

Why There is No Defense of Punitive Damages

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My analysis of punitive damages in environmental and products liability cases concludes that these awards impose substantial costs on society, and that abolishing punitive damages would improve social welfare. The two commentaries on my proposal are written by prominent proponents of punitive damages. Professor Luban has been a leading advocate of punitive damages as a form of punishment,¹ and Professor Eisenberg has promoted the view that punitive damages are both small and predictable.² Not surprisingly, each of them is critical of my proposal, but as I will indicate below, neither provides any evidence that punitive damages play a constructive role in society. Without such a beneficial function, the costs of these awards cannot be justified.

I. DO PUNITIVE DAMAGES HAVE A DETERRENT EFFECT?

The linchpin of any law and economics argument in favor of punitive damages is that these awards alter incentives. For the corporate decisions involving environmental and safety torts which were the focus of my paper, fostering safer decisions is essential if punitive damages are to play a constructive role. I set out to evaluate the effect of punitive damages by examining the risk performance in the four states that do not permit punitive damages as compared with the other states that do. This analysis considers an extremely wide range of risk measures—toxic chemical accidents, toxic chemical accidents causing injury or death, toxic chemical discharges, surface water discharges, total toxic releases, medical misadventure mortality rates, total accidental mortality rates, and a variety of liability insurance premium measures.

This detailed effort to detect a deterrent effect yielded no evidence of any safety incentive role. This lack of evidence is consistent with the proposition that punitive damages are random. Of course, from a statistical standpoint it is not possible to prove a negative—that punitive damages have zero effect. The most I can do is conclude, based on the data I have analyzed, that we cannot reject the hypothesis that punitive damages have zero effect. Notwithstanding the length of their critiques, neither Professor Luban nor Professor Eisenberg presents any empirical evidence indicating that punitive damages have a deterrent effect. The most these authors can do is offer some conjectures about why my data analysis may not be conclusive. However, no statistical test can ever

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1. See Marc Galanter & David Luban, *Poetic Justice: Punitive Damages and Legal Pluralism*, 42 AM. U. L. REV. 1393 (1993).

2. See Theodore Eisenberg et al., *The Predictability of Punitive Damages*, 26 J. LEGAL STUD. 623 (1997).

prove conclusively that there is a zero effect; statistical tests can only find that there is no statistically significant basis for rejecting the hypothesis that there is no effect in the data analyzed. That is the nature of statistical hypothesis testing. If in fact there is any deterrent role for punitive damages, why do Luban and Eisenberg fail to cite any empirical evidence whatsoever to support this hypothesis?

Professor Luban's principal concern is whether the nonpunitive states benefit from the deterrent effect of punitive damages on other states.³ For precisely the concern that he raises, I omitted nationally marketed products such as motor vehicles from my analysis, even though the analysis of these data yielded results that were consistent with my findings for the other risk measures. The risk categories I analyzed, such as medical malpractice misadventures and toxic chemical spills, are quite local in character and thus should be most responsive to the incentives imposed in that jurisdiction. If some national firms are involved and if they do not vary their safety practices by locale, as Luban hypothesizes, then the deterrent effect on these firms will be muted—but not eliminated. The deterrent effect of punitive damages will then be governed by the weighted average effect of punitive damages across all states in which the firm or doctor operates, which will be reduced by the extent of the firm's or doctor's operations in the non-punitive damages states.

Luban's hypothesis that safety decisions do not vary across different states is inconsistent with empirical evidence of other risk policies that vary across states. If Luban was correct, state differences in workers' compensation regimes likewise would not affect job safety, but in fact interstate policy differences have dramatic effects on safety, reducing job fatality rates by one-third.⁴ Similarly, water pollution discharges are extremely responsive to state and local differences in EPA enforcement activities.⁵ The risk categories I analyzed for punitive damages are not idiosyncratic and should be responsive to state differences in economic incentives, just as has been the case for risk policy effects documented in the literature. The strong evidence supporting the incentive effects of regulatory policies highlights the relative advantage of using regulation rather than punitive damages to promote safety.

II. IS RETRIBUTION A LEGITIMATE OBJECTIVE?

Even in the absence of an incentive effect, all may not be lost, as Professor Luban suggests that punishment for bad conduct is a legitimate role for punitive

3. See David Luban, *A Flawed Case Against Punitive Damages*, 87 GEO. L.J. 359 (1998).

4. The principal empirical measure is the expected replacement rate for worker earnings, which should have no effect if differences in replacement rates across states do not matter. See MICHAEL J. MOORE & W. KIP VISCUSI, *COMPENSATION MECHANISMS FOR JOB RISKS: WAGES, WORKERS' COMPENSATION, AND PRODUCT LIABILITY* 76 (1990); W. KIP VISCUSI, *REFORMING PRODUCTS LIABILITY* 178 (1991) [hereinafter VISCUSI, *REFORMING PRODUCTS LIABILITY*].

