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PUTTING A PRICE ON PAIN-AND-SUFFERING DAMAGES: A CRITIQUE OF THE CURRENT APPROACHES AND A PRELIMINARY PROPOSAL FOR CHANGE

Ronen Avraham*

I. INTRODUCTION

Seventeen volumes and seventeen years ago, the editors of the *Northwestern University Law Review* made a wise decision. They accepted for publication an article—*Valuing Life and Limb in Tort: Scheduling Pain-and-Suffering*—which has become one of the most important pieces concerning pain-and-suffering damages in the legal literature.¹ Like many great works, this paper was a joint effort of multiple scholars: Randall Bovbjerg, from the Urban Institute in Washington, D.C.; Frank Sloan, an economics professor at Vanderbilt University; and James Blumstein, a law professor, also at Vanderbilt. In their paper, Bovbjerg, Sloan, and Blumstein (hereinafter “BSB”) took upon themselves a daunting task: analyzing various ways to put a price on the unpriceable, a person’s pain and suffering.

Nothing much has changed since BSB’s seminal paper. Pain-and-suffering awards seem to continue to make up approximately fifty percent of total awards, at least in some areas of personal injury cases.² Juries, judges, lawyers, lawmakers, and academics still struggle with the same dilemma BSB tackled: what is the best way to adequately compensate tort victims for the noneconomic harms they incur? In many ways, BSB’s paper is as relevant today as it was seventeen volumes ago.

* Assistant Professor of Law, Northwestern University School of Law. I thank Tom Baker, Shari Seidman Diamond, and Mark Geistfeld for their comments and Issa Kohler-Hausmann for great research assistance. I also thank Eric Olshan and Kate Shaw of the *Northwestern University Law Review* for great editorial work.

¹ Randall R. Bovbjerg, Frank A. Sloan & James F. Blumstein, *Valuing Life and Limb in Tort: Scheduling “Pain and Suffering,”* 83 NW. U. L. REV. 908 (1989) [hereinafter BSB, *Valuing Life and Limb*]. As of May 2005 this piece had been cited in 147 law reviews, 15 other journals (from *Health Affairs* to *Gerontologist*), and 4 legal news articles, as well as in 5 cases.

² See Neil Vidmar et al., *Jury Awards for Medical Malpractice and Post-Verdict Adjustments of Those Awards*, 48 DEPAUL L. REV. 265, 296 (1998); W. Kip Viscusi, *Pain and Suffering in Product Liability Cases: Systematic Compensation or Capricious Awards?*, 8 INT’L REV. L. & ECON. 203 (1988) [hereinafter Viscusi, *Systematic Compensation*].

In what follows I attempt to explain some of BSB's suggestions for pricing pain and suffering. I will also explore a number of other proposals that have since been introduced. The theoretical approach I adopt in this Essay to the pricing of pain and suffering is the approach BSB adopted in their paper, which is to analyze it from a law and economics standpoint, which also incorporates a limited notion of global fairness.³

From a law and economics perspective, the threshold question of the appropriateness or desirability of pain-and-suffering damages is not yet settled. A rule of thumb for conceptualizing the problem within the framework of law and economics is to ask whether awarding pain-and-suffering damages contributes to the two objectives of tort law: adequate incentives for potential tortfeasors to exercise due care (the "deterrence" rationale); and the efficient spreading of victims' losses to a larger pool (the "insurance" rationale). Scholars who support pain-and-suffering damages argue that, from an optimal deterrence perspective, defendants should bear the full social cost of their conduct, which includes pain-and-suffering costs.⁴ According to this view, pain-and-suffering damages actually compensate for a concrete loss: disfigurement, emotional trauma, extended physical discomfort, and loss of normal life-enhancing capacities. These are all very real things, not any less real than loss of potential future income. This view rejects the idea that pain and suffering is simply not a serious component of a plaintiff's loss.⁵

Yet a number of scholars persistently object to pain-and-suffering damages altogether. They either think that pain-and-suffering awards are not required for optimal deterrence,⁶ or that there is no room for subjective valuations in tort law,⁷ or both.⁸

³ This basic notion of fairness can be parsimoniously summarized as like cases should be treated alike, which may in fact be a primitive formulation of an egalitarian approach to tort law. See Ronen Avraham & Issa Kohler-Hausmann, *Accident Law for Egalitarians* (Sept. 6, 2005) (unpublished manuscript, on file with the author).

⁴ WILLIAM LANDES & RICHARD POSNER, *THE ECONOMIC STRUCTURE OF TORT LAW* 186 (1987); STEVEN SHAVELL, *ECONOMIC ANALYSIS OF ACCIDENT LAW* 133-34 (1987); Samuel A. Rea, Jr., *Non-pecuniary Loss and Breach of Contract*, 11 J. LEGAL STUD. 35, 43-44 (1982).

⁵ Cf. PROSSER AND KEETON ON TORTS 55-56 (W. Page Keeton ed., 5th ed. 1984) ("[M]edical science has recognized long since that not only fright and shock, but also grief, anxiety, rage and shame, are in themselves 'physical' injuries, in the sense that they produce well marked changes in the body, and symptoms that are readily visible to the professional eye.").

⁶ Paul Rubin argues that since there are other forces for deterrence in the economy, such as direct regulation and reputational effects, tort law must not carry the entire deterrence burden alone. Accordingly, deterrence is not diluted even if pain-and-suffering awards are not awarded. PAUL H. RUBIN, *TORT REFORM BY CONTRACT* 82-84 (1993). Rubin's analysis seems to neglect the fact that most injuries are not being legally pursued. So, if at all, there seems to be an underdeterrence problem. In any case, even if Rubin is correct about the deterrence effects of regulation and reputation, this is an argument for reducing damages in general and not necessarily to eliminate pain-and-suffering damages. In fact, as I explain below, it may make more sense to eliminate loss of income.

⁷ Keith Hylton observed that, since nonintentional injuries are high transaction cost environments, tort remedies should follow Calabresi and Melamed's liability rule paradigm. Keith Hylton, *Property*

From the perspective of the other goal of an optimal tort regime—the insurance rationale—the desirability of pain-and-suffering damages is more questionable. In other words, it is not clear whether a rational and informed individual would have purchased pain-and-suffering coverage in a free market if such insurance coverage existed. Scholars who support pain-and-suffering damages on the insurance rationale justify their beliefs with indirect evidence that sovereign consumers would demand and pay for some level of coverage for pain-and-suffering losses in a hypothetical (first-party) insurance contract.⁹ Other scholars provide indirect evidence that sovereign consumers would prefer not to pay for any coverage at all.¹⁰ In a recent paper, I offered direct experimental evidence that pain-and-suffering damages may be warranted even under the optimal insurance rationale.¹¹ What was left unanswered in that work was the optimal magnitude of such coverage.

Thus, if we take the position that efficient tort law does indeed require pain-and-suffering damages to be awarded, the fundamental unresolved issue is how to price such damages. Despite BSB's masterful treatment, the question remains unresolved, and this Essay takes a first step in that direction.

Rules and Liability Rules, Once Again (Boston Univ. Sch. of Law, Working Paper No. 05-17, 2005). Under the Calabresi-Melamed framework, subjective valuations are protected only under property rules. Guido Calabresi & A. Douglas Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089 (1972). And given the arbitrariness of pain-and-suffering awards, the presumption should be that they are not part of the damage judgment in high transaction cost settings. While Hylton's observation about the liability rule characteristics of accidental injuries is interesting, Hylton's conclusion seems logically unnecessary. Hylton presumably would not have objected to pain-and-suffering damages if there were an objective way to measure the loss. In this Essay I try to do exactly that. So if I succeed here, presumably even Hylton should support awarding pain-and-suffering damages.

⁸ See JEFFREY O'CONNELL, *ENDING INSULT TO INJURY: NO-FAULT INSURANCE FOR PRODUCTS AND SERVICES* (1975). Recently, Joseph King raised objections to awarding pain-and-suffering damages assuming that rehabilitation costs are fully awarded. Joseph A. King, Jr., *Pain and Suffering, Noneconomic Damages, and the Goals of Tort Law*, 57 SMU L. REV. 163 (2004).

⁹ See Steven P. Croley & Jon D. Hanson, *The Nonpecuniary Costs of Accidents: Pain-and-Suffering Damages in Tort Law*, 108 HARV. L. REV. 1785 (1995) (providing indirect evidence to support their conclusion that consumers are likely to demand some level of pain-and-suffering insurance, and therefore tort law should provide some level of pain-and-suffering damages); Patricia M. Danzon, *Tort Reform and the Role of Government in Private Insurance Markets*, 13 J. LEGAL STUD. 517, 533 (1984) (arguing, based on her observations of the market, that serious pain-and-suffering injuries should be awarded damages).

¹⁰ John E. Calfee & Paul H. Rubin, *Some Implications of Damages Payments for Nonpecuniary Losses*, 21 J. LEGAL STUD. 371 (1992); Robert Cooter, *Towards a Market in Unmatured Tort Claims*, 75 VA. L. REV. 383, 392 (1989) (arguing that "a rational person would insure only against that pain and suffering that curtailed earnings"); George L. Priest, *A Theory of the Consumer Product Warranty*, 90 YALE L.J. 1297, 1346–47, 1352 (1981); see also Alan Schwartz, *Proposals for Product Liability Reform: A Theoretical Synthesis*, 97 YALE L.J. 353, 362–67 (1988).

