result, they often fall back on such irrelevancies as the witnesses' demeanor and style of presentation or sympathy for the plaintiffs' plight or the defendants' reputation.

CLARK C. HAVIGHURST, HEALTH CARE LAW AND POLICY 778 (1988).

12. WEILER, *supra* note 3, at 54.

13. AMA PROPOSED ALTERNATIVE REPORT, *supra* note 5, at 9 (citing DANZON, *supra* note 7). *See also* Johnson et al., *supra* note 5, at 1369 ("Because large portions of the awards depend upon subjective and emotional considerations, some injured patients recover nothing, some receive less than fair compensation, and others recover amounts far in excess of their losses, both economic and noneconomic.") (footnotes omitted). For a discussion of Danzon's research, see *infra* subsection I(C)(3).

Much of the unpredictability and inconsistency of malpractice awards is due to non-economic damages (i.e., pain and suffering), which constitute about half of total payments . . . Such damages are highly subjective. Reducing this unpredictability and removing the open-ended nature of these damages would probably improve decisionmaking during the course of a lawsuit.¹⁴

The evidentiary base for the AMA's and Weiler's conclusion that the problem of awards for pain and suffering is particularly acute is rather scanty. The assertion is apparently derived from a study by Danzon.¹⁵ Danzon's study combined databases from several sources and attempted to estimate the components of awards that can be ascribed to pain and suffering.¹⁶ It is important to note, however, that Weiler's claim, citing Danzon, that "damages for pain and suffering, broadly defined, now make up nearly 50 percent of total tort damages paid for medical cases, with the largest awards taking the lion's share of this money," cannot be found in the Danzon study.¹⁷ Similarly, the AMA Proposed Alternative Report's claim that Danzon's study found that "the pain

14. PHYSICIAN PAYMENT REVIEW COMMISSION, ANNUAL REPORT TO CONGRESS 201 (1992) (citation omitted). In *Medical Economics*, James D. Griffith, an attorney specializing in the defense of malpractice cases, argued that "there's no limit on what jurors can award for pain and suffering so too often they act like Santa Claus, handing out millions of dollars in cases involving comparably minor injuries." James D. Griffith, *What Will It Take to Resolve the Malpractice Crisis*, MEDICAL ECON., Sept. 27, 1982, at 195. In 1991, the centerpiece of President Bush's draft proposal on health care was a proposal to limit the amounts that malpractice victims can collect for pain and suffering. Philip J. Hilts, *Bush Enters Malpractice Debate with Plan to Limit Court Awards*, N.Y. TIMES, May 31, 1991, at A1.

15. Patricia Danzon, *Report on Awards for Noneconomic Loss*, in FLORIDA MEDICAL MALPRACTICE POLICY GUIDEBOOK 132 (Henry G. Mame ed., 1985).

16. See *infra* subsection I(C)(3).

17. Weiler, *supra* note 3, at 55 (citing Danzon, *supra* note 15, at 128-42); see *id.* at 55 n.36. Weiler's other sources were a study by Viscusi that attempted to eliminate pain and suffering awards in products liability cases, *id.* at 55 (applying W. Kip Viscusi, *Pain and Suffering in Product Liability Cases: Systematic Compensation or Capricious Awards?*, 8 INT'L REV. L. & ECON. 203, 205-19 (1988)), and an unsupported allusion to the "[w]idespread sentiment that pain and suffering awards were out of control [that] inspired many states in the eighties to establish caps solely on this type of damages," *id.*

Weiler evidently determined that awards for non-economic damages were too high because state legislatures acted on the belief that they were too high. This is a dangerous predicate for empirical assumptions because legislative tort reform efforts are frequently based on erroneous assertions. See, e.g., NEIL VIDMAR ET AL., AN EMPIRICAL EXAMINATION OF A LEGISLATED PROCEDURAL REFORM: COURT-BASED MANAGEMENT OF MEDICAL MALPRACTICE LITIGATION 84-88 (1992) (discussing North Carolina reforms); Joseph Sanders & Craig Joyce, "Off to the Races": *The 1980s Tort Crisis and the Law Reform Process*, 27 HOUS. L. REV. 207, 276-80 (1990) (discussing Texas reforms).

and suffering portion of [awards in excess of \$100,000] accounts for 80 percent of the total verdict in such cases"¹⁸ also cannot be found in that source.¹⁹ Danzon did conclude that of those plaintiffs who won a verdict in large damage award cases, 51% received a pain and suffering award in excess of \$100,000.²⁰ Even these figures, however, must be interpreted in relation to the total amount of the awards. In a subsequent interpretation of her study's findings, Danzon stated that "[p]ayments in excess of \$100,000 for pain and suffering on malpractice cases increased from 1.8 percent to 12.8 percent of total payments to plaintiffs on all tort cases."²¹ There are some very serious problems of interpretation and communication in the Danzon report, as I will demonstrate below,²² but it is clear that neither the 50% nor the 80% estimates for pain and suffering were made by Danzon. In the way I was taught mathematics 12.8% cannot easily be rounded to "nearly 50%," let alone to "80%."

The deep pockets hypothesis rests on three interrelated psychological assumptions about medical negligence costs. Unreasonable awards are purported to result from: (1) jurors' tendency in medical negligence cases to focus on plaintiff needs rather than liability; (2) jurors' belief in health provider defendants' capacity to pay; and (3) jurors' failure to perceive a connection between an award and its potential effect on their own lives or on society. Weiler claims that in contrast to jurors in medical negligence cases, jurors in automobile accident cases consider the impact of large awards on their own lives because "the insurance premiums at risk are paid directly by the jurors themselves."²³ Huber expounds a parallel thesis: "The layperson votes in favor of expansive liability [out of compassion] when sitting in the jury box but votes overwhelmingly in favor of limiting liability when the legal rules are put to public referendum."²⁴

18. AMA PROPOSED ALTERNATIVE REPORT, *supra* note 5, at 9.

19. *Id.* (citing Danzon, *supra* note 15). This claim was not included in the Johnson article which was based on the AMA report. See Johnson et al., *supra* note 5.

20. Danzon, *supra* note 15, at 133.

21. Patricia M. Danzon, *The "Crisis" in Medical Malpractice: A Comparison of Trends in the United States, Canada, the United Kingdom, and Australia*, 18 LAW, MED. & HEALTH CARE 48, 49 (1990).

22. See *infra* subsection I(C)(3).

23. WEILER, *supra* note 3, at 48.

24. HUBER *supra* note 9, at 186; see also Frederick D. Watkins, *Social Inflation: Our Next Trial*, 77 INSURANCE MAG. 42, 44-45 (1976) (arguing that juries routinely perceive

It is worth observing that assertions that sympathy for plaintiffs drives jurors' decisions date back at least 140 years. Indeed, Judge Barculo's opinion in *Haring v. New-York and Erie Railroad Co.*²⁵ has a very contemporary ring:

We can not shut our eyes to the fact that in certain controversies between the weak and the strong—between a humble individual and a gigantic corporation, the sympathies of the human mind naturally, honestly and generously, run to the assistance and support of the feeble, and apparently oppressed; and that compassion will sometimes exercise over the deliberations of a jury, an influence which, however honorable to them as philanthropists, is wholly inconsistent with the principles of law and the ends of justice.²⁶

B. *The Evidence*

Although the deep pockets hypothesis is an integral part of American legal folklore, examination of the text and footnotes of the writings of contemporary jury critics indicates that recent claims about the deep pockets hypothesis emanate from several empirical studies. Audrey Chin and Mark Peterson, two researchers with the Rand Corporation's Institute for Civil Justice, compared the outcomes of over 1000 civil trials that took place in Cook County, Illinois between 1959 and 1979.²⁷ The data were derived from verdict reporters,²⁸ comprehensive accounts of all trials within the county that provide basic data about the case,

corporate defendants as being better able to "foot the bill" for injuries than plaintiffs).

25. 13 Barb. 9 (N.Y. App. Div. 1852). This case and related history are reviewed in Stephan Landsman, *The Civil Jury in America: Scenes from an Unappreciated History*, 44 HASTINGS L.J. 579 (1993).

26. *Haring*, 13 Barb. at 15-16.

27. See AUDREY CHIN & MARK A. PETERSON, THE RAND CORPORATION, DEEP POCKETS, EMPTY POCKETS: WHO WINS IN COOK COUNTY JURY TRIALS (1985). The Chin and Peterson study builds upon two earlier reports. See PETERSON & PRIEST, *supra* note 7; MARK A. PETERSON, THE RAND CORPORATION, COMPENSATION OF INJURIES: CIVIL JURY VERDICTS IN COOK COUNTY (1984).

28. Verdict reporters are compilations of jury verdicts and other data bearing on jury outcomes in specific jurisdictions. They are primarily subscription services for lawyers, judges, insurance companies, businesses, and local government bodies. See, e.g., CHIN & PETERSON, *supra* note 27, at 63-91; Stephen Daniels & Joanne Martin, *Jury Verdicts and the "Crisis" in Civil Justice*, 11 JUST. SYS. J. 321, 328 (1986); Stephen Daniels, *Civil Juries, Jury Verdict Reporters, and the Going Rate*, Paper Presented at the Annual Meeting of the Law & Society Association (May 29-June 1, 1986) (on file with author).

such as the nature of the claim, the seriousness of the alleged injury, and estimates of the amount of economic losses, as well as the outcome of the trial. After controlling for severity of injury, Chin and Peterson concluded that in cases in which the plaintiff was not severely injured, corporate and health care provider defendants paid approximately thirty percent more than other defendants paid for similar injuries. When plaintiffs were severely injured, however, corporate and health care provider defendants had to pay up to more than four times the amount assessed against individual defendants in similar cases.²⁹ Additionally, Chin and Peterson concluded that even when the seriousness of injury was similar, doctors and hospitals who were defendants in ordinary lawsuits, such as slip-and-fall cases, paid substantially less than when they were defendants in malpractice cases.³⁰

Working from some of the same data, James Hammitt, Stephen Carroll, and Daniel Relles, three other Rand researchers, specifically examined doctors and hospitals as defendants.³¹ They concluded that "medical malpractice awards against doctors are almost 2.5 times as great as awards against other individuals in average case types, and awards against hospitals are 85 percent larger."³² These authors offered several possible explanations for this finding. First, jurors may balance the plaintiff's financial needs against the financial harm to the defendant. Second, jurors may act on their beliefs that doctors and hospitals are heavily insured or wealthy. Third, jurors may feel that these types of harm carry a special "insult" because of the trust a patient places in the doctor and that larger awards are therefore appropriate.³³

Two other studies have found the same pattern of data as that found in the Hammitt, Carroll, and Relles study. In one, Stephen Daniels and Joanne Martin examined over 23,000 jury verdicts from forty-three counties in ten states.³⁴ They concluded that awards in medical malpractice and product liability cases were

29. CHIN & PETERSON, *supra* note 27, at vii.

30. *Id.*

31. James K. Hammitt et al., *Tort Standards and Jury Decisions*, 14 J. LEGAL STUD. 751 (1985).

32. *Id.* at 754-55.

33. *Id.* at 756.

34. Daniels & Martin, *supra* note 28, at 321; see also Stephen Daniels, *Tracing the Shadow of the Law: Jury Verdicts in Medical Malpractice Cases*, 14 JUST. SYS. J. 4 (1990).

"generally much higher than those in other legal areas."³⁵ However, Daniels and Martin cautioned that these cases may have involved more serious injuries than other types of personal injury cases.³⁶ They also questioned the representativeness of the data Chin and Peterson used³⁷ and concluded that there is "little systematic evidence concerning actual jury verdicts."³⁸ In the other study, Randall Bovbjerg, Frank Sloan, Avi Dor, and Chee Ruey Hsieh analyzed verdicts from the Rand database together with verdicts from five other jurisdictions to determine whether malpractice cases yield different verdicts than cases involving automobile injuries, product liability, or government defendants.³⁹ Using multiple regression analysis to statistically control for a number of variables (such as injury severity), they concluded that the expected value of malpractice verdicts was larger than for other types of cases, particularly automobile injuries. In a subsample of cases in which the injuries resulted in death, the amount of the awards for malpractice cases was, on average, more than twice the amount for injuries resulting from automobile accidents.⁴⁰ The researchers suggested, however, that much of the difference may be due to the fact that the malpractice and auto injury cases that actually make it to trial have different kinds of plaintiffs; malpractice attorneys specifically select for trial cases in which plaintiffs appeal to jurors' sympathies.⁴¹ According to this explanation, it may not be deep pockets, but rather case selection, that causes the observed difference.⁴²

In another Rand study, Mark Peterson compared jury verdicts in Cook County, Illinois and San Francisco County, California from 1960 to 1984.⁴³ In both jurisdictions, the probability of

35. *Id.* at 339.

36. *Id.* at 343.

37. *Id.* at 326-27.

38. *Id.* at 325.