5. See Wesley A. Magat & W. Kip Viscusi, *Effectiveness of EPA's Regulatory Enforcement: The Case of Industrial Effluent Standards*, 33 J.L. & ECON. 331-60 (1990).

damages, hence the term “punitive.”⁶ Careful scrutiny of the arguments in favor of a retributive role reveals that in fact their underlying concern is really the deterrence value of punitive awards, but the author has not recognized it as such. Punitive damages, in Luban’s view, will “send a message.”⁷ But we should only be concerned about doing so if such messages will foster safer behavior. Luban seems more concerned with such deterrence effects, which he calls “forward-looking,” than with retribution, which he labels “backward-looking.”⁸

From an economic standpoint, whether legal philosophers are looking backward, forward, or not looking at all, is inconsequential. If punitive damages are levied in a manner that is not random and capricious, economic actors will look forward and anticipate these costs, producing a deterrent effect. A major theme of my article is that when firms look forward, the prospect of punitive damages is so uncertain that there is no deterrent effect. Moreover, there is no need to augment the safety incentives provided by the market, government regulation, and compensatory damages.

Courts essentially are trying to send a message that will change behavior so that the defendant does not injure again. Any such message-sending and concern with safety behavior is what economists mean by deterrence. Once concern about incentives enters any discussion of retribution, such concerns should be recognized really as notions of deterrence.

Is there nevertheless a benefit from punishing wrongdoers apart from the deterrence rationale? Corporate entities are not children or criminals who need to be punished. They are institutions. Punitive damages inflict harm on current shareholders, customers, and employees. None of these individuals may have even been involved in the original safety decision. For long-term risks, such as asbestos, the economic players today are quite different from those who made the risk decisions decades ago at the time of exposure. Even for contemporaneous risks, it is not easy to locate the responsible employee for a large institution’s actions.⁹ Even if the responsible employee is identified, that individual will not suffer the full effects of the punitive damages award. The employee can simply quit his job, thus limiting the institution’s ability to sanction him. The result is that innocent people who are not responsible for the risk decision nonetheless will suffer the economic sanction.

Misdirected penalties do not promote justice or penalize wrongdoers. Ultimately, any legitimate defense of punitive damages requires that they have some constructive role in making our lives safer. Such an objective is called deterrence.

6. See Luban, *supra* note 3, at 359.

7. *Id.* at 378.

8. *Id.*

9. See A. Mitchell Polinsky & Steven Shavell, *Punitive Damages: An Economic Analysis*, 111 HARV. L. REV. 869, 950-51 (1998).

III. ARE THERE OTHER RATIONALES FOR PUNITIVE DAMAGES?

Punitive damages also affect the character of the litigation process. Professor Luban believes it is desirable that punitive damages reduce “hardball bargaining by defendants” and offer a bounty to plaintiffs’ lawyers.¹⁰ The desirability of these effects is doubtful, and punitive damages are not well suited to these tasks.

Luban’s hypothesized recalcitrant bargaining by defendants suggests an assumed inequity in which the defendants have the bargaining leverage. However, the major wave of tort liability reforms in the 1980s was in large part an effort to restrain the rising power of plaintiffs in the wake of the massive rise in tort liability.¹¹ Depicting plaintiffs as without economic influence is inconsistent with the tripling in liability costs in the mid-1980s.¹²

Increasing punitive damages to foster out-of-court settlements will promote such settlements insofar as punitive damages raise the expected loss to the firm more than the expected benefit of litigation to the plaintiff, due to both plaintiff risk aversion and the pattern-setting implications of a punitive award. Inflicting massive but uncertain economic harms on defendants to promote settlements is no more justifiable than inflicting similar random harms on plaintiffs, which would also promote settlements. The litigation process and out-of-court bargaining has a legitimate role to play in our legal system. Luban would short-circuit these efforts by penalizing one party indiscriminately simply to bring them to their knees in the settlement process.

Punitive damages also may serve as a reward for plaintiffs’ lawyers, benefiting Luban’s “bounty hunter.”¹³ Luban apparently believes there is not enough litigation in our society and that punitive damages bounties are needed to induce more lawsuits. However, even if one wanted to increase litigation, punitive damages are not well suited to the task. These bounties are restricted only to cases in which punitive damages are awarded. Punitive damages cases also tend to have large compensatory damages awards¹⁴ so that the additional financial incentive is not needed. It is the small stakes cases that most lack the incentive for litigation. Legal reforms such as additional payments for legal fees could address such a problem, if in fact it is believed to be important. Punitive damages simply give an added windfall to lawyers in cases in which the rewards already tend to be great.