¹¹ Ronen Avraham, *Should Pain-And-Suffering Damages Be Abolished from Tort Law?: More Experimental Evidence*, 55 U. TORONTO L.J. 941 (2005). For further evidence, see Croley & Hanson, *supra* note 9.

After reviewing various proposals for pricing pain and suffering, I will argue that all of these proposals are analytically problematic, and undesirable as a matter of policy. I will then propose a new way to price pain and suffering. Under my proposal, a system of age-adjusted multipliers would be assigned to plaintiffs' medical costs in order to calculate the pain-and-suffering component. The multipliers would be nonbinding, allowing the jury to fairly deviate when justice required. This system solves the problem of unpredictability and, at the same time, approximates optimal deterrence, all at very low administrative costs. It combines the advantages of efficiency and fairness by having a jury determine awards on a case-by-case basis, without the high complexity of assessing pain-and-suffering losses present in other proposals.

II. BACKGROUND

I begin by briefly surveying the way pain and suffering is currently handled in the United States. Under the current system, pain-and-suffering coverage is provided extensively by the tort system, and yet only moderately provided by private markets. In the tort system, jurors are given vague instructions to "reasonably compensate" the plaintiff for non-economic losses. They are told that the only real measuring stick they can employ is their "collective enlightened conscience."¹² Interestingly, and against many scholars' views, juries cannot be told of patterns of awards in comparable cases.¹³ As a result, innovative lawyers have tried to offer a host of heuristic devices to help juries monetize pain and suffering, but courts for the most part have rejected such attempts. For example, courts have held it inappropriate for a plaintiff lawyer to ask a jury to estimate how much compensation the victim would require (*ex ante*) in order to accept the certainty of the injury she suffered.¹⁴ Courts have similarly rejected the "Golden Rule" which asks jurors to estimate the amount of money they would require (*ex post*) if they had to experience the victims' pain and suf-

¹² *E.g.*, RONALD W. EADES, JURY INSTRUCTIONS ON DAMAGES IN TORT ACTIONS 321 (3d ed. 1993) ("There are no objective guidelines by which you can measure the money equivalent of this element of injury; the only real measuring stick, if it can be so described, is your collective enlightened conscience. You should consider all the evidence bearing on the nature of the injuries, the certainty of future pain, the severity and the likely duration thereof. In this difficult task of putting a money figure on an aspect of injury that does not readily lend itself to an evaluation in terms of money, you should try to be as objective, calm and dispassionate as the situation will permit, and not to be unduly swayed by considerations of sympathy.").

¹³ 2 ALI, ENTERPRISE RESPONSIBILITY FOR PERSONAL INJURY: APPROACHES TO LEGAL AND INSTITUTIONAL CHANGE 202 (1991) [hereinafter ALI VOL. II]. For a proposal to inform juries about comparable cases, see Shari Seidman Diamond, Michael J. Saks & Stephan Landsman, *Juror Judgments About Liability and Damages: Sources of Variability and Ways to Increase Consistency*, 48 DEPAUL L. REV. 301 (1998).

¹⁴ See 8 AM. JUR. PLEADING AND PRACTICE FORMS ANNOTATED, *Damages* § 153 (2005).

fering.¹⁵ Yet some jurisdictions allow jurors to use the “per diem” method, where the jury awards the plaintiff a small amount per unit of time (such as a day) and then multiplies it by the plaintiff’s life expectancy.¹⁶ Similarly, “day-in-the-life” videos, if properly prepared, are admissible in courts.¹⁷

Once the jury decides the damage award, the court can still lower the amount through the use of a remittitur process, or because there are statutory caps under which the court must adjust the jury award.¹⁸ The common law doctrine of remittitur allows the court to lower the damage award if it “shocks the conscience”; in those cases, the judge might have some knowledge about jury awards in similar cases, so that where remittitur is used, there may be less variation in awards.¹⁹

Still, many people feel that a jury trial is a lottery in which the outcome cannot be predicted based on relevant case factors.²⁰ Indeed, some have argued that the practice of providing pain-and-suffering damages through the use of a jury is what caused the insurance crises of the late 1970s and early 2000s, when medical malpractice insurance premiums skyrocketed, as well as the late 1980s crisis in product liability.²¹ Interestingly, in England juries no longer decide tort awards.²² In the United States, at least four states have even debated instituting “professional courts” composed of doctors and

¹⁵ See generally James O. Pearson, Jr., Annotation, *Per Diem or Similar Mathematical Basis for Fixing Damages for Pain and Suffering*, 3 A.L.R.4TH 940 (2005). In their research, McCaffery et al. found that making jurors think of themselves as if they were the plaintiff approximately doubles the pain-and-suffering awards. Edward J. McCaffery et al., *Framing the Jury: Cognitive Perspectives on Pain and Suffering Awards*, 81 VA. L. REV. 1341, 1360 (1995).

¹⁶ See generally Pearson, *supra* note 15.

¹⁷ See Chilton Davis Varner & James Matheson McGee, *Worth a Thousand Words: The Admissibility of Day-in-the-Life Videos*, 35 TORT & INS. L.J. 175 (1999).

¹⁸ More accurately, in the remittitur process the court can order a new trial “unless a stipulation is entered to a different award.” N.Y. C.P.L.R. 5501(c) (McKinney 1995). Practically all parties usually choose not to proceed with a new trial.

¹⁹ New York seems to be more liberal in directing the appellate division to “determine that an award is excessive or inadequate if it deviates materially from what would be reasonable compensation.” *Id.*

²⁰ Consider a case brought by Jeffrey O’Connell where the defendant hospital raised its offer from \$85,000 (made after the claim was filed) to \$425,000 (after ten days of trial). Both offers were rejected by the plaintiff infant. During the deliberation of the jury the hospital agreed to a \$500,000 settlement only to learn that the jury was about to reject the lawsuit altogether. JEFFREY O’CONNELL, *THE LAWSUIT LOTTERY* 3–4 (1979).

²¹ See George L. Priest, *The Current Insurance Crisis and Modern Tort Law*, 96 YALE L.J. 1521 (1987). O’Connell called for abolishing recovery for nonmonetary damages as far back as the mid-1970s. See O’CONNELL, *supra* note 8.

²² In England the court has discretion to order trial by jury for personal injury. Yet, the Court of Appeals held in 1966 that personal injury cases should almost always be tried by a judge because a jury trial fails to achieve uniformity and predictability in damages awards. *Ward v. James*, (1966) 1 Q.B. 273. This proposition was confirmed in 1991 in *H. v. Ministry of Defense*, (1991) 2 Q.B. 103, where the Court of Appeals reversed a lower instance order to a trial by jury. Lord Donaldson MR said: “[T]rial by jury is normally inappropriate for any personal injury action in so far as the jury is required to assess compensatory damage.” *Id.* at 112.

lawyers with the purpose of reducing seemingly unjust massive discrepancies in pain-and-suffering damage awards.²³

Is it optimal to have the tort system provide pain-and-suffering damages awarded by juries? The answer depends on our understanding of the objective of an optimal tort system and the problems that the current regime presents in light of this objective.

Some scholars argue that maximizing horizontal equity should be the goal of the tort system. Indeed, much of the literature following BSB's article focused on horizontal inequity in pain-and-suffering awards. By "horizontal equity" one means that like injuries will be treated alike. But to provide a fuller answer to the question of optimal damages one must reflect on the goals of an optimal tort system. Reducing the variance between cases cannot be the only goal of an optimal tort system. If it were, abolishing pain-and-suffering damages would help achieve that goal. In fact, abolishing tort law altogether would totally achieve that goal—all cases would be treated alike, as no one would be compensated at all.

Another possibility is that the goal of an optimal tort system is to minimize damages awards. While this seems by some observers to be the goal of the interest groups that advocate tort reforms—mostly insurance companies and the relevant industries—this cannot possibly be the goal of a benevolent policymaker. Again, if minimizing damage awards were the desired objective, then abolishing tort liability altogether²⁴ or abolishing any other component of tort damages, such as loss of income, would achieve this goal quite effectively. In fact, as I hinted above and will explain further below, removing the loss-of-income component from tort law might make more sense than abolishing pain-and-suffering damages.²⁵

At least from the normative standpoint adopted in this Essay, the objective of tort law should be what Guido Calabresi taught us many years ago: to minimize the costs of injuries, the costs of preventing injuries, and the cost of administrating and insuring against injuries, while keeping one eye on horizontal equity.²⁶ The optimal solution to pricing pain-and-suffering damages thus needs to be formulated in light of these goals.