39. Randall R. Bovbjerg et al., *Juries and Justice: Are Malpractice and Other Personal Injuries Created Equal?* 54 *LAW & CONTEMP. PROBS.*, Winter 1991, at 5. The five other jurisdictions were Kansas City, Missouri, Kansas City, Kansas, San Francisco and several other counties in California, and Cook County, Illinois. *Id.* app. 1.

40. *See id.* at 31.

41. *Id.* at 35-36.

42. *Id.* The selection hypothesis will be considered in more detail in subsection I(C)(1).

43. MARK A. PETERSON, *THE RAND CORPORATION, CIVIL JURIES IN THE 1980s: TRENDS IN JURY TRIALS AND VERDICTS IN CALIFORNIA AND COOK COUNTY, ILLINOIS (1987)*.

plaintiff verdicts in medical negligence trials increased from about one chance in four to one chance in two.⁴⁴ The amounts awarded to prevailing plaintiffs also increased dramatically; in Cook County, for example, the median award more than tripled.⁴⁵

C. *Problems with the Evidence*

Taken at face value, the above studies appear to support the notion of a deep pockets effect. Examined more closely, however, none can support the conclusions that have been drawn from them, and for a very compelling reason: they are methodologically flawed to the point that very plausible alternative explanations of the data cannot be discarded. Moreover, on the issue of liability, the data appear contrary to the deep pockets hypothesis; so do some of the data regarding amounts awarded as damages. Finally, there are no data at all to support the contentions that jurors are psychologically motivated by uncontrolled sympathy for plaintiffs and a belief that the rich ought to pay.

1. *The Case Selection Problem.* The databases for the empirical studies on which proponents of the deep pockets hypothesis rely are limited to cases that went to trial. They provide no information about the lawsuits that were settled, dropped, or disposed of through judicial rulings. Sources tell us that depending on the type of case, only 2 to 12% of lawsuits culminate in a jury trial.⁴⁶ Moreover, the numbers and types of cases that proceed to trial vary over time and between jurisdictions.⁴⁷ The thrust of this insight is that different mixes of cases in each category may reach

44. *Id.* at 17.

45. *Id.* at 22. Between 1960 and 1964, the median award was \$35,000. Between 1980 and 1984 it was \$121,000. Differences in the mean or average amounts, which are inflated by extreme amounts, were even more dramatic: from \$52,000 in 1960-1964 to \$1,179,000 in 1980-1984. The findings for San Francisco were similar. See A. Russell Localio, *Variations on \$962,258: The Misuse of Data on Medical Malpractice*, 13 LAW, MED. & HEALTH CARE 126 (1985) (discussing issues relating to the interpretation of means and medians).

46. See, e.g., Saks, *supra* note 4, at 1212-13, 1226 (reporting that 10% of medical malpractice cases proceed to trial).

47. For an extensive discussion of this matter, see Theodore Eisenberg, *Testing the Selection Effect: A New Theoretical Framework with Empirical Tests*, 19 J. LEGAL STUD. 337 (1990); Samuel R. Gross & Kent D. Syverud, *Getting to No: A Study of Settlement Negotiations and the Selection of Cases for Trial*, 90 MICH. L. REV. 319 (1991); Saks, *supra* note 4.

trial; juries may be deciding very different proportions and types of cases, rather than deciding similar cases differently.⁴⁸

Since this elementary fact seems to have escaped some experienced researchers and was conveniently forgotten by others,⁴⁹ an elementary example is not out of order. Assume that in a particular jurisdiction, the only cases that go before juries are ones in which defendants are found liable and that the only task of the jury is to decide damages. Assume further that at Year 1, two types of cases are selected for jury trial: Type A cases are worth \$10,000, and Type B cases are worth \$100,000. During Year 1, ten Type A cases and ten Type B cases are tried. The juries are reliable, so that on average, Type A plaintiffs each receive \$10,000, and Type B plaintiffs each receive \$100,000. If we calculate the average jury award for the year, it is: $((10 \text{ trials} \times \$10,000) + (10 \text{ trials} \times \$100,000)) \div 20 \text{ trials} = \$55,000$. Assume now that between Year 1 and Year 5, the state introduces an alternative dispute resolution program for cases worth \$10,000 or less and that it is so successful that all Type A cases are settled in Year 5. Only Type B cases are left, of which there are still 10 per year, to go to trial. Each type B case still receives \$100,000. The average award at Year 5 is: $(10 \text{ trials} \times \$100,000) \div 10 = \$100,000$. Thus, the average jury award has increased \$45,000 (from \$55,000 to \$100,000), or 82%, between Year 1 and Year 5. Can we conclude that juries have become more inagnumous over the five-year period? Of course not; the change in the types of cases going to trial caused the change in the average award. Similarly, we would not be justified in concluding that juries had become less generous if, for some reason, Type B cases settled and only Type A cases went to

48. See Neil Vidmar, *Making Inferences About Jury Behavior From Jury Verdict Statistics: Cautions About the Lorelei's Lied* (1993) (unpublished manuscript, on file with author); see also Saks, *supra* note 4, at 1244. Saks points out that complications go beyond cases that are filed. Different types of cases may have different rates of injury incidence, numbers of claims arising out of incidents, and pre-litigation settlement rates. This fact further complicates attempts to compare jury verdicts across different types of cases. *Id.*

49. See, e.g., Hammitt et al., *supra* note 31. Interestingly, although the other Rand researchers consistently recognized the selection problem at various places in their reports, they continued to make conclusions that the changes in win ratios and awards over time constituted or implied changes in jury behavior. For instance, Peterson stated that "there may have been differences over time or across jurisdictions," PETERSON, *supra* note 43, at xii, but stated that the data showed that "plaintiffs are increasingly advantaged in jury trials," *id.* at ix, and "Cook County jury verdicts were increasingly favorable to plaintiffs . . .," *id.* at vii.

trial.⁵⁰ Without knowing about the base of cases from which trials were selected and about any changes in that base, we can conclude nothing about changes in jury behavior from verdict reports.

The jury verdict data in the Rand studies do not provide direct information on changes in case selection, but they do strongly suggest that such factors may have been operating. For example, in San Francisco, the annual number of malpractice jury trials decreased by almost half between the 1960–1964 period and the 1980–1984 period, from 95 trials to 55.⁵¹ Unless one assumes that the number of malpractice suits also declined by half—a most unlikely hypothesis—we must infer that cases were being settled differently. In fact, the Rand report notes that in California a vigorous alternative dispute resolution program was instituted in the courts in the 1980s.⁵² It is highly probable, therefore, that in 1984, juries were deciding a different mix of cases than in 1960.

The case selection problem also plagues attempts to compare jury verdicts across jurisdictions because of possible differences in “legal cultures.” For example, although Peterson’s data show that the number of malpractice cases going to trial in San Francisco between 1960 and 1984 was almost halved, the number of cases in Cook County, Illinois almost tripled.⁵³ Peterson recognized this

50. We can push the example still further in any number of ways. Suppose that between Years 1 and 5, more Type B cases were filed and went to trial so that at Year 5, juries were deciding ten Type A cases and twenty Type B cases. In this instance, the average award would be \$70,000. Alternatively, consider an example in which only half of the Type A cases are diverted to alternative dispute resolution. We also can vary the example using liability, rather than damages, e.g., defendants start settling cases in which they have a low chance of prevailing at trial. Equally important, we also can concoct statistical scenarios in which juries actually do become more generous toward plaintiffs (as to liability or damages, or both) between Year 1 and Year 5, but simultaneous changes in the mix of cases going to trial yield results that reflect no change in plaintiff win ratios or damage awards. In the most extreme example, suppose that at Year 5, juries become really perverse and award ten Type A cases \$100,000 each and ten Type B cases only \$10,000 each; despite this stunning change in behavior, the average award would be the same as Year 1: \$100,000.

51. PETERSON, *supra* note 43, at 11. These are the data that show plaintiff win ratios increasing from one in four to two in four, *id.* at 17, and the median award increasing from \$35,000 to \$121,000, *id.* at 22.

52. *Id.* at 7–9. I want to emphasize again that although Peterson clearly recognized these and other methodological confounds throughout the report, he nevertheless was tempted to ignore them and draw the unqualified conclusion in the executive summary that “plaintiffs are increasingly advantaged in jury trials.” *Id.* at ix. I want to acknowledge that the hypothesis could be correct; the point, however, is that Peterson’s conclusion is not scientifically valid given the data he explored.

53. *Id.* at 11. In the 1960–1964 period, there were 56 cases. In the 1980–1984 period,

difference and speculated that there were more Chicago lawyers willing to try small stakes cases and that Chicago courts might make less aggressive use of alternative dispute resolution techniques.⁵⁴ Despite similarities in plaintiff win ratios and award trends in these two counties, absent information on how cases were selected for trial, one cannot conclude that juries were behaving the same way—or differently.

Finally, the case selection problem also confounds facile attempts to compare verdicts across types of cases. There is, for example, evidence that smaller percentages of automobile negligence lawsuits go to trial than malpractice lawsuits.⁵⁵ There is also evidence that at the front end of the litigation process, malpractice attorneys select their cases differently than do auto negligence attorneys.⁵⁶ Bovbjerg speculated that because of the costs and risks of malpractice litigation, attorneys select cases whose plaintiffs are likely to appeal to the sympathies of the jury.⁵⁷ We also know from other recent empirical studies that although the plaintiff win rate in malpractice jury trials hovers around 30%, the plaintiff win rate for automobile negligence trials is around 60 to 70%.⁵⁸ As I have just illustrated in my example using Type A

there were 162. *Id.*

54. *Id.* at 13.

55. See Galanter, *The Civil Jury*, *supra* note 4, at 210; David B. Rottman, *Tort Litigation in the State Courts: Evidence from the Trial Court Information Network*, ST. CT. J., Fall 1990, at 4; Saks, *supra* note 4, at 1228; see also DANZON, *supra* note 7, at 56 (“[L]awsuits are filed in only 20 percent of automobile claims, and only 1 percent are litigated to verdict, whereas suits are filed in 58 percent of malpractice cases and 7 percent are litigated to verdict.”). Indeed, Gross and Syverud report data showing that the percentage of auto injury cases going to trial was only 0.9% in 1988–1989, whereas other personal injury suits proceeded to trial at a rate of 2.4%. See Gross & Syverud, *supra* note 47, at 360 n.95.

56. I reached this conclusion following discussions with plaintiffs’ attorneys in North Carolina. Weiler also draws this conclusion. See WEILER, *supra* note 3, at 48; cf. Gross & Syverud, *supra* note 47, at 349–52, 360–62.

57. Bovbjerg et al., *supra* note 39, at 35–36.

58. See, e.g., CHIN & PETERSON, *supra* note 27, at 50 (reporting win rates of 53% for auto and 33% for malpractice); PETERSON, *supra* note 43, at 17 (finding that in 1980–1984, the win rate in auto accidents was 70% in San Francisco and 64% in Cook County; in contrast, the win rates in malpractice cases tried in those cities were 53% and 49%, respectively); Kevin M. Clermont & Theodore Eisenberg, *Trial by Jury or Judge: Transcending Empiricism*, 77 CORNELL L. REV. 1124, 1175 (1992) (finding that the win rate was 60% for motor vehicle plaintiffs and 30% for medical malpractice); Henry S. Farber & Michelle J. White, *Medical Malpractice: An Empirical Examination of the Litigation Process*, 22 RAND J. ECON. 199, 203 (1991) (reporting that in a sample of 326 cases against a single large hospital between 1977 and 1989, only 13, or 5.2%, were tried

and Type B cases, the fact that these differences exist proves nothing absent other data about the cases, but it still raises serious questions about whether juries are deciding cases that are inherently different because of case-selection processes.

To sum up, because jury verdict data do not provide information about the proportions of cases selected for trial or the various dimensions along which cases may differ as a result of different selection processes, it is not possible to determine from such data what changes may be occurring in jury behavior. It is not necessary to specify the exact nature or extent of these confounding variables to challenge the validity of previous authors' conclusions about the meaning of trends over time, across jurisdictions, or between different types of cases if they raise the possibility of plausible alternative explanations.

2. *Multiple Dimensions: The Apples and Oranges Problem.* Even if the differential case selection problem did not exist, it would still be difficult to compare verdicts in malpractice cases with verdicts in auto injury cases and to ascribe any differences to the deep pockets effect. The two types of cases differ on many dimensions other than the fact that defendants in the former may be seen as having a greater ability to pay large damage awards. Consider a partial listing of the differences.

Auto injury cases typically involve a single defendant, the driver of the automobile, but sometimes they involve multiple plaintiffs, e.g., several persons riding in the car that was hit.⁵⁹ In contrast, malpractice cases typically involve a single plaintiff, the injured patient, but frequently involve multiple defendants, e.g., two or more doctors, and perhaps the hospital, who acted as a team in the patient's medical treatment.⁶⁰ Many, perhaps most, auto injuries arise between persons with no prior relationship,

to verdict and all were decided in the defendant's favor).