IV. ARE PUNITIVE DAMAGES PREDICTABLE?

If punitive damages are to deter, and thus promote safety, potential injurers must be able to anticipate that they will incur additional expected liability costs

10. See Luban, *supra* note 3, at 366-67.

11. See VISCUSI, *REFORMING PRODUCTS LIABILITY*, *supra* note 4, at 6-11.

12. See *id.* at 26-28.

13. See Luban, *supra* note 3, at 366-67.

14. See Eisenberg et al., *supra* note 2, at 648 tbl.5.

if they adopt riskier safety or environmental policies. If punitive damages are random and simply a wild card encountered by unlucky defendants, then there will be no deterrent effect. Luban and Eisenberg both cite statistical evidence reported in a study by Eisenberg et al.¹⁵ as indicating that punitive damages are predictable. For predictability to matter, a corporation or other potential injurer must be able to anticipate the expected penalty at the time of the risky decision.

Does the evidence in the study by Eisenberg et al. show that punitive damages are predictable in the contexts that were the focus of my paper? Their sample consisted of just under 3000 trials from 75 counties. However, about one-third of the cases were routine automobile tort cases, and only approximately 17% were in the volatile areas of products liability, medical malpractice, and toxic substance liability that were of concern in my paper.¹⁶ Various summary statistics from the Eisenberg et al. paper, such as punitive damage frequency or level, consequently do not directly pertain to the case mix in my study.

The first predictability issue is whether punitive damages will be awarded. Punitive damages awards seem to vary wildly in their sample, with the percentage of plaintiffs' victories with punitive damages awards ranging from 0% to 27% by county.¹⁷ Whether jurisdictions are randomly variable or whether the variability continues across jurisdictions is unclear. The Eisenberg et al. statistical model explains only 12% of the variation in the probability of a punitive damages award.¹⁸ Even that estimate overstates how much liability corporations can anticipate, because one of the explanatory variables was the value of the compensatory award, which is not known *ex ante*. The most influential variables were indicators of broad case categories, such as intentional tort or contract fraud. Knowing the broad category of case, however, still leaves the lion's share of the variation unexplained, and more importantly does not tell a firm which of its risk decisions within a case category, such as products liability, will lead to punitive damages. This distinction is critical. Indeed, there are no variables in the Eisenberg et al. model that permit firms to estimate different probabilities of a punitive damages award for different risk decisions. There will be no deterrent effect unless firms can predict such differences.

The second issue considered by Eisenberg et al. is the level of punitive damages. Professor Luban seems impressed with the precision of the Eisenberg et al. analysis of punitive damages award levels. According to Luban: "The punitive award equals the compensatory award to the .782 power and multiplied by 8.117. You cannot get much better predictability than that."¹⁹ Such statements are statistically meaningless. This relationship gives us an illusory sense

15. *See id.* at 632-35.

16. *See id.* at 634.

17. *See id.* at 642-43.

18. *See id.* at 644-45. The pseudo-r-squared for the clustered model, which is the preferred statistical model with multiple trials from the same county, was 0.124.

19. *See* Luban, *supra* note 3, at 361.

of mathematical precision. Obtaining such a statistical estimate tells us nothing whatsoever about the predictability of the relationship or the variation of the actual award around the predicted amount.

A close look at their analysis of award levels reveals that it offers virtually no predictive guidance to firms. The Eisenberg et al. analysis of damages award levels is *conditional on a nonzero punitive damages award*. Whether there will be a punitive damages award is itself largely unknowable to the firm making a safety decision. If firms are bad at making such predictions, their analysis of the level of the award will also be flawed. Moreover, the actual ability to predict the amount of punitive awards even conditional on there being an award is much less than the explanatory power of the regression explaining 46-47% of the variation would suggest.²⁰ The focus of the analysis is on the logarithm of punitive damages, which is the dependent variable to be explained. Taking logs of award amounts compresses the extent of the variation in what is of actual concern to defendants, which is the level of punitive damages, not its log. A punitive damages award of \$1,000,000 is 1000 times worse than an award of \$1000—but in logs, getting hit with the million dollar award looks only twice as bad (that is, a log value of six versus three). Their log transformation consequently shrinks much of the extreme variation in the size of punitive damages awards.

Given this mathematical transformation, what variables do Eisenberg et al. then give us to “predict” punitive damages, conditional on a punitive award? The two most influential variables are the value of compensatory damages and whether the compensatory award is zero. Neither of these trial outcome values are known to the corporation at the time of the risky decision, so one needs a model to predict these levels as well before their values can be used to predict punitive awards. Although Eisenberg et al. present no such model, any such estimates undoubtedly would involve substantial error.