Once the objective is clear, one needs to carefully analyze what is wrong, if anything, in the current regime of pain-and-suffering damages. Some scholars argue that the problem with pain-and-suffering damages rests not on the normative desirability of such awards, but in the manner in which they are distributed. The most common formulation of this claim is

²³ The states are: Illinois, Maryland, Massachusetts and Pennsylvania. Lindsay Fortado, *States Weigh Med-Mal Courts*, NAT'L L.J., Dec. 13, 2004, at 5, available at <http://www.law.com/jsp/article.jsp?id=1103138407341>.

²⁴ W. Kip Viscusi, *Pain and Suffering: Damages in Search of a Sounder Rationale*, 1 MICH. L. & POL'Y REV. 141, 167 (1996) [hereinafter Viscusi, *Sounder Rationale*].

²⁵ See *infra* pp. 28–29.

²⁶ See GUIDO CALABRESI, *THE COSTS OF ACCIDENTS* (1970).

that pain-and-suffering awards are arbitrary and random. Yet a stream of research, in which BSB's paper would be included, shows that the hypothesis that pain-and-suffering awards are entirely random should be rejected.²⁷

Others argue that the problem rests in the skewed distribution of awards. Accordingly, there are too many blockbuster awards, which create a thick tail at the high end indicating an inefficiency of the tort system.²⁸ Daniel Rubinfeld has observed, however, that a skewed distribution is not necessarily inefficient, but alternatively could reflect a growing awareness of the availability of the tort remedy for different wrongs.²⁹ In a similar manner, W. Kip Viscusi argues that in fact "it may be the small pain and suffering awards that are most unwarranted."³⁰

The main sources of discomfort about pain-and-suffering damages seem to be, first, that they are unpredictable, and, second, that because a non-negligible amount of court time is dedicated to proving the pain-and-suffering loss, they cause high administrative costs to the system. Indeed, the unpredictability of awards was the focus of BSB's article. BSB used a sample distribution of jury awards in personal injury cases from Florida and Kansas City.³¹ The cases were categorized by degrees of severity which were measured on a nine-point scale, conventionally used for evaluating malpractice insurance cases. The authors found that severity directly influenced the level of damages and was the best single predictor of the awards, explaining approximately forty percent of the variance.³² However, the authors also found a high degree of unpredictability within each injury category. They found evidence that the variation of awards per severity is enormous. For example, awards for the most serious permanent injuries range in value from approximately \$147,000 to \$18,100,000.³³ BSB con-

²⁷ See BSB, *Valuing Life and Limb*, *supra* note 1 (showing an empirical investigation that yielded similar observations); Viscusi, *Systematic Compensation*, *supra* note 2. Viscusi also showed that the claim that pain-and-suffering awards are a fixed amount or a fixed percentage markup of the financial loss should also be rejected. *Id.* at 212; see also Diamond, Saks & Landsman, *supra* note 13, at 301 n.1 (containing a useful literature review).

²⁸ Danzon made this argument in the context of medical malpractice, yet it seems that the problem is robust in other areas of tort. Danzon, *supra* note 9.

²⁹ Daniel L. Rubinfeld, *On Determining the Optimal Magnitude and Length of Liability in Torts*, 13 J. LEGAL STUD. 551, 552 (1984).

³⁰ Viscusi, *Systematic Compensation*, *supra* note 2, at 217.

³¹ BSB, *Valuing Life and Limb*, *supra* note 1, at 920.

³² *Id.* at 921–23; see also Viscusi, *Systematic Compensation*, *supra* note 2 (finding that there is a pattern of regularity so that more severe injuries result in higher pain-and-suffering damages). The concern remains that the remainder of the awards is probably explained by extralegal factors, such as gender, race, socioeconomic status, or physical appearance. See Oscar G. Chase, *Helping Jurors Determine Pain and Suffering Awards*, 23 HOFSTRA L. REV. 763, 770 (1995) (discussing studies which found that gender and race affect outcomes).

³³ Viscusi, *Systematic Compensation*, *supra* note 2, at 922. They do, however, admit that parts of the variation may reflect parties' individual circumstances, such as age, income, medical costs, and the like. Chase, *supra* note 32, at 765.

clude that the tort system is vertically fair (the median and the mean awards in a given category are reasonable) yet there is a lack of horizontal equity, measured by the extent of variation within a single category.³⁴ Other scholars have reached similar conclusions.³⁵

Before continuing, it is important to note that there are some “good” reasons why we might observe a large variance among pain-and-suffering awards. First, many scholars have used the National Association of Insurance Commissioners’s (“NAIC”) nine-point severity-of-injury scale to categorize seriousness of injuries and facilitate commensuration of the pain-and-suffering of dissimilar injuries. The nature of this task, commensuration of different injuries, creates variation because, for example, deafness, loss of a limb, loss of an eye, or loss of one kidney are all level six in the NAIC severity-of-injury scale.³⁶ But the mere construction of categories involves reducing dissimilar things to similar categories and therefore eliminates, by definition, the nuances of the injury. Thus, jurors might rationally not award the same amount of damages for all losses in the same category.³⁷ Second, age of plaintiff, typically not considered in studies that

³⁴ BSB, *Valuing Life and Limb*, *supra* note 1, at 924. BSB claim that high variability of awards raises not only issues of *fundamental fairness* (for not treating similarly situated people alike), but also of *general confidence in justice* (as awards seem to be arbitrary). *Id.*

³⁵ David Leebron reached a similar conclusion on the basis of his study of pain-and-suffering awards in 256 wrongful death cases. David W. Leebron, *Final Moments: Damages for Pain and Suffering Prior to Death*, 64 N.Y.U. L. REV. 256, 324–25 (1989). Aaron J. Broder reported on the nonpecuniary damage awards reported for victims of the Korean Air Line disaster, finding that the ten awards made by January 1994 ranged from zero to \$1.4 million. Aaron J. Broder, *Judges, Juries and Verdict Awards*, N.Y. L.J., Jan. 3, 1994, at 3. Geistfeld argues that indeed there is lack of evidence establishing that pain-and-suffering damages are excessively high, but that jury awards for pain and suffering vary for equally severe injuries. Mark Geistfeld, *Placing a Price on Pain and Suffering: A Method for Helping Juries Determine Tort Damages for Nonmonetary Injuries*, 83 CAL. L. REV. 773, 777 (1995). Some argue, however, that most of the disparities in the awards assessed in “comparable cases” can be explained by actual differences in the cases that are not apparent to people who did not hear the evidence.

³⁶ The National Association of Insurance Commissioners (“NAIC”) has published a nine-point Injury Severity Scale, which has been used by many scholars. The nine-point scale includes the following categories (examples are in parentheses):

1. Emotional only (fright, no physical damage).
2. Temporary insignificant (lacerations, contusions, minor scars, rash; no recovery delay).
3. Temporary minor (infections, fracture, fall in hospital; recovery delayed).
4. Temporary major (burns, surgical material left, drug side effect, brain damage; recovery delayed).
5. Permanent minor (loss of fingers, loss or damage to organs; includes nondisabling injuries).
6. Permanent significant (deafness, loss of limb, loss of eye, loss of one kidney or lung).
7. Permanent major (paraplegia, blindness, loss of two limbs, brain damage).
8. Permanent grave (quadriplegia, severe brain damage, lifelong care or fatal prognosis).
9. Death.

NAT’L ASS’N OF INS. COMM’RS (“NAIC”), *MALPRACTICE CLAIMS: MEDICAL MALPRACTICE CLOSED CLAIMS 1975–1978*, at 304 (M. Patricia Sowka ed., 1980).

³⁷ Roselle L. Wissler et al., *Explaining “Pain and Suffering” Awards: The Role of Injury Characteristics and Fault Attributions*, 21 LAW & HUM. BEHAV. 181, 183 (1997). Indeed Wissler et al. found that individuals’ subjective assessment of the overall severity of the injury was a better sole predictor of pain-and-suffering awards than was the NAIC scale. *Id.* at 202.

explore the variation of pain-and-suffering damages, may matter. The total pain and suffering of a sixty-year-old who is assumed to suffer twenty more years of pain and suffering is different than that of a twenty-year-old who would suffer sixty more years. A study that does not account for plaintiff's age may detect variation which is totally reasonable. Third, as BSB note, the context in which the injury occurs may matter. A plaintiff who loses a hand in a car accident might get less in pain-and-suffering damages than a plaintiff who loses a hand as a result of medical malpractice. It may be rational to assume that being injured in a special relationship (like doctor-patient) causes more pain.³⁸ Fourth, jury size may matter. Some states have six- and others have twelve-juror juries. Studies have shown that the smaller the jury size, the larger the variation in awards across juries.³⁹ Fifth, jury instructions in general, and with respect to pain-and-suffering damages in particular, vary significantly among states. For example, some states include "disfigurement" in their instructions, whereas other states do not mention that element at all.⁴⁰ Some jurisdictions instruct juries that an award will be reduced in proportion to the plaintiff's contributory negligence, while other jurisdictions do not tell juries about the consequences of assigning fault.⁴¹ Therefore, the categories of pain and loss that juries are instructed to consider as legitimate objects of compensation have obvious effects on the damages they deem appropriate for similar injuries.