59. See, e.g., CHIN & PETERSON, *supra* note 27, at 49-56.

60. In North Carolina, the average malpractice case filed between 1984 and 1987 had 3.2 defendants. Less than one-third of the cases initially had only a single defendant; the number of defendants ranged as high as 21. (unpublished data, on file with the author). One reason for multiple defendants is the fact that increasingly, health care is highly specialized; a team of health care providers share responsibility for the patient's welfare. Furthermore, a "manager" organization may be responsible for delivery of these services. For further discussion, see THE INSTITUTE FOR CIVIL JUSTICE, THE RAND CORPORATION, HEALTH CARE DELIVERY AND TORT 18-23 (Elizabeth Rolph ed., 1992) [hereinafter HEALTH CARE DELIVERY].

whereas malpractice suits arise out of a professional and financial relationship between patient and physician.⁶¹ Furthermore, auto injuries typically involve a single theory of liability; malpractice cases often involve multiple theories of causation and liability.⁶² In auto negligence cases, the jurors may perceive the plaintiff as having contributed to the accident, whereas most often the medical accident plaintiff was a passive, if not completely anesthetized, party during the events that led to the injury.⁶³

This last difference alone could have a major impact on verdicts because most jurisdictions today apply comparative negligence standards. It has long been thought that even in jurisdictions with contributory negligence laws, juries frequently adjust their awards with their own rough comparative negligence standards.⁶⁴ Thus, in auto negligence cases, the jurors can almost always conceive of ways that the plaintiff shares some responsibility for the accident, e.g., she should have practiced better defensive driving. In contrast, jurors would not typically perceive the medical negligence plaintiff as having contributed to the injurious event, since she trusted the health care providers' professional judgments and skills.⁶⁵ In short, discounting under comparative negligence standards, whether by law or by *de facto* jury equity, might explain why automobile injury awards are lower than medical negligence awards.

The trial itself also may be different. Research by Samuel Gross and Kent Syverud indicates that a high proportion of malpractice cases that went to trial appeared to be contested solely on the issue of liability, whereas this pattern was much less likely to occur in motor vehicle suits.⁶⁶ In North Carolina, malpractice de-

61. CHIN & PETERSON, *supra* note 27, at 56; WEILER, *supra* note 3, at 46; Bovbjerg et al., *supra* note 39, at 33 n.108.

62. See, e.g., HEALTH CARE DELIVERY, *supra* note 60, at 17-28; CHIN & PETERSON, *supra* note 27, at 49-51.

63. Bovbjerg et al., *supra* note 39, at 33 n.108.

64. See, e.g., Dale W. Broeder, *The University of Chicago Jury Project*, 38 NEB. L. REV. 744, 756-60 (1959); Edith Greene, *On Juries and Damage Awards: The Process of Decisionmaking*, 52 LAW & CONTEMP. PROBS., Autumn 1989, at 225, 229; Harry Kalven, Jr., *The Jury, the Law, and the Personal Injury Damage Award*, 19 OHIO ST. L.J. 158, 167-68 (1958).

65. There are some exceptions to zero percent patient responsibility: cases in which the defendants argue that the patient was told of risks of a procedure and gave informed consent; cases in which the patient did not follow physician instructions during or after treatment; and cases in which the illness leading to the treatment contributed to the effects of the negligent injury.

66. See Gross & Syverud, *supra* note 47, at 356-66. In auto injury cases, 85% of

fense lawyers have expressed a reluctance to dispute the amount of damages or present expert evidence on damages on the theory that the mere mention of damages would cause the jury to assume liability.⁶⁷ This assumption may be less operative in auto injury cases, particularly if they are taken to the jury in a dispute that is primarily about damages. In addition, it is often asserted that malpractice cases are litigated by attorneys who specialize in malpractice, whereas generalist lawyers may be more likely to litigate auto injury cases;⁶⁸ specialists have become very sophisticated in presenting day-in-the-life evidence and introducing expert evidence on economic and non-economic damages, such as pain and suffering.⁶⁹

Finally, the decision rule that juries are required to apply differs in the two types of cases. In automobile cases, as in almost all other areas of torts, the negligence rules are based on the reasonable man standard. In contrast, in medical malpractice cases, the rule is whether the health care provider's treatment violated professionally accepted standards of practice in his area of specialization, in that community, and during that period of time.⁷⁰

To the extent that these other dimensions distinguish malpractice cases from other types of cases and have an impact on jurors, they provide additional alternative explanations for the data seeming to support the deep pockets hypothesis.

plaintiffs had an offer of settlement prior to trial, but only 40% of malpractice plaintiffs had similar offers. *Id.* at 346. My interviews with attorneys suggest that this result is also likely to be found in North Carolina, but, unlike the malpractice cases, I have no systematic data on auto negligence cases.

67. This conclusion was derived from interviews with both plaintiff and defense malpractice attorneys in North Carolina as part of a larger study of medical malpractice litigation. See Vidmar, *supra* note 4, at 124; VIDMAR ET AL., *supra* note 17. My conclusions from the interview data were supported by a survey of 25 cases filed in North Carolina that went to trial between July 1987 and December 1989. In 16 cases, the plaintiff called expert testimony on damages and the defense called no evidence; in five cases, both plaintiff and defendant had expert evidence on damages; in four cases, neither side called experts on the issue of damages. This difference is statistically significant. A Chi-square test yields a value of 10.68, which is significant at the .01 level of confidence.

68. WEILER, *supra* note 3, at 48.

69. *Id.* For a general discussion of day-in-the-life evidence, see, for example, J. Ric Gass, *Defending Against Day-in-the-Life Videos*, 34 FOR DEF., July 1992, at 8.

70. See WEILER, *supra* note 3, at 19-26; Robert C. Clark, *Why Does Health Care Regulation Fail?*, 41 MD. L. REV. 1, 5-8 (1981); Eleanor D. Kinney & Marilyn M. Wilder, *Medical Standard Setting in the Current Malpractice Environment: Problems and Possibilities*, 22 U.C. DAVIS L. REV. 421, 440-42 (1989).

3. *Tenuous Findings About Non-Economic Damages*. Danzon's study on non-economic damages,⁷¹ which the AMA⁷² and Weiler⁷³ cited to support their claims that jurors are overly generous with pain and suffering awards, and which Danzon cited in a subsequent article claiming that the percentage of pain and suffering awards is growing,⁷⁴ has methodological problems that most social scientists would consider grave. Danzon's primary data were based on Florida malpractice claims closed in 1984. Of a projected total of 322 cases that went to jury trial, some of the cases may have been tried to the judge or dismissed by the court.⁷⁵ From this contaminated sample, Danzon estimated that 84 cases resulted in a plaintiff verdict but conceded that "the precise number could be as low as 45 or as high at [sic] 132."⁷⁶ She conceded that these data were subject to "great sampling variability"⁷⁷ and were discrepant from other, more comprehensive data showing substantially lower plaintiff win rates in Florida. She then went on to estimate from this unreliable sample that of plaintiffs

71. See Danzon, *supra* note 15.

72. AMA PROPOSED ALTERNATIVE REPORT, *supra* note 5, at 9.

73. WEILER, *supra* note 3, at 55 n.36.

74. Danzon, *supra* note 21, at 49.

75. Danzon *supra* note 15, at 132. Danzon arrives at this estimate of the number of 1984 cases by projecting from 1983 claims in Florida and the 1980 National Association of Insurance Commissioners report, *cf.* NATIONAL ASSOCIATION OF INSURANCE COMMISSIONERS, MALPRACTICE CLAIMS (M. Patricia Sowka ed., 1980). In using this latter study, Danzon implicitly assumed that the trial rate in Florida was the same as nationwide averages and, further her study is contaminated by cases that might have been settled at trial, decided in a bench trial, or by some other disposition. Danzon's description of how the figure of 322 potential jury cases was arrived at is as follows:

A total of 2,539 malpractice claims were closed in Florida 1983. Since unpublished St. Paul data show no increase in frequency in 1984, the same number is used for 1984 claims. On average, 87.3 percent of malpractice claims are dropped or settled out of court; the remaining 12.7 percent of claims go to trial and are resolved either by final judgment by jury or judge, by dismissal, or by other disposition. These numbers imply a total of 322 court dispositions in Florida in 1984.

Danzon *supra* note 15, at 132 (citations omitted). In an article published in 1986, Danzon observed that other data showed "significant differences in claim frequency for 1983, by type of insurer." Patricia M. Danzon, *The Frequency and Severity of Medical Malpractice Claims: New Evidence*, 49 LAW & CONTEMP. PROBS., Spring 1986, at 57, 61 n.15. Danzon continued to cite results from the Florida study in her 1990 article accompanied by a footnote indicating some of the sources of possible error in generalizing from her data, but she did not address the confounds that are discussed in this Article. See Danzon, *supra* note 21, at 49 & u.9.

76. Danzon, *supra* note 15, at 132.

77. *Id.*

who won a verdict, 51% received a pain and suffering award in excess of \$100,000. However, she conceded that the figure could easily be "as low as 23 or as high as 67."⁷⁸ In fact, the 51% figure was not based on Florida data, but rather on estimates from the Cook County, Illinois data in the Rand studies.⁷⁹ Danzon merged these data sets, concluding that "[t]he Cook County experience is therefore reasonably representative for Florida as a whole."⁸⁰ She also included decade-old data from a nationwide survey of closed claims that included settled cases as well as jury verdicts,⁸¹ which Danzon conceded was not representative of malpractice cases. After merging these data sets, she concluded that the "data imply that 2.7 percent of all claims or 5.6 percent of paid claims receive compensation for pain and suffering in excess of \$100,000."⁸² The report continued with more acknowledgements of bias in the data and concessions of "best estimate[s]," but regardless of these major deficiencies, Danzon asserted that her conclusions were "not implausible."⁸³ Although much more could be said about the flaws in the Danzon study, this incomplete recitation is sufficient to show that its method and conclusions are, to say the least, seriously compromised.⁸⁴

78. *Id.* at 133.

79. *Id.*

80. *Id.*

81. *Id.* at 134.

82. *Id.*

83. *Id.* at 136. These "not implausible" conclusions were repealed in a subsequent article by Danzon with some qualifications in a footnote. See Danzon, *supra* note 21, at 49 & n.9.

84. Nevertheless, at least a lengthy footnote should call attention to another matter. I am concerned about the databases used to estimate non-economic damages and the meaning that should be ascribed to the estimates. The concern applies not only to the Danzon study in question but to other researchers' attempts to calculate non-economic damages, particularly pain and suffering, from verdict reporters and closed-claim files. For a more extensive discussion of the problems with verdict reporter data, see Vidmar, *supra* note 48; see also PETERSON, *supra* note 27, at 8-9 (researchers estimated disabilities from plaintiffs' injuries); Bovbjerg et al., *supra* note 39; Frank A. Sloan & Chee R. Hsieh, *Variability in Medical Malpractice Payments: Is the Compensation Fair?*, 24 LAW & SOC'Y REV. 997 (1990); Viscusi *supra* note 17. To calculate non-economic damages, the known special damages are subtracted from the total verdict (less punitive damages, if any); the residual is the figure used for non-economic damages. Usually researchers label the residual simply "pain and suffering."

There are several major reasons to be concerned about the use of these figures. First, the databases are often missing extensive information. In *Medical Malpractice*, Danzon used closed-claims insurance files. She stated that these data "only report the insurance company's estimate of economic loss" and concluded that "the data on earnings

were particularly poor." DANZON, *supra* note 7, at 40. Peterson, using verdict reporters, stated that "[o]ccasionally the Reporter included a plaintiff's income and the length of time that his or her income was lost because of an injury," and presumably for similar reasons, Peterson did not report information about future medical expenses or future lost income. PETERSON, *supra* note 27, at 9. Viscusi similarly conceded problems with making estimates of pain and suffering from closed-claim files.

The loss figures . . . are reported losses, not actual losses. The amount of the loss is recorded in the data set by the insurance company. To the extent that this variable reflects the insurance company's loss estimate, the financial loss will be understated . . . [B]ias may also vary with the loss level. Very large loss claims with substantial long-term medical costs may have a very wide possible variance, so that the propensity for underestimation by the insurance company and overestimation by the claimant will be especially great.

Viscusi, *supra* note 17, at 206; *see also* Sloan & Hsieh, *supra*, at 1012-13, 1019. The truth of the matter is that in these data sets, economic data are frequently missing to an extensive degree. In fact, I have reviewed convenience samples of closed-claim files from three different professional liability insurers in North Carolina. Sometimes, the financial estimates are presented only in the most general terms; much of the time, they are missing altogether.