What then is left in the predictive equation for the punitive damages level? The only variables that are statistically significant are whether the suit is (1) individual versus business, (2) involves toxic substances, or (3) is some “other tort.”²¹ Once again, however, within a class of decisions, such as those affecting environmental risks, there is no variable that can assist the firm in distinguishing which decisions will lead to large punitive damages awards and which will not. Thus there will be no deterrent effect.

My pessimistic conclusion regarding the value of the Eisenberg et al. analysis is not unique. As Professor A. Mitchell Polinsky observed: “The point I want to make here is that, notwithstanding their claims, *their results are consistent with the possibility that in each jurisdiction and case category jury decisions to award punitive damages are random.*”²² Indeed, the title of the Eisenberg et al.

20. See Eisenberg et al., *supra* note 2, at 648.

21. See *id.*

22. See A. Mitchell Polinsky, *Are Punitive Damages Really Insignificant, Predictable, and Rational? A Comment on Eisenberg et al.*, 26 J. LEGAL STUD. 663, 672 (1997) (emphasis added).

article—*The Predictability of Punitive Damages*—is a misnomer. Their article gives corporate decision makers no basis for predicting the punitive awards arising from different safety choices.

V. DO COGNITIVE BIASES IMPEDE THE RATIONALITY OF COURT DECISIONS?

A principal theme of my article is that cognitive biases in thinking about risk will impede the jury's ability to make rational judgments. Indeed, because these biases often lead to exaggerated responses to risk, the result will be a bias against corporate defendants and an excessive tendency to award punitive damages. In discussing diverse evidence from the literature, I generalized based on a large body of research for a wide variety of risk situations, many of which involved experimental results. This approach is consistent with usual scientific methods in this field of study.

Professor Luban fears, without any substantive basis, that such extrapolations are "larded with uncertainty and heavily context-sensitive."²³ But the opposite is the case, as I am unaware of any evidence that has ever indicated that the risk perception or decision biases I cited are limited to specific experimental contexts.²⁴

Indeed, my studies specifically suggest that judicial actors may be quite vulnerable to these same kinds of influences. Let us consider three principal biases. First, do judicial actors have an exaggerated response to small risks? In a survey of almost one hundred judges, I found that judges overestimated small risks and underestimated large risks, thus exhibiting the same pattern as the population at large.²⁵ Second, is there an exaggerated response to ambiguous risks, such as those posed by new products? The judges in my sample preferred old products with known risks to safer new products for which the risk levels were less well established.²⁶ Third, when the stakes tended to become extremely large, judges failed in their ability to correctly apply legal rules, as they tended to award punitive damages even in cases where the firm passed traditional economics negligence tests.²⁷ Judges had great difficulty with low probability-high loss events, as do people more generally.

Judges did, however, perform better than jurors with respect to hindsight bias, where Reid Hastie and I found that jurors were much more prone to be victims of hindsight bias.²⁸ Judicial review, such as that which has led to the frequent

23. See Luban, *supra* note 3, at 370.

24. For a broad review of the range of such biases, see generally W. KIP VISCUSI, *RATIONAL RISK POLICY* (1998).

25. See W. Kip Viscusi, *How Do Judges Think About Risk?* 4-9 (Apr. 28, 1998) (unpublished manuscript, on file with author).

26. See *id.* at 23-24.

27. See *id.* at 12-16.

28. See Reid Hastie & W. Kip Viscusi, *What Juries Can't Do Well: The Jury as a Risk Manager*, 40 ARIZ. L. REV. (forthcoming Fall 1998).

overturning or reduction of punitive awards, can restrain some of these jury excesses.

A basic difficulty is that juries cannot think sensibly about punitive damages awards when attempting to set the level of such penalties. The mock jury analysis by Kahneman, Sunstein, and Schkade found that juries had a reasonable sense of the gravity of an offense but were unable to link it to a dollar punitive award in a sensible manner.²⁹

Professor Luban seeks refuge in the hope that group decisions by juries will be better than individual decisions,³⁰ and he hypothesizes that there is an antiplaintiff bias that may be offsetting.³¹ The jury study by Hastie, Schkade, and Payne³² demonstrates, however, that each of these conjectures is false. Their study found that individual juror liability judgments are antidefendant initially and that in three of four cases group deliberation shifted the verdicts further in the antidefendant direction.³³ Indeed, even Professor Luban concedes that juries may not always make unbiased liability judgments: "Of course I do not mean that jurors invariably respect this doctrinal point. Irresponsible juries may elect to pick the deep pockets of a blameless corporation—which I take to be one of Viscusi's main worries."³⁴ The attractiveness to juries of raiding deep corporate pockets is one of the most fundamental truths in the tort area.