In sum, not all variance in pain-and-suffering awards is unwarranted. Variance is normatively unwarranted to the extent that it is larger (or smaller) than it should be. Juries' considerations of unlawful factors in determining the magnitude of damages—including plaintiff's attorney fees, defendant type (individual versus corporate), defendant's insurance coverage, defendant's degree of culpability (once found liable), plaintiff's lawyer's award recommendation, etc.—are problematic because they increase unpredictability. Some juries will disregard proscribed factors and others will not. This strikes us as unfair.

As BSB argue, and Mark Geistfeld seems to agree, unpredictability of awards might also cause problems for optimal deterrence.⁴² On the other hand, one may argue that from an efficiency perspective if the mean and median are indeed optimal, then in general it is not clear that there is a problem of inadequate deterrence at all. Presumably, potential tortfeasors would

³⁸ BSB *Valuing Life and Limb*, *supra* note 1, at 943. This intuition is also found in the common law treatment of liability for negligent infliction of emotional distress, which attaches such liability especially when the defendant implicitly undertook to care for the emotional well-being of the plaintiff (doctors, nurses, therapists, etc). See DAN B. DOBBS, *THE LAW OF TORTS* § 308, at 836–37, § 312, at 848–50 (2000).

³⁹ Diamond, Saks & Landsman, *supra* note 13.

⁴⁰ Roselle L. Wissler et al., *Instructing Jurors on General Damages in Personal Injury Cases*, 6 *PSYCHOL. PUB. POL'Y & L.* 712, 716 (2000).

⁴¹ *Id.* at 730.

⁴² BSB, *Valuing Life and Limb*, *supra* note 1, at 908; Geistfeld, *supra* note 35, at 786.

take, on average, adequate precautionary measures. But whether this indeed is the case seems to be more complicated in practice than in theory.⁴³

In any case, even if optimal means or medians are a necessary condition for an optimal tort system, they are not sufficient conditions; there would still be an important role for predictability. Unpredictability of the awards within categories of injuries might make it more difficult to reach settlements. If juries treat similar pain-and-suffering losses differently, the argument goes, then lawyers will find it difficult to advise their clients on the expected jury awards. Such unpredictability might also provide lawyers with increased incentives to forgo settlements for the chance of getting high awards for their clients. This causes the probability of settlement to decrease, conventionally considered a loss from an efficiency standpoint.⁴⁴ Here again, as BSB observed, the real story is more complicated.⁴⁵

Another problem with unpredictability is that the uncertainty will make insurers charge potential tortfeasors “ambiguity premiums” above the regular actuarial expected losses and the administrative costs load.⁴⁶ This might cause firms to forgo activities in which they would otherwise engage if they could obtain lower-priced insurance.⁴⁷

To sum up this point, predictability of awards arguably has both fairness and efficiency advantages. Thus, the optimal provision of pain-and-suffering damages should combine predictability with optimal mean or median of awards, to preserve deterrence. Optimal provision of pain-and-suffering damages should, in addition, not be blind to the administrative costs it entails.

⁴³ See Rubinfeld, *supra* note 29. A wide distribution of awards might be a problem for optimal deterrence (even if the mean and median are optimal and there are no systematic errors), however, if there is some positive probability that the potential tortfeasor becomes judgment-proof as a result of a bankruptcy due to some “outlier” awards. Another case where a wide distribution of awards is problematic is where defendants are risk averse. In any case, my analysis here does not contradict BSB’s analysis because BSB do not argue that the median and the mean are optimal on deterrence grounds, which is what I assume in the text, but rather that it is “reasonable.”

⁴⁴ Uncertainty concerning awards increases the “difficulty in predicting the outcome of a case and hence [causes] much more difficulty in negotiating a settlement.” P.S. ATIYAH, ACCIDENTS, COMPENSATION AND THE LAW 216 (3d ed. 1980).

⁴⁵ BSB, *Valuing Life and Limb*, *supra* note 1, at 925 n.92 (arguing that there is room for more analysis regarding whether uncertainty increases or decreases the likelihood of settlement).

⁴⁶ See Howard Kunreuther & Robin M. Hogarth, *How Does Ambiguity Affect Insurance Decisions?*, in CONTRIBUTIONS TO INSURANCE ECONOMICS 307, 321 (Georges Dionne ed., 1992) (“A principal conclusion emerging from surveys of actuaries and underwriters is that they will add an ambiguity premium in pricing a given risk whenever there is uncertainty regarding either the probability or losses.”). The ambiguity premium may reflect the probability of insolvency of the insurer.

⁴⁷ Geistfeld, *supra* note 35, at 788–89. This idea is reflected in various bills attempting to cure tort law. See, e.g., Common Sense Product Liability and Legal Reform Act of 1995, H.R. 956, 104th Cong. § 2(5) (1995). Section 2(5) of Title II, “Limitation on Speculative and Arbitrary Damage Awards,” argues that, “as a result of excessive, unpredictable, and often arbitrary damage awards[,] . . . consumers have been adversely affected through the withdrawal of products, producers, services, and service providers from the national market.” *Id.*

Indeed, another problem with the current determination scheme is its high administrative costs, especially relative to other compensation systems. Some have argued that it amounts to up to fifty cents on the dollar, compared to only five cents on the dollar in Medicare and Medicaid.⁴⁸ Indeed, part of the high cost of the tort system is related to the difficult process of determining the pain-and-suffering coverage. But that in itself does not mean that pain and suffering should be abolished, as opposed to abolishing the current system of determination and administration. The administrative costs associated with pain-and-suffering damages could be significantly reduced if a more efficient system of pricing pain and suffering were in place.

In sum, the current system of allocating pain-and-suffering damages has reasonable aspects, in that pain-and-suffering damages are not awarded in a completely random or unfair matter, as higher categories of severity of injuries receive higher (average and median) awards. Yet the putative fairness says nothing about the efficiency of the current system. From an efficiency perspective, even if optimal median or mean awards of pain-and-suffering damages are the most one can hope for, there is no guarantee that the current mean awards reflect the mean of the social noneconomic costs of the tortfeasors' conduct. In addition, the high variation in awards within each category brings with it not only costs in terms of horizontal equity, but also some efficiency costs in terms of potentially lower settlement rate and lower insurability.

The next Part explores whether more structured ways of pricing pain-and-suffering awards are superior to the current system in light of the objectives stated above.

III. CAPPING PAIN-AND-SUFFERING DAMAGES

One possible way to resolve the problem of unpredictable awards would be to place caps or ceilings on the amount of pain-and-suffering coverage that could be awarded. Under such a legal regime, lawyers and insurers would have better knowledge of the range of possible awards and the extent of unpredictability would be reduced. Accordingly, some scholars have called for such a solution, and the majority of the states have passed such laws in one form or the other.⁴⁹ President Bush has urged Congress several times in recent years to impose substantial nationwide restrictions on medical malpractice cases, including a cap on pain-and-suffering damages of \$250,000.⁵⁰

⁴⁸ See BSB, *Valuing Life and Limb*, *supra* note 1, at 925–26.

⁴⁹ See *id.* at 956–58; Geistfeld, *supra* note 35, at 789 n.67.

⁵⁰ In the last ten years, no less than six bills have been proposed in Congress to impose caps on malpractice payments: Help Efficient, Accessible, Low-Cost, Timely Healthcare (HEALTH) Act of 2004, H.R. 4280, 108th Cong. § 4(b) (2004); Patients First Act of 2003, S. 11, 108th Cong. § 4(b) (2003); Help Efficient, Accessible, Low-Cost, Timely Healthcare (HEALTH) Act of 2003, S. 607, 108th

Yet there are several problems with simply capping pain-and-suffering damages. Large caps might have little impact in practice because most pain-and-suffering damages are generated by small claims, not by the few at the extreme.⁵¹ If to avoid this problem one lowers the ceiling in order to cap more claims, a second problem arises: as Viscusi observed, “victims with major injuries would be limited in making their claims while those with minor injuries would be unaffected.”⁵² As Viscusi noted, capping pain-and-suffering damages will cause victims of brain damage, para- or quadriplegia, and cancer to be most disadvantaged.⁵³ This has at least three adverse upshots for efficiency. First, damage caps are in a way “regressive” (in the sense that their fiscal impact is larger for severe injuries, than for minor injuries) so they might prevent many victims with totally legitimate claims from obtaining legal representation. The problem increases over time as the cap’s size remains fixed at the initially legislated amount in nominal terms despite inflation.⁵⁴ Second, caps distort deterrence. Potential tortfeasors will take less than due care, knowing that their liability is capped.⁵⁵ More accurately, caps will distort marginal deterrence of activities with higher risks of severe bodily harm; potential tortfeasors will have no incentive to

Cong. § 5(b) (2003); Help Efficient, Accessible, Low-Cost, Timely Healthcare (HEALTH) Act of 2003, H.R. 5, 108th Cong. § 4(b) (2003); Help Efficient, Accessible, Low-Cost, Timely Healthcare (HEALTH) Act of 2002, S. 2793, 107th Cong. § 4(b) (2002); Help Efficient, Accessible, Low-Cost, Timely Healthcare (HEALTH) Act of 2002, H.R. 4600, 107th Cong. § 4(b) (2002); Medical Malpractice Rx Act, H.R. 2242, 106th Cong. § 4(b)(1) (2001); Health Care Liability Reform Act of 1997, H.R. 1091, 105th Cong. § 204(a) (1997). Other related bills include: Help Efficient, Accessible, Low-Cost, Timely Healthcare (HEALTH) Act of 2005, H.R. 534, 109th Cong. § 4(b) (2005); Healthy Mothers and Healthy Babies Access to Care Act of 2005, S. 366, 109th Cong. § 3(b) (2005); Pregnancy and Trauma Care Access Protection Act of 2005, H.R. 367, 109th Cong. § 3(b) (2005); Help Efficient, Accessible, Low-Cost, Timely Healthcare (HEALTH) Act of 2005, S. 354, 109th Cong. § 5(b) (2005). Most recently, on July 28th, 2005, the U.S. House of Representatives passed (by a vote of 230 to 194) H.R. 5, the Help Efficient, Accessible, Low-Cost, Timely Healthcare (HEALTH) Act of 2005, which includes a \$250,000 limit on noneconomic damages. Help Efficient, Accessible, Low-Cost, Timely Healthcare (HEALTH) Act of 2005, H.R. 5, 109th Cong. § 4(b) (2005).