The second problem is vaguely identified in the Peterson study, *see* PETERSON, *supra* note 27, and by Viscusi, *see* Viscusi, *supra* note 17, at 206, but needs to be made explicit. Both economic and non-economic damages have many potential components, and there is often no bright line dividing the two. Economic damages may consist not only of past and present medical expenses and lost wages but also future medical expenses, future lost income, future housekeeping expenses (including modifications to homes and automobiles), and when dependent children are involved, future costs for education. Any observer of trials or settlement negotiations will quickly agree that the assumption that special damages can be "easily ascertained" and "usually . . . documented by routine business records," PETERSON, *supra* note 27, at 9, is facile, since bitter disputes over past lost income occur on a regular basis. Furthermore, disagreement over future income and medical costs, reduced to present value, may exceed past economic losses by at least several points on a Richter scale. Indeed, even experts arrive at wildly varying figures. For instance, one case in the Duke Medical Malpractice Project study involved a severe birth injury in which the biggest point of contention regarded future medical and associated costs. *See* Vidmar, *supra* note 4, at 122. The plaintiff's expert produced a plausible case for an award exceeding \$6 million. The defendant had obtained estimates from three separate experts; these ranged from \$2.1 million to \$4.3 million. *See id.* What, then, was the correct figure, and what does this example say about the ease with which economic damages are calculated? How reliable are the accounts of economic damages in closed-claim files and in verdict reporters, and how are they computed?

When we turn to non-economic damages, the problem becomes even more difficult. There should be no debate that past and future pain and suffering is a non-economic loss. Possibly, we could reach agreement that loss of consortium, nurturance for dependents, and loss of enjoyment of life's amenities are also non-economic losses. Does severe disfigurement constitute an economic or a non-economic loss? It might affect a person's self-esteem and happiness, but it might also affect earning capacity. Is it reasonable to label the difference between economic and total damages "pain and suffering" when it may contain some or all of the above components?

Still further problems can be identified from discrepancies in figures contained in published reports about unreliability of damage awards. *See, e.g.,* Randall R. Bovbjerg et al., *Valuing Life and Limb in Tort: Scheduling "Pain and Suffering,"* 83 NW. U. L. REV.

4. *Missing Evidence on Juror Motives.* As noted above, the claims about the deep pockets hypothesis typically involve assertions about the attitudes, perceptions, and motivations that lead jurors to malfeasance. Weiler, for example, speculated that jurors worry about the size of awards when they perceive awards as affecting their car insurance rates but ignore such factors in malpractice cases.⁸⁵ Koop and Huber argued that jurors ignore the question of negligence out of sympathy for injured plaintiffs and levy awards based on their beliefs that deep pocket defendants can and should pay.⁸⁶ The Bovbjerg group speculated that in comparison to other tort cases, malpractice attorneys select cases that involve plaintiffs who are most likely to appeal to the sympathies of

908 (1989). I compared figures for median "total awards," *id.* at 922, and "non-economic" awards, *id.* at 937, and found: (a) that in one instance the "non-economic award" *exceeded* the total award (median total award in cases of permanent major injury was \$1,422,000, whereas the median non-economic award in such cases was \$1,642,000, or 115% of the total); and (b) that the reported median non-economic award for various injury levels ranged between 29% and 115%, but the median non-economic award for the total data set was reported as only 26%. Both of these findings are not logically possible. The discrepancies may accrue in part from the fact that the cases from which the non-economic data were taken constituted a subsample of the total sample from which the total awards were derived, but the fact of the discrepancies itself raises serious questions about the reliability of the estimates set forth in this study.

Finally, the above insights about the difficulty and unreliability of estimating both economic and non-economic damages lend an alternative explanation to the conclusion of Bovbjerg's study that the wide variation in jury awards, even within categories of injury severity, is due primarily to the unreliability of juries. *Id.* at 923-26. The conclusion is predicated on the assumptions that: (a) economic losses for different plaintiffs do not vary greatly; (b) the parties, or outside observers, will agree as to what those losses are; and (c) stable estimates were placed into evidence before the juries. To the extent that these assumptions are not warranted, and the above analysis suggests that they likely are not, ascribing the variation in damages to jury caprice or incompetence is not valid. I do not suggest that there is no unreliability in jury awards. The data from the experiment described *infra* Part II and previous research by Neil Vidmar and Jeffrey Rice indicate some unreliability does exist. See Neil Vidmar & Jeffrey J. Rice, *Assessments of Non-economic Damage Awards in Medical Negligence: A Comparison of Jurors with Legal Professionals*, 78 IOWA L. REV. 883 (1993); see also Greene, *supra* note 64 (finding that the decisionmaking process of jurors depends on the complexity of the case). My point, however, is that substantial variation also can be ascribed to prior variation in the standards by which earlier researchers have judged verdicts and that these researchers have not given adequate recognition to the problem.

In summary, all of the published empirical studies of pain and suffering awards should be viewed with great suspicion as to their reliability, validity, and meaning.

85. See *supra* text accompanying note 3.

86. See *supra* text accompanying notes 8-10.

the jurors, presumably leading to larger awards for medical negligence.⁸⁷

Verdict reporters and closed-claim files do not contain interviews with jurors or psychological profiles of jurors in the cases that were decided. Similarly, neither the Rand studies nor the Bovbjerg study presented any evidence of jurors' mindset. The authors who have made these claims report no studies of post-trial juror interviews.⁸⁸ In short, the evidence to support the claims about juror attitudes and beliefs is pure, unsubstantiated conjecture.

D. *Contrary Evidence*

Several findings provide evidence that appears to be contrary to the deep pockets hypothesis. In the various Rand studies, plaintiff win rates never exceeded 50%; in fact, the best estimate from the various reports was that plaintiffs prevailed on the issue of liability in less than one-third of the trials.⁸⁹ Danzon reported that in Florida, plaintiffs won only 13.8% of cases taken to trial;⁹⁰ in another Danzon study of malpractice cases in California in 1974 and 1976, plaintiffs won only 28% of cases tried to verdict.⁹¹ In North Carolina, the win rate was about 20%.⁹² Other researchers have reported figures in the vicinity of 30%.⁹³ In contrast, plain-

87. Bovbjerg et al., *supra* note 39, at 35-36. I want to be fair: Bovbjerg's group of researchers, in contrast to the other authors, stated the matter only as a hypothesis. *Id.*

88. Subsequent to the publication of the above articles speculating on jury motives, a 1993 issue of *The National Law Journal* reported the results of a survey of 783 former jurors with the following headline: "Many Jurors Consider Deep Pockets and Ignore Presumption of Innocence." Although reporting that "[m]ore than a third of all civil jurors thought that members of their jury took into account the defendant's ability to pay damages," the headline distorted the finding that "[f]ifty-three percent said they didn't consider a defendant's finances" and that some of the jury experts who commented on the survey results offered alternative explanations for the findings. *Many Jurors Consider Deep Pockets and Ignore Presumption of Innocence*, NAT'L L.J., Feb. 22, 1993, at S12. Moreover, the survey suffers from methodological weaknesses; the answers were retrospective and the question, as reported in the article itself, asked the respondents to speculate about the minds of other jurors, rather than asking them whether they themselves took a defendant's finances into account when reaching their verdict.

89. *E.g.*, CHIN & PETERSON, *supra* note 27, at vii.

90. Danzon, *supra* note 15, at 132-33.

91. DANZON, *supra* note 7, at 38.

92. Vidmar, *supra* note 4, at 118, 119.

93. *E.g.*, Clermont & Eisenberg, *supra* note 58, at 1162 (finding 30% plaintiff win rates for product liability and medical malpractice trials, 60% for others); Gross & Syverud, *supra* note 47, at 334 (finding 29.2% plaintiff win rate in medical malpractice

tiff win rates for other types of tort cases, as noted earlier, are substantially higher, sometimes approaching 70%.⁹⁴ As discussed previously, the ways in which cases are chosen for trial substantially influence plaintiff win ratios;⁹⁵ however, the consistent findings of low win ratios in malpractice cases clearly suggest that juries do not automatically give plaintiffs the benefit of the doubt over doctors and hospitals. Otherwise, plaintiff win ratios would be much higher.⁹⁶

A recent study by Mark Taragin and his co-researchers, involving over 8000 malpractice cases in New Jersey, concluded that the probability of the plaintiff prevailing on the issue of liability at trial was not correlated with the severity of the plaintiff's injury.⁹⁷ If juror sympathy for plaintiffs were a significant factor, we should have expected a positive correlation in which more severely injured plaintiffs would win more cases.

Perhaps, however, the deep pockets effect applies only after liability has been determined. None of the authors or organizations making claims about the deep pockets effect has articulated a two-stage hypothesis, but we should be willing to entertain one and focus attention on the question of whether the deep pockets phenomenon applies only to damage awards after liability has been found.

Chin and Peterson's finding that doctors and hospitals paid lower awards when they were found liable in non-malpractice cases than when they were found liable in malpractice cases would

trials); see also Bovbjerg et al., *supra* note 39, at 22 (finding 30% plaintiff win rate in malpractice trials). Also, although their data set included settlements as well as jury verdicts, Sloan and Hsieh concluded that "[c]ontrary to the notion that payment is higher when the defendant has deep pockets . . . cases involving hospitals as named defendants resulted in lower rather than higher payments" compared to physician-only malpractice cases. Sloan & Hsieh, *supra* note 84, at 1024.

94. See *supra* text accompanying note 58; see also PETERSON & PRIEST, *supra* note 20, at 19 (reporting that the average plaintiff win rate for medical malpractice between 1960 and 1979 was 33% and that the plaintiff win rate for auto accidents was 53%).

95. See *supra* subsection I(C)(1).

96. Danzon draws a similar conclusion. "The data on the issue of liability are . . . limited, but clearly refute the extreme charge that juries compensate without regard to fault in cases of severe injury." DANZON, *supra* note 7, at 50.

97. Mark I. Taragin et al., *The Influence of Standard of Care and Severity of Injury on the Resolution of Medical Malpractice Claims*, 117 ANNALS INTERNAL MED. 780 (1992). Taragin also found that verdicts on liability were positively correlated with judgments of negligence made by reviewing physicians acting in a neutral capacity. *Id.* at 781.

seem contrary to the deep pockets hypothesis.⁹⁸ The health care providers' perceived ability to pay should not vary by the type of case.⁹⁹ This finding suggests that one of the other factors distinguishing medical and other tort negligence, discussed above, may account for the difference.

A final piece of contrary evidence is more indirect. Danzon's California study,¹⁰⁰ the Rand studies,¹⁰¹ and subsequent studies comparing jury verdicts with the seriousness of plaintiffs' alleged injuries¹⁰² have consistently concluded that the best predictor of the size of the award is the severity of the injury.¹⁰³ If the deep pockets effect is real, these later findings suggest, it must have an effect over and above injury severity, or at least an effect that combines with severity in some unspecified way.

E. *Conclusion: Little Evidence One Way or the Other*

Influential authors and organizations have made claims about the deep pockets hypothesis. These claims are widely disseminated to the public, legislators and other policymakers, judges, the business community, and the legal and scientific communities. They play a major role in debates about the tort system. My detailed critique, however, makes it clear that the empirical evidence supporting the claim is at best flimsy, and at worst non-existent. On the other hand, my critique does not allow the conclusion that the deep pockets hypothesis is wrong. It simply points out that we cannot say, one way or the other, whether it is wrong on the basis of available data. Aggregate statistics on jury verdicts are not capable of providing the crucial evidence because they cannot rule

98. See CHIN & PETERSON, *supra* note 27, at 54-56.

99. Unless, of course, jurors are aware of liability insurance coverage and assume the limits are higher in malpractice cases than in auto injury or slip-and-fall cases, or if, as Weiler implies, jurors distinguish between awards they perceive may affect their own insurance rates and those that will not while calculating damages. WEILER, *supra* note 3, at 48.

100. DANZON, *supra* note 7, at 50 ("Damage awards are strongly influenced by the plaintiff's economic loss and by the law defining and sometimes limiting compensable damages.").

101. CHIN & PETERSON, *supra* note 27; PETERSON, *supra* note 27.

102. *E.g.*, Bovbjerg et al., *supra* note 84; Taragin et al., *supra* note 97.

103. Severity of injury accounts for about 50% of the variability in these studies, leaving the possibility that some proportion of the remaining variability is due to the deep pockets effect, but this possibility has yet to be demonstrated, as the present critique shows. Additionally, keep in mind my severe critique of these studies. See *supra* Section I(C).

out a host of plausible alternative explanations. Clearly, then, some other types of data are necessary to test the deep pockets hypothesis. One approach is through a controlled experiment.

II. AN EXPERIMENT AND THE RESULTS

A. *Overview*

My students and I conducted an experiment to test the deep pockets hypothesis without the confounding of other variables that occurs in studies of aggregate verdict statistics. The experiment also provided an opportunity to get a direct glimpse of the attitudes and beliefs of prospective jurors. A sample of 147 veniremen was asked to award damages for pain and suffering in a case involving a young woman who suffered a broken leg and resultant complications. For some jurors, negligence was ascribed to health care providers: either one doctor, two doctors, or a hospital. For other jurors, the cause was ascribed to negligence involving the operation of a motor vehicle and, in parallel fashion to the medical negligence cases, involved either one defendant, two defendants, or a business corporation.