Professor Luban also expresses concern with cognitive biases of corporate decision makers. Whereas the biases I cite tended to produce excessive safety, he suggests two other biases that could cut the other way. People may look at risk with a "rose-colored lens," underestimating its magnitude.³⁵ Even if such an effect exists—though I have never seen such an effect documented for health, safety, or environmental risks in any context—it would have to exceed the effect of total overreactions to risk in order to lead to excessive risk levels.

Luban also hypothesizes that risk managers could be subject to "precommitment bias,"³⁶ whereby decisionmakers become locked into decisions that they otherwise would like to reverse as more information is learned. However, Luban never demonstrates that people will be systematically precommitted to

29. See Daniel Kahneman et al., *Shared Outrage and Erratic Awards: The Psychology of Punitive Damages*, 16 J. RISK & UNCERTAINTY 49 (1998); Cass Sunstein et al., *Assessing Punitive Damages (with Notes on Cognition and the Valuation in Law)*, 107 YALE L.J. 2071, 2100 (1998).

30. See Luban, *supra* note 3, at 370.

31. See *id.*

32. See Reid Hastie et al., *A Study of Juror and Jury Judgments in Civil Cases: Deciding Liability for Punitive Damages*, 22 L. & HUM. BEHAV. 287 (1998).

33. The Hans and Lofquist study cited by Luban, *supra* note 3, at 370 n.54, does not say that jurors' primary bias is antiplaintiff, only that "jurors focused most on the plaintiffs"—whatever that means. Because such studies were interview studies of individual jurors after they were members of a jury, rather than experimental studies that manipulated the group aspect of the decision, their relevance to Luban's claims is unclear. See Valerie P. Hans & William S. Lofquist, *Jurors' Judgments of Business Liability in Tort Cases: Implications for the Litigation Explosion Debate*, 26 L. & SOC'Y REV. 85, 94 (1992).

34. Luban, *supra* note 3, at 368 n.34.

35. *Id.* at 371.

36. *Id.*

excessively risky choices. In addition, punitive damages are not well suited to disciplining rogue managers who make bad decisions.³⁷

Luban's concerns along these lines are intended to show that corporations may make bad safety decisions. This observation misses the main thrust of my argument. I never claimed that corporations could never make mistakes in choosing the level of the risk. Mistakes are made. There will be some situations in which firms will choose a risk level that is above the socially optimal level. However, the most effective way to discipline such erroneous decisions is through market forces, government regulation, and compensatory damages—not punitive damages.

VI. WILL OTHER SOCIAL INSTITUTIONS PROVIDE ADEQUATE INCENTIVES?

In the absence of punitive damages, enterprises making unsafe choices risk (1) lower profits due to consumer, worker, and public reactions, (2) regulatory sanctions, if safety standards are violated, and (3) compensatory damages awards. Professor Luban's primary doubts relate to the efficacy of regulatory sanctions and whether there is a pro-corporate bias.³⁸ The opposite bias is in fact the case. For a broad range of regulatory activities, the level of the health and safety mandated by government regulations is too safe, as compared to the economically efficient level.³⁹ Politics may intrude, as may cognitive biases, but studies of these effects suggests that they lead to excessive regulatory stringency.⁴⁰ Indeed, the result for the highly politically sensitive toxic waste cleanup effort is that firms spend billions of dollars per expected cancer case prevented by these efforts.⁴¹

Nevertheless, Professor Luban worries about problems of underenforcement, such as OSHA's limited inspection resources, which I have documented as well.⁴² OSHA is not, however, the only institutional player. Each expected job fatality costs the firm \$3-\$7 million in higher wages per year in terms of compensating differentials for risk, and each additional lost workday injury has a wage cost of \$50,000 per injury.⁴³ Workers' compensation also creates powerful incentives for safety, so that the total financial incentives from both the market and workers' compensation is on the order of \$100 billion annually for job safety alone. One need not rely solely on government regulation to foster job safety.

37. See Polinsky & Shavell, *supra* note 9, at 950-52.

38. See Luban, *supra* note 3, at 376.

39. See VISCUSI, REFORMING PRODUCTS LIABILITY, *supra* note 4, at 119-21.

40. See W. Kip Viscusi & James T. Hamilton, *Are Risk Regulators Rational? Evidence from Hazardous Waste Cleanups*, AM. ECON. REV. (forthcoming 1999).