⁵¹ See W. KIP VISCUSI, REFORMING PRODUCTS LIABILITY 106 (1991).

⁵² *Id.* at 107 (noting that data shows that most severe injuries are undercompensated).

⁵³ *Id.* For these reasons as well as because inflation erodes nominal-dollar caps, the ALI study rejects caps on damages. See ALI VOL. II, *supra* note 13, at 219–20.

⁵⁴ Few states, however, adjust the cap for inflation. See, e.g., MD. CODE ANN., [CTS. & JUD. PROC.] § 3-2A-09 (LexisNexis 2004) (providing Maryland’s adjustment for inflation). For an argument that caps are regressive, see David M. Studdert et al., *Are Damages Caps Regressive?: A Study of Malpractice Jury Verdicts in California*, 23 HEALTH AFF. 54 (2004).

⁵⁵ In fact, it is not clear that caps will even have the intended impact, which is to reduce total annual payouts. As Kathy Zeiler observed, potential tortfeasors who take less care because they know that their liability is capped might generate many more cases than before, increasing total payouts to a level higher than before the caps. Kathryn Zeiler, *Turning from Damage Caps to Information Disclosure: An Alternative to Tort Reform*, 5 YALE J. HEALTH POL’Y L. & ETHICS 385, 390 (2005). On the impact of various tort reforms on total annual payout in medical malpractice cases, see Ronen Avraham & David Lee, *An Empirical Study of the Impact of Tort Reforms on Medical Malpractice Payments* (Aug. 16, 2005) (unpublished manuscript) (on file with author).

invest more in avoiding more severe injuries because such injuries do not cause higher liability on injurers. Caps also present problems on optimal insurance grounds, the other goal of an efficient tort law, because risk-averse victims generally prefer to insure against large losses rather than insuring only against minor losses. Indeed, even before capping pain-and-suffering damages, the data indicates that severe injuries are undercompensated.⁵⁶ Caps also present problems on distributive justice grounds.⁵⁷ Low-income people, especially the unemployed (mostly women, children, and minorities) whose loss-of-income component in the total damage awards is null, might be left severely injured without adequate means of survivorship.

Another problem with caps is that they fail to address overvaluation and undervaluation of pain-and-suffering in the range of losses that fall below the ceiling.⁵⁸ To avoid this problem BSB (who also object to applying a single flat cap) offered a system of flexible ranges for floors and ceilings that reflect the various categories of injury severity and victim age.⁵⁹ However, there are at least three problems with even this approach. First, in terms of optimal deterrence and insurance, it is not enough that a more flexible system of floors and ceilings will be imposed. This might reduce the variance of awards but will not ensure correct—from optimal deterrence and insurance perspectives—amounts. This leads to the second problem, which is that someone will have to predetermine the floors and ceilings, an arduous task in itself carrying significant administrative costs. Third, the flexible ceiling approach also burdens juries with the task of implementing such a scheme, a task that is both costly and complex. Indeed, no state has adopted such a scheme.

Another problem with caps is that they can be circumvented in several ways. First, as Catherine Sharkey has recently observed, a jury could increase the amount awarded for economic losses to make up the difference between the caps and what they think is desirable.⁶⁰ A number of scholars have recognized this “crossover” phenomenon.⁶¹ Second, where pain-and-

⁵⁶ See Geistfeld, *supra* note 35, at 802 n.111.

⁵⁷ Whether tort law should account for distributive justice concerns is a controversial issue. See Kyle Logue & Ronan Avraham, *Redistributing Optimally: Of Tax Rules, Legal Rules and Insurance*, 56 TAX L. REV. 157 (2003).

⁵⁸ BSB, *Valuing Life and Limb*, *supra* note 1, at 957–58. The ALI reporters questioned the use of caps because, among other things, they do not eliminate the large variations in pain and suffering awards that have been the source of much of the criticism placed upon them. See ALI VOL. II, *supra* note 13, at 219.

⁵⁹ BSB, *Valuing Life and Limb*, *supra* note 1, at 958–60.

⁶⁰ Catherine Sharkey, *Unintended Consequences of Medical Malpractice Damages Caps*, 80 N.Y.U. L. REV. 391 (2005).

⁶¹ Professor David Schkade from the University of Texas has argued that “[t]here is evidence that there is leakage between different kinds of damages.” Adam Liptak, *Pain-and-Suffering Awards Let Juries Avoid New Limits*, N.Y. TIMES, Oct. 28, 2002, at A14. David Leebron, former dean of Columbia Law School argued that “[w]hen you cut down on one kind of award, you’ll see a shift in investment to another kind of award.” *Id.*

suffering damages are capped, plaintiff lawyers can disguise demands for pain and suffering as pleas for punitive damages, asking the jury to consider plaintiff's suffering in order to send a message to the defendant to never subject anyone to "the type of indignity and injustice and intolerable acts" to which the plaintiff had been subjected.⁶² Third, plaintiff lawyers may "itemize" noneconomic damages by looking for economic justification for them, in order to move those "itemized" damages into the noncapped economic losses.⁶³

In addition, as a recent Rand Institute study explains, caps can shift the costs of liability from malpractice insurance companies (where liability is capped) to other types of benefit providers, or government agencies (where liability is not capped).⁶⁴

For all these reasons, it is doubtful that capping pain-and-suffering damages (whether a flat cap, or a more advanced system of ceilings and floors) will improve the system. Even if capping somewhat increases the predictability of the system, its price in terms of deterrence distortions, administrative costs, and horizontal and vertical equity is too high. Accordingly, the American Law Institute reporters were against it,⁶⁵ as was the ABA Action Commission to Improve the Tort Liability System⁶⁶ and sev-

⁶² See *Gilbert v. DaimlerChrysler Corp.*, No. 227392, 2002 WL 1767672, at *18 (Mich. Ct. App. July 30, 2002). The case was reversed by *Gilbert v. DaimlerChrysler Corp.*, 685 N.W.2d 391 (Mich. 2004) because the plaintiff's lawyer pled for punitive damages when not permitted to do so. The opposite can also occur. Victor Schwartz, former dean of the University of Cincinnati College of Law and the co-author of the tenth edition of *Prosser, Wade and Schwartz's Torts*, has argued that "[p]laintiff's lawyers are repackaging their punitive-damages claims to put the money load into pain-and-suffering damages." Liptak, *supra* note 61, at 14.

⁶³ It is possible that several types of damages which are now conventionally understood as monetary ones have been "itemized" in the last decades for exactly this reason; loss of companionship when a child dies and rehabilitation expenses for the injured are just two examples. In a recent Illinois case, parents received \$3.7 million for the loss of society of their stillborn baby girl. *Estate of Precious Matthews*, COOK COUNTY JURY VERDICT REP., Dec. 7, 2001, at 8/1. It is plausible that these unprecedented noneconomic damages were awarded because general pain-and-suffering damages were "itemized" into a more concrete "loss of society." It is also possible that the award represented an attempt by the jury to punish the negligent hospital, given that in Illinois there is no recovery for punitive damages in medical malpractice cases. See 735 ILL. COMP. STAT. 5/2-1115 (2005). As expected, states have reacted to plaintiff lawyers' itemizing general damages by capping those "itemized items." For example, in 1997, New Hampshire imposed a cap of \$50,000 on the damages for loss of familial relationship that parents of a deceased child can recover. N.H. REV. STAT. ANN. § 556:12, ¶ III (2005).

⁶⁴ NICHOLAS M. PACE ET AL., RAND. CORP., CAPPING NON-ECONOMIC AWARDS IN MEDICAL MALPRACTICE TRIALS: CALIFORNIA JURY VERDICTS UNDER MICRA (2004).

⁶⁵ "We believe that the cap model has far more vices than virtues, and the fact that state legislatures have been so ready to impose such caps should give pause to those who assert that statutory tort reform reflects a fair and balanced appraisal of the interests of both actors and victims." *Id.* at 218.