B. *Rationale*

The research strategy was to vary two factors most central to the deep pockets hypothesis while keeping all of the other variables constant. The first factor was the cause of the accident. For approximately half of the subjects, the injury was caused by medical negligence, and the defendants were health care providers. For the remaining jurors, the injury was described as caused by an automobile accident. An auto injury was chosen as the comparison case since most critics have used it as the baseline against which malpractice cases are judged.¹⁰⁴

The second factor was the number or type of defendants. We hypothesized that one crucial distinction between automobile injury cases and medical malpractice cases was that the former frequently have a single defendant, whereas the latter typically have multiple defendants. As I will discuss in more detail below, a new, although still not well understood, body of research evidence suggests that juries may assess responsibility and damages differently for corpo-

104. See *supra* Part I.

rate acts than for acts by single individuals.¹⁰⁵ Consequently, of the jurors who were told that medical negligence caused the injury, some had a version in which the negligence was ascribed to a single physician, some had a version with two physicians, and some had a version in which the hospital was the defendant. Jurors who received the auto accident version of the case had parallel conditions of one defendant, two defendants, or a business corporation.

Thus, the study can be described as a 2x3 factorial experiment, yielding six conditions: a malpractice case involving three types of defendants and a motor vehicle case involving three types of defendants. To control for differences in liability, the case materials presented to the jurors asserted that the defendant had been found legally negligent and that the jurors' only task was to assess the amount of damages.

Most of the concern with the deep pockets effect and other factors relating to juror damage awards centers on the non-economic components of damages, particularly pain and suffering. The apparent assumption is that assessment of this component is so subjective that any juror biases can find free expression. For instance, Weiler stated that "the most troublesome feature of large tort verdicts is the amount of damages awarded for pain and suffering, not for direct medical costs."¹⁰⁶ As a consequence, we designed the case materials so that the defendant(s) stipulated medical expenses; the jurors were asked only to determine the amount of damages for pain and suffering.

As discussed earlier, assertions about the deep pockets effect are usually accompanied by speculation about the psychological attitudes of the jurors who produce those awards. Hammitt, Carroll, and Relles speculated that jurors may balance "the benefit of greater compensation for the plaintiff against the harm to the defendant;" that jurors may believe that doctors are heavily insured; and that jurors' sensibilities are insulted by the breach of special trust a patient places in his doctor.¹⁰⁷ Huber asserted that the public has come to view accidents as "inalign and calculated intrusions on the settled order of things" with the consequence that hospitals and surgeons are viewed as thick-skinned, well-in-

105. See *infra* Section III(A).

106. WEILER, *supra* note 3, at 54.

107. Hammitt et al., *supra* note 31, at 756.

sured, callous, and unwilling to take measures to prevent accidents.¹⁰⁸ None of these assertions about juror attitudes can be assessed from jury verdict reporters, but our experiment allowed us to study juror attitudes on these matters in the context of the specific case to which they were exposed.

C. *Juror Sample and Research Procedure*

The sample of jurors consisted of 147 veniremen waiting to be called for jury selection in the Wake County (Raleigh), North Carolina state court. They were told that the researchers were studying juror decisionmaking and were asked to volunteer; they also were told that participation was not part of their jury service and that their answers would be anonymous. The sample consisted of equal numbers of women and men. Their average age was 42, their average education level was high school graduate with some post-high school work, and they lived in households with yearly incomes that averaged \$42,800. We did not inquire about race on the questionnaires, but blacks appeared to participate in numbers proportionate to their representation in the jury pool. The sample appears to approximately mirror the demographic characteristics of the jury pool.

The case materials were randomly ordered so that jurors were randomly assigned to one of the six experimental conditions. A few jurors did not complete the study after volunteering, resulting in an uneven number of jurors per condition. Although the statistical tests that we applied to the data take unequal numbers into account and weight the data accordingly, the numbers of jurors per condition are as follows:

Condition	Number of Jurors
(1) medical negligence, 1 defendant	21 jurors
(2) medical negligence, 2 defendants	26 jurors
(3) medical negligence, hospital	23 jurors
(4) auto negligence, 1 defendant	25 jurors
(5) auto negligence, 2 defendants	26 jurors
(6) auto negligence, corporate defendant	26 jurors

108. HUBER, *supra* note 9, at 120.

D. *Case Materials*

Each juror was given a packet of materials consisting of background facts, results of a prior judicial proceeding establishing defendant liability, excerpts of the plaintiff's testimony about her pain and suffering, three photographs of the plaintiff demonstrating the injury, and legal arguments from attorneys for both sides. Instructions from the judge stipulated economic (medical expenses and wages) damages of \$34,268 and provided standard guidance on awards for pain and suffering. Following these materials, the jurors received a verdict sheet, the questionnaire on juror perceptions and attitudes, and seven questions pertaining to the jurors' demographic characteristics.

1. *Medical Negligence, One Defendant.* The plaintiff was described as a seventeen-year-old female who elected surgery under general anesthesia to have a benign cyst removed from her back. She was given a sedative prior to general anesthesia and brought into the operating room. When the anesthesiologist negligently moved away from the disoriented patient, she fell off the operating table. She was placed back on the table and the operation was completed, but when she awoke in the recovery room with excruciating pain in her leg, doctors discovered that she had a broken femur. The leg was set in a plaster cast, and the patient was discharged the next day. However, she required pain medication for two weeks, and when the cast was removed in two months, it was discovered that the fracture had not healed properly, resulting in a two-inch shortening of her leg. The result was determined not to be the fault of the doctor who set the leg. During the next six months, the plaintiff was unable to attend school or participate in normal physical activities and had to undergo four separate corrective surgeries: an osteotomy to lengthen the leg bone; osteosynthesis to attach a metal plate to the leg; surgery to remove the metal plate; and plastic surgery to cosmetically disguise the scars. During part of this time, the evidence (illustrated by a photograph) showed that she was on crutches with an exterior metal plate on her leg. Testimony indicated that she also underwent intense and painful physical therapy.

The ultimate result was a good one: she recovered fully, and plastic surgery successfully corrected the surgical scars. However, she sued the anesthesiologist for medical expenses and her pain and suffering over the lengthy period of her recovery. The lawyer

for the defendant did not dispute liability and conceded the economic damages of \$34,268, but he argued that the amount for past pain and suffering should be \$30,000. The lawyer for the plaintiff argued that compensation for pain and suffering should be between \$180,000 and \$220,000.¹⁰⁹

2. *Medical Negligence, Two Defendants.* The facts of the case were identical except that in this instance, the surgeon began the operation before the patient was fully anesthetized, causing her to kick and fall off the table. Prior judicial proceedings ascertained that both doctors were liable because the anesthesiologist is required to ensure that the patient is anesthetized and the surgeon is required to check with the anesthesiologist before beginning surgery.

3. *Medical Negligence, Hospital Defendant.* The facts of this case were identical except that hospital orderlies negligently dropped the patient when transferring her from the operating table, causing the broken femur.

4. *Auto Injury Negligence, One Defendant.* In contrast to the medical negligence conditions, the broken femur resulted from a driver who negligently caused his vehicle to swerve into an oncoming lane of traffic, striking the plaintiff's vehicle. All of the other facts about the plaintiff and her recovery remained identical.

5. *Auto Injury Negligence, Two Defendants.* In this condition, two drivers were responsible for the plaintiff's broken leg. One driver was distracted while talking on his cellular phone, and the other impatiently attempted to pass him near a curve. The startled first driver swerved, forcing the second into the path of the plaintiff's vehicle.

6. *Auto Injury Negligence, Corporate Defendant.* This version was similar to the single driver version, except that the driver was an employee of the Allied Products Company; under the

109. These figures were derived from comparable injuries listed in the PERSONAL INJURY VALUATION HANDBOOK: CASE EVALUATION MANUAL III L-Z (1993), and would be within the range of what a plaintiff's attorney might demand in such a case.

doctrine of *respondet superior*, the corporation was held liable for the accident.

E. *Dependent Measures*

Regardless of condition, each juror was instructed to award \$34,268 for medical bills and affix a sum for past pain and suffering under the following instructions:

Damages should include such amount as you find, by the greater weight of the evidence, is fair compensation for the actual physical pain and mental suffering which were the immediate and necessary consequences of the accident. There is no fixed formula for evaluating pain and suffering. You will determine what is fair compensation by applying logic and common sense to the evidence.

Following their verdict on damages, jurors were asked to explain in their own words what factors were important or unimportant in their decisions and why.

Next, they were asked to respond to thirteen questions, each accompanied by a ten-point scale. These questions were intended to assess juror attitudes and perceptions about the plaintiff's suffering, degrees of legal and moral responsibility for the accident, the reasonableness of the amounts suggested by the attorneys, the risks a person assumes in driving a car or undertaking a medical procedure, and attitudes about litigation.¹¹⁰

110. The thirteen items were as follows:

1. How severe do you think Katherine Link's pain and suffering was in the months following the accident?;
2. To what extent do you believe that the accident and the medical complications that followed will have a negative, or bad, effect on the rest of Katherine's life?;
3. To what extent do you believe that the accident was avoidable?;
4. To what extent do you believe that the plaintiff, Katherine Link, bears some responsibility for the accident?;
5. To what extent do you believe that the defendant was negligent in Katherine's accident?;
6. To what extent do you believe that the defendant should be held morally responsible for the accident?;
7. To what extent do you believe that the defendant should be held legally responsible for Katherine's accident?;
8. To what extent do you believe the lawyer for the plaintiff was reasonable or unreasonable in suggesting that Katherine should receive \$220,000 for the accident?;
9. To what extent do you believe that the defense lawyer was reasonable or unreasonable in suggesting that Katherine should receive \$65,268 for the

Four additional questions ascertained the juror's gender, age, education, and household income. Three final questions asked whether the juror or members of his family had ever been injured by a health care provider, injured in a car accident, or caused an auto accident in which someone had been injured.

F. Results

1. *Awards.* The mean (average) pain and suffering award and the standard deviation, a measure of the variability of awards,¹¹¹ for each of the six conditions, plus aggregate statistics, are presented in Table 1. Consider the aggregate statistics first. The bottom right-hand figure, \$89,908, is the mean award summed over all conditions. The two figures immediately above it report the mean awards for all jurors for whom the cause of the accident was medical negligence (\$93,999) and for auto negligence (\$87,783). Overall, the mean malpractice award was \$6216 more than the mean auto negligence award. The bottom row of three figures (\$102,506, \$75,682, and \$94,484) are the mean awards, summed across the causes of injury for one defendant, two defendants, and hospital/corporation defendants, respectively.

accident?;

10. Some people say that when you drive a car you should assume some of the risk for any accident that happens. To what extent do you agree or disagree with this view?;
 11. Some people say that if you go to a hospital for surgery you have to assume some of the risk for any medical accident that happens. To what extent do you agree or disagree with this view?;
 12. Some people say that today too many people file lawsuits in hope of making a fast buck. Do you feel that too many people file lawsuits for that purpose?;
 13. Some people say that today medical doctors and hospitals are sued too often. To what extent do you agree that they are sued too often?
111. See, e.g., QUINN MCNEMAR, *PSYCHOLOGICAL STATISTICS* 20-25 (1962).

TABLE 1
Means and Standard Deviations^a of "Pain and Suffering"
Awards by Condition^b

	One Defendant	Two Defendants	Hospital/ Corporation	Mean Award
Medical Negligence	\$99,950 (\$60,482) _a	\$67,709 (\$43,278) _b	\$114,339 (\$61,243) _a	\$93,999
Motor Vehicle Negligence	\$105,063 (\$69,471) _a	\$83,655 (\$63,546) _a	\$74,630 (\$46,923) _a	\$87,783
Mean Award	\$102,506	\$75,682	\$94,484	\$89,908

a. Standard deviations in parentheses.

b. Comparisons between individual conditions: Cells with similar subscripts are not significantly different from one another.

Before attempting to put any substantive meaning to these figures, consider the results of a statistical test, called analysis of variance, that we applied to the data. The purpose of the test was to ascertain whether these differences were meaningful in a statistical sense or, alternatively, whether they could be ascribed to chance variation.¹¹² The analysis of variance indicated that neither the \$6216 difference between the medical and auto negligence causes of the injury nor the difference between the defendant conditions was statistically significant, although there was a "cause by defendant" interaction effect.¹¹³ Put in layperson's terms, the test indicates several things. First, there is no support for the hypothesis that jurors would be prejudiced against medical providers in comparison to motor vehicle operators or to corporations who are legally responsible for them. Second, there was no general support for the hypothesis that the number or type of defendants makes a

112. *Id.* at 252-373.