41. See *id.*

42. See W. KIP VISCUSI, RISK BY CHOICE: REGULATING HEALTH AND SAFETY IN THE WORKPLACE 16-19 (1983).

43. See W. KIP VISCUSI, FATAL TRADEOFFS: PUBLIC AND PRIVATE RESPONSIBILITIES FOR RISK 65 (1992).

Professor Eisenberg's concerns are the opposite of those of Professor Luban. He believes that regulatory efforts may be so powerful that they swamp the effect of punitive damages. After providing an extremely detailed review of the sanctions imposed by environmental statutes, he concludes: "The system of federal environmental laws does not leave much room for added deterrence in the areas so central to Viscusi's study."⁴⁴ Exactly. There is no additional constructive role for punitive damages with respect to environmental torts because government regulations are so comprehensive and stringent. Let us now move on to products liability and medical malpractice. I also believe that the role of other social institutions is so dominant that punitive damages are not needed in these domains either. In cases of products liability and medical malpractice, there is no evidence of a deterrent effect, because in Professor Eisenberg's view "the problem is instead that punitive damages have not been shown to play a major role in either area."⁴⁵ Manufacturers of breast implants, asbestos, and the Ford Pinto no doubt might suggest that punitive damages can, in fact, be consequential. However, even if Eisenberg is right that punitive damages really are too infrequent to have a deterrent role for such cases, they will not be missed. The world will not be a less safe place if we eliminate punitive damages. However, enterprises will be spared the risk of the low probability/high stakes penalty that is inflicted with such randomness that it fails to have any desirable incentive effects.

VII. ARE THERE OUTSTANDING STATISTICAL CONCERNS?

Professor Eisenberg raises several technical issues that should be addressed as well.⁴⁶ He asks if the sample size of fifty states is large enough to be conclusive.⁴⁷ More and better data are always desirable, but there is more information in these observations than Eisenberg suggests. In the case of toxic chemical spills, for example, I do not use information on whether one representative firm from each state had a toxic chemical spill on a given day. That would be fifty observations. Rather, I have information on toxic chemical spills of all firms in the state across several years, which are averaged to form the risk variable. The empirical analysis has two potential sources of error. The first source of error is the state-specific random error. This error is reduced by having multiple observation across firms and time. Indeed, in every case my analysis included comprehensive information from across the entire state, and the toxic release data included multi-year data as well. The second source of error arises from the particular cross section of states, where the extent to which I can reduce this error is in fact limited by my fifty state observations.

44. Theodore Eisenberg, *Measuring the Deterrent Effect of Punitive Damages*, 87 GEO. L.J. 347 (1998).

45. *Id.* at 350.

46. Some issues he raises do not have merit, such as his suggestion that I use either negative binomial or Poisson regressions. *See id.* at 350 n.21. These methods are preferable only when the number of event counts in a state is low. Mine is large.

47. Eisenberg discusses the power of the test issue at length. *See id.* at 349.

Professor Eisenberg also expresses concern that other variables, such as those reflecting subtleties in the state's liability regime, should be included in the analysis.⁴⁸ Such omitted variables create potential biases only if they are correlated in significant ways with the punitive damages measures. If, for example, all states with punitive damages had damages caps, these measures would limit the extent of the average influence of punitive damages in these states, but it would not alter the direction of the effects. States with punitive damages still should be safer if they have a deterrent effect—just not quite as safe as would be the case if there were no caps. Moreover, my estimates reflect the difference between the accident rates in the nonpunitive states and the average accident rates in states with punitive damages. I am not estimating what the effect would be if there were no punitive damages caps in the punitive damages states, but this is not the world in which we live.

It is noteworthy that my statistical analysis not only included a punitive damages regime measure but also a detailed set of variables pertaining to the insurance status of punitive damages. In contrast, the punitive damages study by Eisenberg et al. did not include any punitive damages variables or legal regime variables, though some of their analyses did include local indicator variables.⁴⁹

Professor Eisenberg also hypothesizes that the mix of states that I designate as no-punitive-damages states may matter. He suggests that recognizing exemplary damages may be consequential, and notes that the fact that Louisiana does not permit punitive damages for products liability and medical malpractice might alter my results.⁵⁰ My classification of the punitive versus nonpunitive states followed published guidelines, but the distinctions are admittedly complex as states do differ in the character of their punitive damages regimes.⁵¹ Four states do not permit punitive damages, but of the remainder that do, the conduct required to support punitive damages varies. For example, two states (Louisiana and Massachusetts) have punitive damages requirements that vary with statutory authorization of punitive damages awards, fourteen states require proof of malice, and eight states require proof of gross negligence. My empirical estimates in effect calculate the average effect of the punitive damages across the mix of punitive damages requirements currently in place.

Eisenberg's Louisiana hypothesis is easy to test and is not borne out by the data. Tables 1 and 2 add Louisiana to the group of nonpunitive damages states for the analyses of the lines that might be affected by the absence of punitive damages for medical malpractice and products liability. The results parallel the earlier findings excluding Louisiana and do not indicate any deterrent effect. The five states that do not recognize punitive damages for medical malpractice

48. *See id.* at 353.