⁶⁶ See ABA, REPORT OF THE ACTION COMMISSION TO IMPROVE THE TORT LIABILITY SYSTEM 10-15 (1987). The commission also recommended that there should be greater use of additur and remittitur by trial and appellate courts to set aside verdicts that are "clearly disproportionate to community expectations." *Id.* at 13.

eral state courts, which have struck down legislative caps on pain-and-suffering damages on various constitutional grounds.⁶⁷

IV. SCHEDULES, MATRICES, AND SCENARIOS

Another set of proposals that has been advanced to solve the problem of predictability in pain-and-suffering damages is supplementing the tort system with a more structured method of calculating damages via schedules, matrices, or scenarios. Recall that predictability is a necessary but not a sufficient condition for an optimal tort system; optimal deterrence, insurance, and sufficient fairness-as-equity are also important. Do schedules meet these criteria? Danzon has argued that scheduled awards are not only cheaper to administer than individualized awards, but also, importantly, are superior to individualized awards both on deterrence grounds (because producers care about the expected damages) and insurance grounds (because risk-averse victims would prefer a certain award equal to the mean of distribution of potential awards over the distribution itself).⁶⁸ Nevertheless, some authors have raised objections to scheduling tort awards. BSB, for example, objected to schedules because they feared that scheduling tort awards in the current fault system would cut payment levels (especially for non-monetary losses) and, thus, undercut deterrence.⁶⁹ But even if BSB are correct, and schedules will undercut deterrence, it will be a concern only if the new level of deterrence is worse than the previous level. Unfortunately, there is no good evidence to support or refute this concern. BSB also argue that many elements of damages are idiosyncratic, relatively difficult to observe and tabulate. Therefore, a schedule for awards would be unfair to parties who have different costs.⁷⁰ In contrast, as Viscusi argued, applying damages schedules in a nonbinding manner may be preferable on these grounds.⁷¹ Also, to the extent that the BSB critique refers to pain-and-suffering damages, and not to damages more generally, it is not clear that schedules are inferior on these grounds to an alternative system of standardized awards based on victim age and severity of injury, which BSB themselves put forward (and which I will describe below).

⁶⁷ See, e.g., *Moore v. Mobile Infirmary Ass'n*, 592 So. 2d 156 (Ala. 1991) (striking down an Alabama cap on pain-and-suffering damages because it represented an impermissible burden on the right to a trial by jury as guaranteed by the state constitution); *Tenold v. Weyerhaeuser Co.*, 873 P.2d 413 (Or. Ct. App. 1994) (en banc) (striking down an Oregon cap on pain-and-suffering damages). For additional examples, see DAN B. DOBBS & PAUL T. HAYDEN, *TORTS AND COMPENSATION* 790–91 (5th ed. 2001).

⁶⁸ Danzon, *supra* note 9, at 527–30. In a regime with schedules, plaintiffs receive fixed amounts of money based on their observable injuries, regardless of their idiosyncratic pain and suffering.

⁶⁹ BSB, *Valuing Life and Limb*, *supra* note 1, at 930; see also Peter H. Schuck, *Scheduled Damages and Insurance Contracts for Future Services: A Comment on Blumstein, Bovbjerg, and Sloan*, 8 YALE J. ON REG. 213 (1991).

⁷⁰ *Id.*

⁷¹ VISCUSI, *supra* note 51, at 115.

Geistfeld objects to schedules mainly because they rely upon past awards, which in his view “represents the most problematic aspect of these reform proposals.”⁷² He argues that schedules based on past awards will replicate the high variability of awards that the current system suffers from, and it will replicate the undercompensation of severe injuries.⁷³ The fact of the matter is, however, that schedules were proposed in order to avoid exactly such replication. The point of schedules is to have a standardized remedy for similar categories of injuries and avoid past variance. Similarly, there is no reason to think that a policymaker, aware of the studies claiming that severe injuries are undercompensated, would replicate it.

Although I find BSB’s and Geistfeld’s objections to schedules to be minor compared to the potential for a scheduling scheme, I would propose that the problem with such schemes lies more on administrative and deterrence grounds. With respect to optimal deterrence, as Rubinfeld argues, it is not enough to show that total expenditures are reduced with schedules; one must also show that society will make fewer Type 1 and Type 2 errors as a result of switching to scheduled damages.⁷⁴ We want to make sure that injurers invest more in precautions when they are necessary and less when they are not; we cannot be satisfied that on the average, the investment in precaution is adequate, otherwise schedules might distort optimal deterrence.

To avoid this problem, BSB offered a system of standardized awards set according to a matrix of dollar values based on victim age and severity of injury.⁷⁵ Alternatively, they offered a system that employed scenarios of prototypical injuries and their corresponding noneconomic awards, which would be given to juries as nonbinding guides to valuations of plaintiffs’ pain and suffering.⁷⁶ Similarly, the ALI reporters recommend the development of guidelines based on a scale of inflation-adjusted damage amounts

⁷² Geistfeld, *supra* note 35, at 792.

⁷³ *Id.*

⁷⁴ Here Type 1 error will mean that the jury overcompensated a minor injury. A Type 2 error will mean that the jury undercompensated a major injury. The point in the text is that even if, on average, the jury does a good job, this will not be enough due to these two types of errors. Rubinfeld, *supra* note 29, at 556.

⁷⁵ BSB, *Valuing Life and Limb*, *supra* note 1, at 941. The severity of the injury would be determined based on the nature of the injury, i.e., whether it is permanent or temporary as well as whether it is major or minor. Regarding the age of the victim, the authors argue that just as with bodily injuries, young people are expected to recover faster from temporary pain-and-suffering losses, whereas for permanent loss they would suffer more as their life span is longer. *Id.* A similar approach was suggested in the ALI’s study. ALI VOL. II, *supra* note 13, at 222.

⁷⁶ BSB, *Valuing Life and Limb*, *supra* note 1, at 953–56. The authors suggest constructing nine scenarios that would describe the physical severity of the injury, i.e., the victim’s age, the pain endured, etc. As Chase argued, the problem with the nine-point grid is that both an amputation and a permanent back pain “would apparently fall into the same category, with a resultant spread of awards ranging from \$16,500 to \$1.8 million.” Chase, *supra* note 32, at 789. He then argues that “this range provides very little guidance.” *Id.*

attached to a number of disability profiles that range in severity from the relatively moderate to the gravest injuries.⁷⁷

All of these solutions, however, are administratively complicated, and therefore possibly prohibitively costly. Who decides the schedules, matrices, scenarios, or guidelines? What criteria do they use? The more detailed the scenarios or guidelines are, the more costly it is to design them,⁷⁸ and the less discretion the jury has.⁷⁹ How do we know that the jury will not be overburdened with these new tasks? Even a simple matrix (conventionally used for evaluating malpractice insurance cases into which all injuries, including death, are collapsed) introduces a wide range of awards within each category. Surveying injury cases in the Appellate Division in New York, Chase argues that using the nine-point scale might result in a wide spread of awards, from \$100,000 to \$1 million.⁸⁰ If this “simple” matrix results in such a massive variation within injury-severity type, it is clearly unhelpful, and one can reasonably expect that an even wider range of awards would result if states adopt BSB’s suggestion that a jury apply different scenarios to the case at hand. This problem is further complicated when it is extended to the determination of what the criteria for the judicial review of jury verdicts would be.⁸¹

⁷⁷ ALI VOL. II, *supra* note 13, at 222.

⁷⁸ As Chase observes, “[d]etailed scenarios keyed to recommended (or required) awards would be difficult to construct because of the myriad of differences in real-world fact patterns.” Chase, *supra* note 32, at 787.

⁷⁹ But the mission of producing detailed guidelines is not impossible. The Judicial Studies Board in England has been producing since 1992 and every two years *Guidelines for the Assessment of General Damages in Personal Injury Cases*. The board is comprised of judges and practitioners who deal with injury cases. Based on previous cases and their own experience, they produce nonbinding guidelines, itemized by type and severity of injury. Its fifth edition, from 2000, holds fifty-one pages of detailed categories of injuries and the ranges of awards given. See JOHN CHERRY ET AL., *GUIDELINES FOR THE ASSESSMENT OF GENERAL DAMAGES IN PERSONAL INJURY CASES* (5th ed. 2000).

⁸⁰ See Chase, *supra* note 32, at 787–89. Chase is correct when he argues that both amputation of two toes (as was the case in *Dauria v. City of New York*, 577 N.Y.S.2d 64 (App. Div. 1991)) and permanent back pain (as was the case in *Wendell v. Supermarkets General Corp.*, 592 N.Y.S.2d 895 (App. Div. 1993)) would fall under category five. In *Dauria*, the plaintiff won \$1 million for future pain and suffering, 577 N.Y.S.2d at 65, whereas in *Wendell* the plaintiff was awarded only \$100,000, 592 N.Y.S.2d at 897. The reader should be warned that Chase mentions different awards in his analysis, yet he seems to confuse damages for past pain and suffering with damages for future pain and suffering. Chase, *supra* note 32, at 787–89.