113. The *F* value for the cause factor was 0.29, *df*=1,138, and probability was not statistically significant. The *F* value for number/type of defendants was 2.70, *df*=2,138, and probability was not significant. The *F* value for cause by defendant interaction was 3.06 with *df*=2,138; the probability was less than .05, a statistically significant result.

difference, despite the fact that the mean for the two-defendant conditions (\$75,682) *appears* substantially lower than the means for the one defendant (\$102,506) and corporation conditions (\$94,484). There is support for the hypothesis that the cause of the injury and number of defendants interact with one another. However, further statistical analyses¹¹⁴ indicated that this interaction effect was due solely to the fact that the mean award was *lower* in the condition involving two defendants who were medically negligent (\$67,709); the award in the two-defendant motor negligence condition (\$83,655) was not statistically different from the other conditions.

These findings may be better understood by first examining the standard deviations, which are reported in parentheses for each condition in Table 1. The standard deviation is a statistical measure of how much awards varied from the average.¹¹⁵ The table shows that in each condition, there was considerable variability. Consider the one-defendant conditions. The standard deviation of \$60,482 in the medical negligence condition indicates that two-thirds of the awards ranged from \$39,468 to \$160,432. (i.e., the mean of \$99,950 \pm \$60,482). In the motor vehicle condition, two-thirds of awards ranged from \$35,592 to \$174,534. (i.e., \$105,063 \pm \$69,471). With this kind of variability in awards, it is not surprising that although the mean award in the motor vehicle negligence condition was \$5113 larger than the medical negligence condition, the difference was probably due to chance fluctuation. The same reasoning can be applied to comparisons between the other conditions.

Another way to understand these data is to look at the median awards, which are the midpoint of the award distribution. The medians are reported in Table 2. These medians of the award distributions are somewhat lower than the means and reflect the fact that in each condition a few high awards (i.e., \$180,000 to \$220,000) raised the mean. Note that the patterns of medians in Table 2 is similar to the pattern of means in Table 1. A statistical test of these alternative summary statistics yielded a result similar

114. These analyses compared the individual conditions against one another to determine which, if any, are statistically significant. None of the individual conditions was significant except for the two-defendant medical negligence condition, which differed from all other conditions.

115. See MCNEMAR, *supra* note 111.

to the means: medical negligence was not treated differently than motor vehicle negligence with respect to the size of awards. The number and type of defendants did not produce statistically meaningful results either.

To avoid any misinterpretation, let me repeat the conclusion to be drawn from these findings about the pain and suffering awards. The facts that the mean and median awards were actually slightly larger for single defendants when liability for the injury was ascribed to automobile as opposed to medical negligence and that the overall mean award was slightly larger for medical negligence can be ascribed to chance fluctuations in the data. Statistical tests of the data lend no support for the hypothesis that jurors would treat medical and automobile negligence cases differently.

TABLE 2

Median "Pain and Suffering" Awards by Condition

	One Defendant	Two Defendants	Hospital/ Corporation
Medical Negligence	\$77,500	\$55,000	\$100,000
Motor Vehicle Negligence	\$80,000	\$71,000	\$65,000

2. *Perceptions and Attitudes.* Jurors were asked a series of thirteen questions about their perceptions and attitudes toward the case.¹¹⁶ These answers were analyzed to determine if there were any meaningful differences between conditions. There were only a few statistically significant effects. The malpractice cause of the accident was seen as more avoidable than the automobile accident (Question 3).¹¹⁷ There was a small but statistically significant difference on Question 4, suggesting that the jurors perceived the plaintiff as bearing more of the responsibility for the accident when it resulted from motor vehicle negligence.¹¹⁸ Mirroring

116. For a list of these questions, see *supra* note 110.

117. The mean for medical negligence was 9.2 on the 10-point scale and for vehicle negligence it was 8.0. *F* value was 7.31, *df*=1,141, *p*<.01.

118. The mean for medical negligence was 1.2 and for vehicle negligence it was 1.5.

Question 4, the jurors saw both single and multiple defendants as more negligent when medical negligence caused the injury (Question 5).¹¹⁹ Question 11 asked about the degree to which people assume some of the risk for an accident that happens to them during surgery; those jurors assigned to the medical negligence conditions were more inclined to disagree about patient responsibility than in the auto injury conditions.¹²⁰ These effects suggest that despite the fact that liability was stipulated in the same way in all conditions, jurors did tend to perceive the plaintiff as less responsible for the injury when it was ascribed to medical negligence.¹²¹

3. *Correlations Among Perceptions, Demographics, and Awards.* We also attempted to ascertain the degree to which the amounts of individual jurors' awards could be predicted from their perceptions and attitudes, as measured by the thirteen questions, and their demographic characteristics. There were positive correlations between the degree to which a juror perceived the plaintiff's suffering as severe¹²² and the extent to which the juror believed that it might have a negative effect on the plaintiff's life,¹²³ and between perceived severity and the amount of the award that the juror gave. Perceptions that the defendant had moral, as opposed to legal, responsibility also were directly related to the amount that jurors awarded.¹²⁴ It was not surprising that the more jurors saw the plaintiff's demand as reasonable¹²⁵ and the less they saw the defendant's offer as reasonable,¹²⁶ the greater their award was. The more that a juror disagreed that patients assume some

F=4.75, df=1,142, p<.05.

119. The means for medical and vehicle negligence were 2.4 and 3.6, respectively.

F=5.56, df=1,143, p<.05.

120. The means for medical and vehicle negligence were 2.4 and 3.7, respectively. F=7.36, df=1,142, p<.01.

121. The analyses of variance also revealed interactions among three of the questions: Question 2, the degree to which the injury had a bad effect on the plaintiff; Question 9, whether the defendant's offer was reasonable; and Question 10, the extent to which a driver assumes risk in operating a motor vehicle. However, the data did not yield interpretable patterns of data, and the effects were small. They are ignored in the remainder of this Article.

122. Question 1, $r=.29$, $p<.001$.

123. Question 2, $r=.49$, $p<.001$.

124. Question 6, $r=.21$, $p<.01$.

125. Question 8, $r=.75$, $p<.001$.

126. Question 9, $r=.42$, $p<.001$.

degree of risk for surgery, the greater was the amount of the award.¹²⁷ Finally, the juror's gender, age, and household income were not related to the size of the award. Those jurors who were better educated, however, tended to give smaller awards.¹²⁸

It is noteworthy that although jurors varied in the extent to which they endorsed the beliefs that "too many people file lawsuits in the hope of making a fast buck" and that "medical doctors are sued too often," these litigation attitudes were not related to the size of awards.

4. *Juror Explanations of Their Awards.* The jurors also were asked to comment in their own words about their reasons for giving the award. The responses were quite varied, but they provide important insights about jurors' reasoning processes.

Some jurors focused on responsibility. A juror in the single-physician condition wrote, "I think a 46 year old Dr. should have the expertise not to make careless mistakes on human life. That his job is to see that people are helped and treated with care" (awarded \$220,000). Another juror in the same condition stated, "The doctor had major responsibility for the care and safety of his patient. Undue stress placed on the patient for an incident not even related to her original condition warrants such an amount" (awarded \$127,000). A juror in the two-physician condition wrote, "The doctors allowing her to fall off the operating table is unpardonable. She suffered 20 times the pain which her cyst removal should have caused" (awarded \$30,000). Another, also in the condition with two physician defendants, commented, "We depend on doctors not to be careless. We are leaving our lives in their hands. Basically, I feel that doctors should not make these kinds of mistakes" (awarded \$100,000). Still another said, "It is my belief that in a job situation such as surgery or any medical area that each step should be double check [sic] to prevent unnecessary or previous incorrect performance of that job" (awarded \$100,000).

The above examples indicate that some jurors did focus on the role and responsibilities of physicians. However, jurors expressed parallel attitudes about responsibility in the motor vehicle negligence conditions: "The man's total carelessness should be thoroughly punished" (awarded \$200,000); "Accident was

127. Question 11, $r=.22$, $p<.01$.

128. $r=-.20$, $p<.01$.

avoidable Terrible ordeal because of carelessness with his car" (awarded \$165,732); "[The driver] should pay attention to the highway because you have to drive for yourself and other people too" (awarded \$10,000).

In both the medical and vehicle negligence conditions, some jurors commented on what they perceived to be the defendant's acceptance of responsibility: "The doctors' attitudes about accepting responsibility was [sic] important" (awarded \$50,000); "The fact that the hospital accepted responsibility was also important although I thought that the amount they were willing to pay for pain and suffering was not adequate" (awarded \$80,000); "The willingness of [the negligent corporate vehicle defendant] to accept responsibility limited amount of 'pain and suffering' award" (awarded \$100,000); "Important: Defendant [motor vehicle negligence] admitted his negligence—honesty" (awarded \$30,000); "Time—it is now 5 years later and the hospital is stalling" (awarded \$75,000).

These examples indicate that despite the fact that the jurors' task was defined solely as assessing the amount of damages, their attitudes about defendant responsibility frequently appeared to affect their decisions. It is noteworthy, however, that in both the hospital and the parallel corporate responsibility conditions, there were many fewer comments about responsibility than in the conditions in which the defendants were individuals. We will return to this point later.¹²⁹

The responses commenting on the plaintiff's pain and suffering showed wide variation. Some jurors made much of the fact that a 17-year-old girl had a very traumatic experience: "[T]ime lost early [in life] may never be regained" (awarded \$50,000); "She trusted the doctors and now she will always be afraid of hospitals and doctors" (awarded \$100,000); "[eight] months of life taken from her The Dr. was distracted from his job. One second is all it took to destroy her" (awarded \$200,000). Several jurors mused about future events, contrary to judicial instructions and the evidence that was presented: "[Alluding to potential problems with] early arthritis or with child bearing" (awarded \$150,000); "[T]his situation could trigger psychological problems later" (awarded \$125,000); "I think events at that age will be carried into adult-

129. See *infra* Section III(A).

hood" (awarded \$220,000). Others, however, minimized the trauma or took the position that sometimes pain must just be borne: "She had pain and suffering. But these things don't last long and you can learn how to get around the way you are" (awarded \$220,000); "[She] lost a year. However, it is quite possible to carry on in a cast—personal experience" (awarded \$30,000); "Pain is a part of life and money will not remove the pain. Mistakes occur daily by all people no matter what their occupation. We are all human, this action [mistake by doctors] was not negligence, it was an oversight (mistake) Life goes on" (awarded \$30,000); "We all go through hardships in life I do not feel anyone is deserving of massive amounts for an incident in her life that she has totally recovered from except for memory" (awarded \$30,000).

Concerns about getting something for nothing and the impacts of awards on society were also prominent in some jurors' responses: "The legal system has gotten out of hand in its pursuit of financial rewards due to damages through litigation that apparently does not apply in this case, but an award should be what is fair and right for both sides" (awarded \$150,000); "I have a hard time giving enormous amounts of \$ to victims even though I acknowledge her right to receive something" (awarded \$50,000); "Accidents happen; no perm[anent] damage. I can't believe in lawsuits for excessive amounts" (awarded \$0); "Personally, I think financial judgments in general are too high and accordingly went with the lowest figure mentioned" (awarded \$30,000); "I do not think she should get rich because of this accident, and accidents do happen and both doctors admitted that it did happen" (awarded \$50,000); "I tried to balance award . . . keeping in mind very large awards may encourage other lawsuits for the sake of potential large settlements" (awarded \$75,000).

It is also clear that jurors uniformly commented on the difficulty of putting a price on pain and suffering and used different methods of calculating the awards.¹³⁰ Some roughly split the difference between the defendant's and the plaintiff's suggested figures. One juror doubled what the defendant said was fair, and another said it should be three times medical expenses. One juror said, "[Eight] months of pain and suffering missing out of her teen years. She should receive no more than what most people make in a year" (awarded \$50,000). A number of jurors assessed pain and

130. For a similar observation, see Greene, *supra* note 64, at 225.

suffering on a per month basis, such as \$4000 or \$5000 and multiplied by the eight months that the plaintiff was incapacitated. Other jurors indicated that they just came up with a figure that they thought was fair.

Of the 147 jurors, only one mentioned that the ability of the defendants to pay was a consideration and that juror was in the two-defendant vehicle negligence condition: "Not knowing the ability of the defendants to pay an exorbitant amount and considering an average salary to be \$35,000 [per year,] I feel both men could pay \$70,000 together."

These explanations in the jurors' own words show highly varied responses to the case. Some expressed punitiveness and a desire to blame, but these responses were offset by those of the majority of jurors, who attempted to come up with what they thought was a fair award. Further, it appears that punitiveness and blame was not disproportionately applied to cases of medical negligence; motor vehicle negligence evoked similar responses in jurors.