49. *See Eisenberg et al., supra* note 2, at 644-45, 648.

50. *See Eisenberg, supra* note 44, at 349.

51. *See RICHARD BLATT ET AL., PUNITIVE DAMAGES: A STATE BY STATE GUIDE TO LAW AND PRACTICE* tbl.8-1 (1991). More recently, New Hampshire permitted punitive damages under narrowly defined statutory circumstances. *See id.* at 111 (Supp. 1993).

are no riskier than the forty-five states that do. The only significant influences are the mixed effects of higher risk levels in states with insurable punitive damages and lower risk levels in states with uncertain insurance status for punitive damages. The insurance results in Table 2 reveal no significant differences due to punitive damages on total insurance, medical malpractice insurance, products liability insurance, or other insurance. The empirical results for punitive damages are quite robust.

Table 1

Accidental Death Rates in States with and without Punitive Damages

MEDICAL MISADVENTURE DEATHS				
	Deaths	Population (1,000s)	Deaths/Population (100,000s)	t-statistic
States without punitive damages:				
Louisiana	50	4,338	1.153	
Michigan	82	9,537	0.860	
Nebraska	20	1,639	1.220	
New Hampshire	14	1,148	1.220	
Washington	42	5,448	0.771	
Five state totals	208	22,111	0.941	
States with punitive damages:				
Other 45 states and DC	2,409	240,778	1.000	0.33
States with insurable punitives	892	71,043	1.256	1.78*
States with uninsurable punitives	1,367	144,949	0.943	0.01
States with uncertain insurance rules regarding punitives	213	30,273	0.704	2.53**
TOTAL DEATHS				
States without punitive damages:				
Louisiana	1,829	4,338	42.162	
Michigan	2,906	9,538	30.468	
Nebraska	591	1,639	36.059	
New Hampshire	288	1,148	25.087	
Washington	1,722	5,448	31.608	
Five state totals	7,336	22,111	33.178	
States with punitive damages:				
Other 45 states and DC	84,102	240,778	34.929	0.51
States with insurable punitives	29,857	71,043	42.027	2.46**
States with uninsurable punitives	46,813	144,949	32.296	0.35
States with uncertain insurance rules regarding punitives	9,548	30,273	31.540	0.66

Note: The t-statistic tests the weighted mean death rate for the five states which do not award punitive damages against the weighted mean for the states in the category described.

Source: National Safety Council, Accident Facts, 1997 edition.

What then are we to make of Professor Eisenberg's statistical quibbles? Eisenberg has sought refuge in complexity. We could always use more data and more refined variables. However, the simple fact is that there is no evidence that

Table 2

**Insurance Performance Differences between States with and
without Punitive Damages**

TOTAL INSURANCE	Premiums (\$1,000)	Population (1,000)	Premiums/Population	t-statistic
States without punitive damages:				
Louisiana	\$4,520,578	4,338	\$1.042	
Michigan	\$9,870,463	9,538	\$1.035	
Nebraska	\$1,738,960	1,639	\$1.061	
New Hampshire	\$1,198,307	1,148	\$1.044	
Washington	\$4,745,126	5,447	\$871	
Five state totals	\$22,073,434	22,111	\$998	
States with punitive damages:				
Other 45 states and DC	\$241,086,656	240,778	\$1,001	0.03
States with insurable punitives	\$65,288,517	71,043	\$919	1.32
States with uninsurable punitives	\$150,312,113	144,949	\$1,037	0.53
States with uncertain insurance rul	\$31,150,917	30,273	\$1,029	0.37
MEDICAL MALPRACTICE				
States without punitive damages:				
Louisiana	\$70,675	4,338	\$16	
Michigan	\$193,836	9,538	\$20	
Nebraska	\$21,783	1,639	\$13	
New Hampshire	\$20,696	1,148	\$18	
Washington	\$97,863	5,447	\$18	
Five state totals	\$404,853	22,111	\$18	
States with punitive damages:				
Other 45 states and DC	\$5,567,016	240,778	\$23	1.00
States with insurable punitives	\$1,420,860	71,043	\$20	0.39
States with uninsurable punitives	\$3,768,674	144,949	\$26	1.29
States with uncertain insurance rul	\$575,187	30,273	\$19	0.35
PRODUCT LIABILITY				
States without punitive damages:				
Louisiana	\$26,442	4,338	\$6.10	
Michigan	\$74,587	9,538	\$7.82	
Nebraska	\$14,351	1,639	\$8.76	
New Hampshire	\$8,336	1,148	\$7.26	
Washington	\$38,312	5,447	\$7.03	
Five state totals	\$162,028	22,111	\$7.33	
States with punitive damages:				
Other 45 states and DC	\$1,998,224	240,778	\$8.30	0.93
States with insurable punitives	\$481,672	71,043	\$6.78	0.69
States with uninsurable punitives	\$1,295,844	144,949	\$8.94	1.51
States with uncertain insurance rules regarding punitives	\$255,807	30,273	\$8.45	1.13