⁸¹ See David Baldus et al., *Improving Judicial Oversight of Jury Damages Assessments: A Proposal for the Comparative Additur/Remittitur Review of Awards for Nonpecuniary Harms and Punitive Damages*, 80 IOWA L. REV. 1109, 1184 (1995). A set of public choice questions immediately arise. Which institution should design the schedules or guidelines? Should there be an advisory committee (the composition of which is determined by the legislature)? Or should the schedules or guidelines be determined directly by the legislature? In either case, it is likely that the question of determining pain-and-suffering damages will be politicized, with a greater influence to groups, such as the insurance industry, which might take advantage of their high lobbying skills not necessarily to promote the deterrence and compensation goals of an optimal compensation system.

These objections show that schedules, matrices, or scenarios might hurt deterrence, without solving the variability problem, and come at a high administrative cost.⁸² But perhaps the most important theoretical point is that schedules, matrices, or scenarios themselves do not solve much; they fail to address the fundamental issue of how one should initially assess the value of pain-and-suffering damages.⁸³

One may wonder whether a possible source for determining the value of pain-and-suffering loss for the schedules, matrices, scenarios, etc., could be the price that individuals place on physical injuries in market transactions. In general, collecting evidence from the market is problematic due to supply-side impediments, namely a missing insurance market in pain-and-suffering coverage.⁸⁴ However, a few scholars have nevertheless undertaken systematic empirical or experimental studies to evaluate the demand for pain-and-suffering coverage. Viscusi published several experimental and empirical studies on the demand for pain-and-suffering coverage.⁸⁵ In some of his studies Viscusi tried to estimate the price workers put on their lives, based on their wage demand for risky jobs. There are, however, at least two theoretical problems with relying on market transactions as a relevant source of information. First, as Geistfeld observed, in those market studies which assess the premium workers demand for risky jobs, there is an underlying assumption that the price which a group places on the statistical death of one of its members is equal to the price an individual places on her own life when confronted by a fatal risk.⁸⁶ This, in turn, requires the

⁸² As Baldus et al. observed:

The use of damages schedules is problematic at several levels. The complexity involved in their application and the institutional competence of jurors to conduct the necessary fact finding raise substantial concerns. A more fundamental concern with damages schedules, however, relates to validity—namely, their current capacity to define subgroups of cases that share reasonably comparable levels of compensable harm. . . . In addition, damages schedules based on more sophisticated case typologies are likely to involve substantial complexity in both their development and application. (We also have concerns about the validity of schedules based on more complex, analytic models). The development of a damages scheduling system with the rigor and precision of the federal sentencing guidelines likely will require substantial conceptual and empirical research with data and measures that are significantly better than those which are presently available.

Id. at 1125–26 (footnotes omitted). As Chase observed, scenarios “would be difficult to construct because of the myriad of differences in real-world fact patterns. . . . The start-up costs would be compounded by the difficulties jurors would likely encounter in digesting and applying the scenarios to the case at hand.” Chase, *supra* note 32, at 787.

⁸³ Viscusi, *Souder Rationale*, *supra* note 24, at 168. In addition, see Geistfeld, *supra* note 35, at 791–93, who also argues that determining injury categories is a hard task. Chase argues that proposals for legislatively enacted mandatory schedules “would merely shift the locus of power to do the impossible, that is, find the right level of compensation.” Chase, *supra* note 32, at 365.

⁸⁴ See Avraham, *supra* note 11.

⁸⁵ The two most influential studies are those which he published with Evans in 1990 and 1991. William N. Evans & W. Kip Viscusi, *Estimation of State-Dependent Functions Using Survey Data*, 73 REV. ECON. & STAT. 94, 101 (1991); William N. Evans & W. Kip Viscusi, *Utility Functions That Depend on Health Status: Estimates and Economic Implications*, 80 AM. ECON. REV. 353 (1990).

⁸⁶ Geistfeld, *supra* note 35, at 832–40. Geistfeld uses as his example a study by Moore and Viscusi in which they found that workers receive \$43.40 in additional annual wages (in 1981 dollars) for each

assumption that people are linear in their probability preferences, an assumption known to be empirically false.⁸⁷ Second, as Viscusi himself admits, market studies have a principal limitation in that “they do not pertain to all classes of risk that are of interest, and they may not always be sufficiently refined to enable us to perfectly isolate the risk-dollar tradeoff.”⁸⁸

Another possible way of assessing the values for different injuries is to derive their price based upon “value of life” studies that determine the price of fatal injuries.⁸⁹ The problem with this method, however, is that market studies have yielded a wide range of valuation for individuals’ lives; somewhere between \$600,000 and \$16.2 million dollars.⁹⁰ Moreover, even if there is an agreement on the value of life that the studies yielded, there is still the problem of conceptualizing injuries as a percentage loss of life. Is losing a limb the same as losing 20%, 10%, or less, of one’s life value? Lastly, market studies, as well as surveys, are determined by healthy individuals attempting to conceptualize the consequences of physical injuries they have never faced. Indeed, Geistfeld opposes reliance on surveys because they relate to hypothetical scenarios that may not be fully understood or taken seriously by the respondents. Respondents may lack sufficient information regarding the injuries they are being asked to evaluate, and may be susceptible to any number of biases, such as framing effects.⁹¹ Meanwhile, it is sufficient to observe that juries are susceptible to the exact same biases as are the participants in the surveys. In fact, the jury’s susceptibility to different biases may be much higher due to strategic framing of the situation by the lawyers.

In sum, schedules, matrices, or scenarios may or may not increase predictability, yet they might seriously decrease deterrence (because we do not know whether society makes fewer Type 1 and Type 2 errors), come at a high administrative price (at least relative to the approach I will suggest below), and do not solve any issues of fairness and parity. Therefore, it is far from obvious that such proposals would actually improve the tort system

additional death per 100,000 workers, and thus estimated at \$4.34 million the cost that this group associated with the loss of one life. Michael J. Moore & W. Kip Viscusi, *Doubling the Estimated Value of Life: Results Using New Occupational Fatality Data*, 7 J. POL’Y ANALYSIS & MGMT. 476, 486 (1988).

⁸⁷ Whether it is a change from .99999 to 1.0000 or a change from .00001 to .00002 matters. The “assumption of linearity is clearly false; individual valuations of changes in risk will vary with the background risk that is modified.” Lewis A. Kornhauser, *The Value of Life*, 38 CLEV. ST. L. REV. 209, 215 (1990).

⁸⁸ W. KIP VISCUSI, FATAL TRADEOFFS: PUBLIC AND PRIVATE RESPONSIBILITIES FOR RISK 67 (1992). To these theoretical problems one should add the methodological problems discussed in the section that analyzes Viscusi’s work.

⁸⁹ Indeed, BSB suggest that the dollar value could be based on previous jury awards with or without findings of the “value of life” work, with legislative or judicial adjustments to either. BSB, *Valuing Life and Limb*, *supra* note 1, at 938–53.

⁹⁰ See VISCUSI, *supra* note 88, at 51.

⁹¹ Geistfeld, *supra* note 35, at 835–40. While these problems may be diminished with adequate design, Geistfeld’s critique remains valid with respect to most of the existing literature.

along any of the dimensions identified as goals in this paper, optimal insurance, deterrence, fairness, and low administrative costs.

V. WILLINGNESS TO PAY TO ELIMINATE THE RISK

Another approach, put forward by Mark Geistfeld, is to ask the jury to assess how much a rational individual would have paid *ex ante* to eliminate the risk that caused the pain-and-suffering loss.⁹² This measure, Geistfeld argues, reflects the consumer's *ex ante* assessment of the cost of the pain-and-suffering loss.⁹³ From a law and economics perspective this approach seems a sensible one, because it maximizes consumer preferences.

However, making such a decision on a case-by-case basis has its disadvantages—specifically, higher administrative costs and higher unpredictability costs. While it is true that jurors—estimating the *ex ante* willingness to pay to eliminate the risk of injury—are in roughly the same situation themselves (and therefore, feel comfortable assessing willingness to pay for prevention), thereby mitigating the problem of case-by-case assessment, the task still seems problematic. Jurors have to estimate the *ex ante* probability of a specific pain-and-suffering loss—as Judge Posner admitted, not an easy task.⁹⁴ Moreover, jurors are, as Geistfeld concedes, subject to the availability heuristic and therefore overestimate the *ex ante* risk.⁹⁵ Another problem with Geistfeld's approach is that different hazards will produce different assessments of the price of the same injury. This is because willingness to

⁹² *Id.* Calfee and Rubin, however, were the first to raise and support this idea. Calfee & Rubin, *supra* note 10, at 379–80.

⁹³ Geistfeld, *supra* note 35, at 805. Geistfeld recognizes that this measure is wealth-dependent and thus wealthy people might receive higher pain-and-suffering compensation. His solution is that jurors will determine how much a person of average wealth in the community would pay to eliminate the risk. This not only eliminates the regressive result, but also is less costly to administer. *Id.* at 806–07. Geistfeld's approach is from the *ex ante* approach. One can think of other approaches. For example, consider Judge Posner's *ex post* approach which asked about people's willingness to pay to eliminate the pain and suffering they experience. See *Kwasny v. United States*, 823 F.2d 194, 197 (7th Cir. 1987) (“We disagree with those students of tort law who believe that pain and suffering are not real costs and should not be allowable items of damages in a tort suit. No one likes pain and suffering and most people would pay a good deal of money to be free of them.”).