G. *Summary of Findings*

This experiment yielded no support for the deep pockets hypothesis or the psychological dynamics that are posited to be behind it. Whether medical or automobile negligence caused the accident made no difference in the amounts of awards. There were some small differences in juror perceptions consistent with the view that plaintiff responsibility may be perceived to be less in medical negligence accidents, although these differences were not reflected in awards. Jurors' explanations of their reasoning demonstrated widely varying approaches to whether and under what conditions awards for pain and suffering were appropriate.¹³¹

131. One interesting finding was that jurors who made strong statements about the irresponsibility of the defendant(s) and those who expressed sympathies for the plaintiff did not necessarily give the highest awards. This lack of correlation between juror reactions and size of awards leads to the hypothesis that even if the juror were inclined to punish the defendant or give the plaintiff a windfall, the actual amount judged appropriate to accomplish the goal differed. Thus, one juror might deem a \$40,000 award big punishment of the defendant, whereas another juror who does not wish to punish might consider \$100,000 fair compensation for the pain and suffering. Our data do not allow further exploration of this hypothesis.

III. FURTHER PERSPECTIVES ON THE DEEP POCKETS PHENOMENON

A. *Corporate Responsibility*

The claims about jurors' propensities toward deep pockets defendants have not been confined to medical malpractice cases. It is alleged that the phenomenon extends to many areas in which large corporations are defendants.¹³² The small but important body of empirical literature that has recently developed on the topic of attitudes toward corporations provides additional insights about the results of the experiment reported in Part II and the other empirical literature bearing on the deep pockets hypothesis in medical negligence cases.

Consistent with the conceptual analysis presented in this Article, Valerie Hans has argued that the deep pockets hypothesis posits that if all other factors in the case were the same—that is, if corporations engaged in the same behavior and caused the same harm as individuals—jurors would assess larger awards against corporate defendants than individual defendants.¹³³ She has proposed three potential explanations as to why juries treat corporate defendants differently.¹³⁴ One, the primary claim of jury critics, is that juries make their decisions solely on the basis of the defendant's ability to pay.¹³⁵ The second is that juror attitudes about business might be negative or that businesses might be held to a higher standard of appropriate behavior than individuals. A third explanation involves structural differences between individuals and corporations. For example, because corporations are composed of many individuals, it may be that people perceive them as having greater capacity to foresee and control negative events associ-

132. CHIN & PETERSON, *supra* note 27, at 3; HUBER, *supra* note 9. For further discussion, see Mahoney & Littlejohn, *supra* note 11, at 1397; Valerie P. Hans & William S. Lofquist, *Jurors' Judgments of Business Liability in Tort Cases: Implications for the Litigation Explosion Debate*, 26 LAW & SOC'Y REV. 85, 86 (1992).

133. Valerie Hans, *Factors Affecting Lay Judgments of Corporate Wrongdoing*, Paper Presented at Third European Conference of Law and Psychology, Oxford, England, Sept. 19, 1992, at 3 (on file with author).

134. *Id.* at 4.

135. *Id.* at 5. This, of course, constitutes the primary claim against medical negligence juries. See *supra* Section I(A). Hans also correctly observes that the phenomenon, if it exists, could as likely be labelled the "empty pockets" phenomenon if jurors undercompensate when defendants are individuals. Hans, *supra* note 133, at 5. This possibility raises the issue of what standards are to be used to determine if an award is "appropriate."

ated with their behavior.¹³⁶ Hans observes, however, that it may be more difficult to ascribe responsibility for negative outcomes of group activity because it is difficult to identify individual decisionmakers or the process of decisionmaking. Her research program has attempted to tease out these factors.

In a first study, Valerie Hans and David Ermann varied the defendant's identity in a personal injury lawsuit involving workers who were harmed by toxic waste but kept every other aspect of the case the same.¹³⁷ Half of the simulating jurors in the experiment learned that Mr. Jones had hired the workers, and the other half learned that the Jones Corporation had done so. The jurors tended to hold the corporate defendant more morally and legally responsible for the injuries, saw it as more reckless and blameworthy, and awarded significantly higher levels of compensation against it.¹³⁸ Further analyses, however, indicated that the amount of the award was more strongly related to perceptions of the corporation's recklessness, not its perceived financial resources.¹³⁹ In short, the larger awards in the corporation condition appeared to be tied more to the fact that corporations were held to higher standards of behavior than to their perceived financial resources.

In a second study, Valerie Hans and William Lofquist interviewed 141 jurors who had recently decided actual cases involving corporate defendants.¹⁴⁰ Most of these jurors said that they treated corporations the same as individuals. They ascribed this behavior to the fact that the lawyers had admonished them in voir dire and closing statements and that the judge had instructed them to do so. They further indicated that during deliberations, they reminded one another of their legal responsibilities to treat the corporation like they would an individual. Some jurors did indicate that the fact that the defendant was a corporation made a difference but suggested that a corporation should be held to higher standards of responsibility because of the number of persons available to solve problems and its greater potential to cause harm

136. Conversely, it may be that it is easier to empathize with the plight of individual defendants. *Id.* at 6.

137. Valerie P. Hans & M. David Ermann, *Responses to Corporate Versus Individual Wrongdoing*, 13 LAW & HUM. BEHAV. 151, 155-56 (1989).

138. *Id.*

139. *Id.*

140. Hans & Lofquist, *supra* note 132, at 90.

to many persons; ability to pay, however, was not a frequently stated consideration.

In a third study, 450 randomly selected Delaware residents were asked in a telephone survey to respond to scenarios that varied the defendant as either a corporation, a non-profit business, or a for-profit business.¹⁴¹ Within each of these conditions, the survey respondents were told either that the defendant had assets less than \$100,000, over \$1 million, or were told nothing about assets. Participants judged for-profit business defendants as more negligent and reckless than individuals and assessed higher awards against them. Contrary to the deep pockets hypothesis, however, awards against defendants did not vary as a function of their financial assets. In independent experimental research, Robert MacCoun also found that whether the defendant was an individual or corporation affected how people judged cases but the defendant's wealth did not.¹⁴²

B. *Responsibility Components of Medical Negligence*

The research on judgments of corporate behavior raises an attributional issue about medical negligence that was given only passing attention in Part I. Medical providers are in professional and fiduciary relationships with their patients; the patients place themselves in the hands of the professionals with trust that the professionals will not be negligent in performing those services. Like their apparent response to corporate defendants, jurors may hold doctors to a higher standard of care. This response could help explain Chin and Peterson's finding that jurors assessed higher awards against both doctors and hospitals when they were defendants in malpractice than when they were defendants in other personal injury suits.¹⁴³ It is also consistent with the written comments of some of the jurors who participated in the present experiment¹⁴⁴ and with the other findings that the injury was seen as more avoidable and the defendants as more negligent in malprac-

141. Hans, *supra* note 133, at 6.

142. Robert MacCoun, Deep Pockets or Corporate Identity: Understanding the Effects of Defendant Identity on Civil Jury Verdicts, Paper Presented at the Annual Meeting of the Law and Society Association (June 28, 1991) (on file with author).

143. CHIN & PETERSON, *supra* note 27, at 54.

144. See *supra* subsection II(F)(4).

tice than in motor vehicle cases.¹⁴⁵ One reason why these effects may not have translated into differences in awards was the fact that in our experiment, both the medical and motor vehicle negligence cases stipulated defendant liability.¹⁴⁶ The corporate responsibility research indicated that jurors may have a hard time assessing responsibility for corporate behavior. This finding might help account for Sloan and Hsieh's finding that jurors assessed lower awards against hospital defendants than against individual doctor defendants.¹⁴⁷

145. See *supra* text accompanying note 65.

146. Research and theory in other contexts indicates that people in positions of authority or who possess special expertise are held more accountable and responsible for their actions. See V. LEE HAMILTON & JOSEPH SANDERS, *EVERYDAY JUSTICE* (1992); Stephen M. Rosoff, *Physicians as Criminal Defendants: Specialty, Sanctions, and Status Liability*, 13 *LAW & HUM. BEHAV.* 231, 234-35 (1989) (finding that physicians in high-status areas of medical practice are held more accountable for criminal actions than physicians in lower-status areas of practice).

As the present Article was being written, the author learned of an unpublished experiment by Bourgeois and Horowitz that bears directly on the responsibility hypothesis. Martin J. Bourgeois & Irwin Horowitz, *Summary of Damage Award Study* (study summary on file with the author and reported with permission of Professor Horowitz). In the simulation, jurors were instructed to award damages in a wrongful death suit in which defendant liability had previously been established and pain and suffering was not at issue because the plaintiff had died instantly. Half of the jurors were told that the cause of death was a surgical mishap, and half were told the plaintiff's death was due to an automobile accident. In each of these two conditions, the defendant was either a doctor (who committed a surgical error or who drove the automobile that caused the death) or a hospital that either was liable for the surgical error or that owned the vehicle the physician was driving. The average awards in the four conditions were as follows: doctor/malpractice = \$1,387,600; doctor/automobile = \$463,812; hospital/malpractice = \$1,640,062; hospital/automobile = \$1,309,267. The results may lend partial support for the deep pockets hypothesis in that the hospital defendant paid almost three times more than the physician defendant in the automobile negligence condition, although an alternative interpretation is that the jurors discounted the award for the physician automobile negligence defendant rather than increased it for the hospital. See Hans & Lofquist, *supra* note 132, at 102-04 (using similar reasoning). For our purposes, however, the more interesting finding is the comparison of jurors' assessments of responsibility in the doctor/malpractice and in the doctor/auto negligence conditions. Although the award was greater when the doctor caused the death through malpractice, rather than through negligent driving, the jurors also ascribed significantly greater responsibility to the doctor in the former condition than in the latter. This result is consistent with the responsibility findings in our own experiment, with our analyses of differences in contributory negligence between malpractice and auto negligence cases, see *supra* Section II(F), and with Hans's analysis, see Hans, *supra* note 133.

147. Sloan & Hsieh, *supra* note 84, at 1024. Obviously, in light of the methodological problems in verdict and closed-claim data already discussed, we must consider other possibilities as well, e.g., different types of evidence, different theories of liability, and differing abilities of plaintiffs' and defense attorneys. See *supra* text accompanying notes 68-69.

These hypotheses should be viewed as complementary to the other selection, structural, and process dimensions that distinguish malpractice from motor vehicle cases. Also, they should be treated as descriptive, rather than prescriptive, hypotheses; we leave to others the question of whether it is appropriate for jurors to hold physicians to a higher standard.

C. *Comparative Perspective on Pain and Suffering*

Although our research found no evidence to support the deep pockets hypothesis, a question may arise about the average award of \$98,908.¹⁴⁸ Weiler and others have raised concerns about the magnitude of pain and suffering awards.¹⁴⁹ One can ask whether the awards to the teenage plaintiff were appropriate for an injury that was only a temporary interlude in her life.

As Harry Kalven and Hans Zeisel observed in their classic research on juries, judgments about the quality of jury decisions have to be made in comparison to the possible alternatives: for example, a professional decisionmaker such as a judge or arbitrator.¹⁵⁰ With respect to the issue of damages, some authors assert that professionals can do a better job than jurors because their legal training makes them less susceptible to legally irrelevant emotional factors and because their experience and knowledge with regard to other cases gives them a more realistic perspective on the monetary worth of particular cases.¹⁵¹

In contrast to this reasoning, Kevin Clermont and Theodore Eisenberg found that in a large sample of cases filed in federal courts, judges gave larger awards than juries.¹⁵² In an experimental study, Jeffrey Rice and I found no difference between the average awards for pain and suffering and disfigurement rendered

148. See *supra* Table 1.

149. WEILER, *supra* note 3, at 54-61; AMA PROPOSED ALTERNATIVE REPORT, *supra* note 5, at 9; Bovbjerg et al., *supra* note 84, at 911-13; Griffith, *supra* note 14, at 195.

150. HARRY KALVEN & HANS ZEISEL, *THE AMERICAN JURY* 9 (1966); Harry Kalven, Jr., *The Dignity of the Civil Jury*, 50 VA. L. REV. 1055, 1063 (1964); see also VALERIE HANS & NEIL VIDMAR, *JUDGING THE JURY* 114-15 (1984).

151. For a review of this literature, see Bovbjerg et al., *supra* note 84; Vidmar & Rice, *supra* note 84, at 884-89.

152. Clermont & Eisenberg, *supra* note 57, at 1126. The authors took note that much of the difference may be due to the fact that judges and juries get different types of cases. *Id.* Samuel Gross argues that almost all of the differences in Clermont and Eisenberg's data can be ascribed to case selection. Samuel R. Gross, *Settling For a Judge: A Comment on Clermont and Eisenberg*, 77 CORNELL L. REV. 1178 (1992).

by jurors and senior attorneys, including former trial court judges.¹⁵³ Furthermore, in direct contradiction of the "professionals are superior" claim, we found evidence that jurors are likely to exhibit less variability in their awards than single judges or arbitrators.¹⁵⁴

We obtained data similar to the Vidmar and Rice study to provide a comparative perspective on the juror awards in the present experiment. Fifty-six senior North Carolina attorneys, representing both plaintiffs and defense bars, were given the same case materials that the jurors had been provided in four of the six conditions in the experiment and asked to render an award.¹⁵⁵ Summed over the four conditions, the average award was \$100,821. The comparable figure for jurors in the same four conditions was \$98,594. The difference was not statistically significant.¹⁵⁶ However, the variability of the attorneys, as determined by the standard deviations of their awards, was more than twice as large as the variability that I estimate twelve-person juries would exhibit.¹⁵⁷ In summary, jurors and legal professionals responding to the same case facts, on average, rendered essentially the same awards, but it is likely that juries would produce more reliable estimates of damages for pain and suffering.