the no-punitive-damages states perform worse than the punitive damages states. Indeed, Eisenberg does not even attempt to offer such evidence. My result was not restricted to one risk measure; on the contrary, I analyzed a wide range of very comprehensive tables of risks that should be affected by punitive damages, if in fact they have a deterrence role. Ultimately, Professor Eisenberg blames the

Table 2 Continued

OTHER LIABILITY

States without punitive damages:

Louisiana	\$370,069	4,338	\$85
Michigan	\$760,467	9,538	\$80
Nebraska	\$141,883	1,639	\$87
New Hampshire	\$88,891	1,148	\$77
Washington	\$369,689	5,447	\$68
Five state totals	\$1,730,999	22,111	\$78

States with punitive damages:

Other 45 states and DC	\$20,219,759	240,778	\$84	0.63
States with insurable punitives	\$4,759,881	71,043	\$67	1.06
States with uninsurable punitives	\$13,335,308	144,949	\$92	1.23
States with uncertain insurance rules regarding punitives	\$2,603,478	30,273	\$86	0.82

Note: The t-statistic tests the weighted means for the five states which do not award punitive damages against the weighted mean for the states in the category described.

Source: The Fact Book 1997: Property/Casualty Insurance Facts

absence of any punitive damages effects not on statistical niceties, but on the relatively powerful role of regulatory policy (for environmental risks) and the relatively small role of punitive damages (for products liability and medical malpractice). Abolishing punitive damages will not sacrifice deterrence.

VIII. WHERE DO WE STAND?

Punitive damages inflict substantial random penalties on firms but offer no constructive deterrence benefits to justify their costs. My article provides a comprehensive assessment of risk measures, none of which indicates that states without punitive damages fared worse. No deterrence effects could be detected. Neither Professor Luban nor Professor Eisenberg provides any empirical evidence whatsoever that supports the deterrence hypothesis. Indeed, Professor Eisenberg correctly observes that, compared to regulatory and other incentives, punitive damages should not be expected to have much of a deterrent effect.

The closest either author came to finding a deterrence link was in their discussion of the predictability of punitive damages based on the earlier Eisenberg et al. study. However, that article in fact provides strong support for the randomness hypothesis. To the extent that other variables explain a small amount of the variation in punitive damages awards, they capture information that is not available at the time of the safety decision (for example, the size of the compensatory damages award), or involve broad case class measures that provide no basis whatsoever for enabling a firm to determine which choices within a case class are likely to lead to a punitive damages sanction.

Because punitive damages impose costs with no tangible benefits, any defense ultimately must rest on the intangible. Professor Luban cites the role of retribution, but this function is not appropriate for penalizing institutions and will impose costs primarily on innocent consumers, shareholders, and employ-

ees. Ultimately, retribution makes sense only if it will make our lives safer, which is to say that there must be some deterrence effect. Even retribution advocates hope that such penalties will “send a message,” but if sending this message does not foster safer decisions, what constructive function is achieved? All that is left is vengeance, and that is not a constructive function for our legal system.⁵² Abolishing punitive damages for environmental and safety torts would impose no tangible losses. Whatever intangible effects exist must surely be outweighed by the increased confidence we would have in a legal system that no longer imposed punitive damages in a random and capricious manner.

52. In the first edition of *Law and Literature: A Misunderstood Relation*, Judge Richard A. Posner observes: “Vengeance, however, is an extremely clumsy method of maintaining order (hence its frequent, but exaggerated association with radical disorder and unending strife). . . .” RICHARD A. POSNER, *LAW AND LITERATURE: A MISUNDERSTOOD RELATION* 29 (1st ed. 1988). In the second edition of the book, Posner reiterates this theme:

The threat of retribution is not an adequate deterrent in situations where an aggressor is unlikely to be punished every time, so that punishment does not equal crime when all his punishments and all his crimes are summed. And a commitment to limited retaliation, or to accepting money or goods in settlement of any wrong, is hard to stick by in the highly emotional circumstances in which revenge is provoked and administered. So vengeance falls out of favor, not only in ethics but in law. . .

RICHARD A. POSNER, *LAW AND LITERATURE: REVISED AND ENLARGED EDITION* 57 (2d ed. 1998).