D. *Generalizability of the Experimental Research*

Invariably, criticisms are raised about the generalizability of experimental research, particularly when it contradicts widely held views. Although we studied real jurors, the task was artificial; for example, the jurors did not deliberate.

The response to this criticism is that when different studies using different methodologies all point in the same direction, we

153. Vidmar & Rice, *supra* note 84, at 892-93.

154. *Id.* at 897. The awards of legal professionals had a standard deviation of \$16,730 in contrast to an estimated standard deviation of \$10,970 for twelve-person juries.

155. The four conditions were as follows: malpractice case with individual defendant; malpractice case with hospital defendant; auto negligence case with individual defendant; auto negligence with corporate defendant. A more detailed account of the attorney data will be reported in a subsequent article.

156. A *t* test yielded a value of 0.25, with 149 degrees of freedom; this difference is not statistically significant.

157. The standard deviation for the experienced attorneys was \$46,452, and that for twelve-person juries was \$22,893. These data will be reported in more detail in a subsequent report.

gain confidence about the generalizability of the experimental results. The present experiment seems generally consistent with the research on corporate responsibility. The data also are congruent with the findings from jury verdict statistics that contradict the deep pockets hypothesis. The explanations jurors gave in our experiments are similar in many respects to those the jurors who had decided real cases in the Hans and Lofquist study offered¹⁵⁸ and with interviews obtained from jurors who decided real malpractice and motor vehicle negligence cases in North Carolina.¹⁵⁹ North Carolina jurors who made awards against doctors indicated that they were worried about the doctor's ability to pay and the effect on the doctor and his practice but, following the judge's instructions, attempted to set their concerns aside and decide the case on the merits.¹⁶⁰ Conversely, jurors who rendered a \$205,000 award against a tow truck operator and his employer in a wrongful death trial arising out of motor vehicle negligence explained afterward that they worried about the financial impact on the defendants. They ultimately concluded that if the defendants did not have liability insurance, it was their own misfortune because the concern should be with fairly compensating the heirs to the estate, as the judge had instructed them to do.¹⁶¹ In short, the findings of the present study have substantial plausibility.

IV. CONCLUSION

A careful analysis of the research findings on which proponents of the deep pockets hypothesis in medical negligence cases have relied is methodologically flawed beyond redemption—the findings do not justify a conclusion that there is a deep pockets effect. Our experimental research, which controlled for alternative hypotheses, yields no support for the deep pockets effect and is corroborated by other research findings.

Unfortunately, we still do not have a clear understanding of precisely how jurors respond to medical negligence cases, particu-

158. Hans & Lofquist, *supra* note 132.

159. See Vidmar, *supra* note 4; see also Neil Vidmar & Jeffrey Rice, *Jury-Determined Settlements and Summary Jury Trials: Observations About Alternative Dispute Resolution in an Adversary Culture*, 19 FLA. ST. U. L. REV. 89 (1991). Reports of these interviews are on file with the author.

160. See Vidmar, *supra* note 4, at 120.

161. For a synopsis of this case, see Vidmar & Rice, *supra* note 159, at 100 n.51.

larly, how judgments of liability influence damage awards. We also do not have reliable data on what percentage of jury awards can be ascribed to non-economic damages, but it is clear that the widely reported claim that they average up to fifty percent or more of total awards¹⁶² is without foundation.

It is intriguing to question why belief in the deep pockets effect and the excessiveness of non-economic damages are so widespread and why many authors and policymakers have failed to recognize the flimsy or contrary evidence documented in this Article. Let me offer some hypotheses that bear on the answer to these questions. First, the deep pockets hypothesis could be explaining real phenomena that persons intimate with the legal system—e.g., judges, defense lawyers—have apprehended; the methodological shortcomings of prior studies have just failed to unequivocally demonstrate their existence. This remains a viable explanation, except that the present experiment and other data described in this Article appear to contradict it. Second, although the deep pockets effect may not exist in malpractice cases, it may occur in other types of cases, such as products liability. There is only a small amount of evidence to support the deep pockets effect in any context,¹⁶³ but even if it does exist, generalizations may be improperly made to malpractice cases. A third explanation is that belief in the deep pockets effect is consistent with intuitive—but incorrect—assumptions about how jurors behave. From its modern inception as a factfinder in seventeenth-century England to the present day, the jury has had its critics. Some legal professionals have questioned how a group of laypersons can make intelligent and unbiased judgments in tasks to which professionals devote years of education and their entire careers.¹⁶⁴ At the same time, doctors and their professional organizations have questioned whether any group of persons other than physicians can make judgments about medical negligence because of the difficult and complex technical medical questions that they allege are involved in malpractice disputes.¹⁶⁵ For any legal or medical pro-

162. See *supra* notes 15–21.

163. See Hans & Lofquist, *supra* note 132, at 106–07; Hans, *supra* note 133, at 5, 11.

164. See generally HANS & VIDMAR, *supra* note 150, at 113–16; Johnson et al., *supra* note 5, at 1371 (“Even under the best of circumstances, juries can never be as effective as specialized triers of fact at deciding malpractice cases”); Landsman, *supra* note 25.

165. See AMA PROPOSED ALTERNATIVE REPORT, *supra* note 5, at 7–8; Johnson et

professional holding such views, there is no reason to closely examine statistics that "confirm" things that "everybody already knows anyway." A fourth explanation is that the methodological and other data limitations of the empirical studies that I have identified in this Article are not obvious ones that laypersons can identify. I include lawyers and doctors in the definition of laypersons; most have not been trained in analysis of the types of data sets or statistical techniques used in the verdict outcome studies that I have critiqued in this Article.

It is not so clear to me, however, why the social scientists who conducted the studies have ignored such major methodological shortcomings, since many of the problems are common to social science research, are well-known, and have been extensively discussed in the academic literature.¹⁶⁶ I can suggest three factors that may have contributed to the problem. The first can be labelled, awkwardly, the "seduction of large data sets." Although some authors appear to have been unaware of the methodological problems of looking only at verdicts, others have acknowledged some of them, particularly the selection problem, but have subsequently ignored or minimized them when drawing substantive conclusions.¹⁶⁷ Verdict report data chronicle real jury decisions and involve hundreds or thousands of cases that on their face, promise to tell judges, policymakers, and social scientists about the role of juries in the legal system. They also entail substantial financial investment to code and analyze. In this context, it is perhaps not surprising that researchers would be inclined to rationalize away methodological problems and emphasize possible substantive conclusions.

Simultaneously, difficulties may also occur from the possibility that researchers were focused on prior assumptions and the regression models under which the data were analyzed, rather than on the potential problems involved in the data sets themselves. Being trained in econometric and regression analysis, unfortunately, does not ensure careful attention to the limitations of the databases on

al., *supra* note 5, at 1370-71.

166. See, e.g., EARL R. BABBIE, *THE PRACTICE OF SOCIAL RESEARCH* (3d ed. 1983); DONALD T. CAMPBELL & JULIAN C. STANLEY, *EXPERIMENTAL AND QUASI-EXPERIMENTAL DESIGNS FOR RESEARCH* (1963); THOMAS D. COOK & DONALD T. CAMPBELL, *QUASI-EXPERIMENTATION: DESIGN & ANALYSIS ISSUES FOR FIELD SETTINGS* (1979); HANS ZEISEL, *SAY IT WITH FIGURES* (6th ed. 1985).

167. See Vidmar, *supra* note 48; Section (I)(C).

which models are tested. Yet, as my critique of some of the studies has shown, to ignore or underestimate the conceptual and methodological problems in these data sets is to build on a questionable foundation.

Another source of the problem derives from the fact that a number, although not all, of the studies supporting the deep pockets effect were published without going through independent peer review. Rather, they were published as technical reports, policy papers, or in law reviews.¹⁶⁸ The peer review process prevalent in science and social science journals requires other experts in the field to undertake independent and usually blind reviews of articles to assess methodological and conceptual shortcomings. Peer review is far from a perfect process, but it does serve to weed out many inadequate studies or at least to require the author to attend to methodological problems and unequivocally state any limitations. If it is not apparent from my critique in Part I, I submit that a number of the empirical studies would likely have failed peer review.

A final explanation has been explored by Stephen Daniels, Robert Hayden, Michael Saks, and Kenneth Chesebro.¹⁶⁹ They have separately documented the fact that powerful interest groups have exploited and misrepresented findings about jury malfeasance in order to further agendas of tort reform.¹⁷⁰ Because the civil jury plays a prominent role in the legal system, it has been used as a symbol of "the litigation crisis."¹⁷¹ Non-representative data, misleading data, and horrific anecdotes of a jury system out of control have been presented at legislative hearings and portrayed

168. For example the Danzon study, *see* Danzon, *supra* note 15, was part of a policy report. The Bovbjerg study, *see* Bovbjerg et al., *supra* note 39, was published in a law review with student editors, and such editors infrequently possess sophistication or experience in data analysis. The Rand Studies, *see, e.g.*, PETERSON, *supra* note 27; CHIN & PETERSON, *supra* note 27; PETERSON & PRIEST, *supra* note 7, were published by the Rand Corporation itself. Although it is my understanding that the Rand reports do undergo in-house peer review, the process is not the same as would occur in a social science or science journal.

169. *See* Kenneth Chesebro, *Galileo's Retort: Peter Huber's Junk Scholarship*, 42 AM. U. L. REV. 1637 (1993); Daniels, *supra* note 28; Robert M. Hayden, *Neocontract Polemics and Unconscionable Scholarship*, 24 LAW & SOC'Y REV. 863 (1990); Saks, *supra* note 4.

170. *See id.*; Hayden, *supra* note 169; Saks, *supra* note 4, at 1156-66.

171. Marc Galanter, *Jury Shadows: Reflections on the Civil Jury and the "Litigation Explosion,"* in THE 1986 CHIEF JUSTICE EARL WARREN CONFERENCE ON ADVOCACY: THE AMERICAN CIVIL JURY 15 (The Roscoe Pound-American Trial Lawyers Foundation ed., 1987); Galanter, *The Civil Jury*, *supra* note 4.

in stories and advertisements in the mass media. This propaganda creates and reinforces beliefs about the deep pockets effect not only in the general public¹⁷² but in the legal, medical, and legislative communities as well. Propagandists have no interest in methodological confounds when the statistics appear consistent with their goals.

There are, then, multiple and overlapping explanations for the widespread belief in the deep pockets hypothesis. In fact, the issue deserves more extensive treatment than I have given it here, but some mention of it is appropriate in the conclusion of this Article.

Finally, I want to enter the caveat that this Article does not attempt to address the much broader controversy about medical negligence and the tort system.¹⁷³ However, because the deep pockets hypothesis and jury behavior in general play such a central role in claims about the failures of the tort system,¹⁷⁴ the Article raises serious problems for critics. More research may modify or contradict these findings, but in the meantime, we may conclude that on present evidence, the jury's reputation for reaching into the perceived deep pockets of health care providers and giving excessive awards for pain and suffering is not warranted.

172. See, e.g., Hans, *supra* note 133; Edith Greene et al., *Jurors' Attitudes About Civil Litigation and the Size of Damage Awards*, 40 AM. U. L. REV. 805 (1991).

173. See, e.g., WEILER, *supra* note 3; HEALTH CARE DELIVERY, *supra* note 60.

174. See, e.g., AMA PROPOSED ALTERNATIVE REPORT, *supra* note 5; Kenneth S. Abraham, *Medical Liability Reform: A Conceptual Framework*, 260 JAMA 68, 70 (1988) ("The chief characteristic of the American jury system that impinges on the medical liability problem is the use of lay jurors."); Arnold S. Relman, *Changing the Malpractice Liability System*, 322 NEW ENG. J. MED. 626, 626 (1990) (arguing that measures "to correct some of the more obvious failings of the tort system . . . cannot correct two fundamentally flawed assumptions on which the system rests—namely, that trial by jury is the best method of determining whether there has been negligence"); *supra* notes 1–14 and accompanying text; see also Stephen Daniels, *The Question of Jury Competence and the Politics of Civil Justice Reform: Symbols, Rhetoric, and Agenda-Building*, 52 LAW & CONTEMP. PROBS., Autumn 1989, at 269; Saks, *supra* note 4, at 1274–77.