⁹⁴ Jurors presumably already engage in a similar calculation when they apply the Learned Hand formula to determining negligence. While Professor Richard Posner believed that the Learned Hand formula is operational, see Richard Posner, *A Theory of Negligence*, 1 J. LEGAL STUD. 29, 32–33 (1972), Judge Richard Posner believed it was not, see *McCarty v. Pheasant Run, Inc.*, 826 F.2d 1554, 1557 (7th Cir. 1987) (“Ordinarily, and here, the parties do not give the jury the information required to quantify the variables that the Hand Formula picks out as relevant. That is why the formula has greater analytic than operational significance.”).

⁹⁵ Geistfeld, *supra* note 35, at 836–37. The availability heuristic is a cognitive bias which causes people to make a judgment based on what they can easily remember, rather than on complete data. Thus, if the media exposes people to major accidents, it might increase the *accessibility* of this information, tilting people's assessment of the risks which really exist. This drawback, however, is balanced out, Geistfeld argues, by the juries' advantage in understanding the consequences of the injury after reviewing evidence on its nature and severity. *Id.* at 838–39.

pay increases with the dread of the hazard, but declines with the degree of knowledge that people have about the risk in question.⁹⁶ In addition, studies by Daniel Kahneman and others show that jury dollar-value assessment of pain-and-suffering losses is not only subject to framing effects by lawyers, but to other cognitive biases as well, and therefore cannot serve as a policy aid because they are totally unreliable.⁹⁷ Indeed, it is not clear what variance among cases this approach would eventually produce. I will not further elaborate on these issues because I think that there is a different reason which, above and beyond all these considerations, defeats this approach.

Geistfeld seems to mean that that the ex ante approach would be applied only when calculating the pain-and-suffering component, not the monetary component.⁹⁸ According to his approach, courts should award damages that cover the pecuniary losses (ignoring the optimal level of insurance), and then add a component to cover pain-and-suffering losses.⁹⁹ The pain-and-suffering component should be based on the plaintiff's willingness to pay for precautions and is intended to provide accurate incentives to potential tortfeasors.¹⁰⁰

However, this measurement might be distorted. Such an approach ignores the fact that the amount of money individuals would pay to eliminate the risk that caused the pain-and-suffering loss might also include the amount needed for the elimination of the risk that caused the monetary loss. Consider, for example, a case in which an individual suffers a mixed monetary and nonmonetary loss due to the collapse of a ladder. When Geistfeld asks the jury to assess how much a rational defendant would pay to elimi-

⁹⁶ See Ian Savage, *An Empirical Investigation into the Effect of Psychological Perceptions on the Willingness-to-Pay to Reduce Risk*, 6 J. RISK & UNCERTAINTY 75, 88–89 (1993).

⁹⁷ McCaffery et al., *supra* note 15. McCaffery et al. found that framing effects have large impacts on nonpecuniary damage awards. The authors distinguished between an ex ante/selling price perspective where participants were asked what amount of money they would demand to willingly accept the injury, and an ex post/making whole baseline where participants were asked what amount of money was needed to make them “whole” again. The authors found, consistent with the literature on the endowment effect in other settings, that the ex ante/selling price perspective yielded a value twice as large as the ex post/making whole perspective did. McCaffery et al. thought that instead of using schedules to deal with the variability of tort awards society should consider a regime in which all participants in the trial system (especially the jury) were better informed about the magnitude of this empirical effect. *Id.* at 1400. Importantly, the authors found that the dollar figures provided by the participants were almost meaningless. *Id.* at 1359 (“We should emphasize that the dollar figures, alone, have little significance; in point of fact, they are greatly higher than actual pain and suffering awards tend to be.”).

⁹⁸ One might wonder whether the same criterion could apply to calculating monetary damages as well. Accordingly, in order to award monetary damages, juries should assess the ex ante willingness to pay to eliminate the risk of monetary loss. Geistfeld never provides a reason for not applying his approach to monetary losses as well. Geistfeld, *supra* note 35.

⁹⁹ *Id.*

¹⁰⁰ Calfee and Rubin also support this view. See Calfee and Rubin, *supra* note 10, at 379–80. Observe that Calfee and Rubin themselves admit in footnote 22 of their piece that this measure is wrong. *Id.* at 378.

nate the risk of a ladder collapse,¹⁰¹ the amount of money the jury selects might include the elimination of not only the nonmonetary loss, but the monetary loss as well. In this case, this distorted measurement of the pain-and-suffering loss will lead to overcompensation and, consequently, to overdeterrence.

Geistfeld's approach would make sense in two types of cases. First, his approach would make sense in cases of pure nonmonetary losses, such as when an infant is placed in a chair lift by an employee of a ski center who fails to secure and properly lock the belt intended to protect the child, and as a result the infant plaintiff becomes frightened and hysterical, but suffers from no physical manifestations.¹⁰² However, the vast majority of losses are mixed, and many states do not even allow for pain-and-suffering recovery unless accompanied by some type of physical harm.¹⁰³ Second, Geistfeld's approach would also make sense if there were a simple way to untangle the pain-and-suffering component from the jury assessment of the plaintiff's overall willingness to pay for precautions.¹⁰⁴

Therefore, Geistfeld's approach is not only unpredictable (because a jury decides on a case-by-case basis), and relatively expensive (in terms of jury time) but might also, under one possible interpretation of his approach, send incorrect deterrence signals to potential tortfeasors; it might lead to overdeterrence.¹⁰⁵ The latter problem does not exist when the measurement is not the ex ante willingness to pay to eliminate the risk that caused the pain-and-suffering loss but rather the ex ante willingness to pay for pain-and-suffering insurance coverage. This approach is discussed next.

¹⁰¹ Geistfeld, *supra* note 35.

¹⁰² This scenario is similar to the facts in *Battala v. State*, 176 N.E.2d 729, 731–32 (N.Y. 1961).

¹⁰³ See, for example, the Motor Vehicle Financial Responsibility Law (“MVFRL”), which requires demonstrating “serious injury.” 75 PA. CONS. STAT. § 1705 (2004). The MVFRL defines “serious injury” as “[a] personal injury resulting in death, serious impairment of body function or permanent serious disfigurement.” *See id.* § 1702. Similarly, the Supreme Court of New Jersey held that in order for a plaintiff to recover for pain and suffering under the Tort Claims Act he must sustain a substantial “permanent loss of a bodily function.” *Brooks v. Odom*, 696 A.2d 619, 623 (N.J. 1997). For a useful summary of the doctrine, see John C.P. Goldberg & Benjamin C. Zipursky, *Unrealized Torts*, 88 VA. L. REV. 1625 (2002).

¹⁰⁴ Indeed, in an effort to achieve disentanglement, Geistfeld provides sample jury instructions; unfortunately, these instructions are by no means simple to follow. Geistfeld, *supra* note 35, at 842–43. In fact, based on my empirical studies, I have serious doubts regarding whether juries would even be able to effectively assess the willingness to pay to eliminate the entire risk of injury (which includes both the monetary and nonmonetary components), a much simpler task. *See Avraham, supra* note 11 (describing individuals' difficulties in assessing the willingness to pay for pain-and-suffering coverage); *see also McCaffrey et al., supra* note 15, at 1402–04 (finding inconsistencies in juries' assessments of punitive damages).

¹⁰⁵ For similar reasons, Graham and Pierce's suggestion to compensate potential victims—while healthy—for risks imposed on them, regardless of whether they are eventually injured, would not work well, if at all. Daniel A. Graham & Ellen R. Pierce, *Contingent Damages for Products Liability*, 13 J. LEGAL STUD. 441, 464–68 (1984).

VI. THE IDEAL APPROACH: A JURY ASSESSES HOW MUCH
PAIN-AND-SUFFERING COVERAGE A RATIONAL INDIVIDUAL
WOULD HAVE PURCHASED IN THE MARKET

Most law and economics scholars agree that the question of whether tort law should provide pain-and-suffering damages depends on whether there is a demand for such coverage in a hypothetical insurance market.¹⁰⁶ Asking a jury to assess whether such a demand exists and, if so, to assess its scope is therefore a natural approach to how to best assess pain-and-suffering damages from a law and economics perspective.¹⁰⁷ Indeed, this rationale is what inspired the line of studies by Viscusi and Evans which were mentioned above.¹⁰⁸

Again, as in the previous proposals, one might worry about the relative administrative costs associated with imposing such a burden on the jury as well as the costs associated with the unpredictability of determining awards in such a manner. I will not elaborate on these issues here because I believe that, in any event, there is a different fatal flaw to this approach.

In a recent article, I presented a series of experiments which asked individuals to assess the amount of money that they would be willing to add to the price of several products they were hypothetically purchasing in order to obtain pain-and-suffering insurance coverage in case products should be defective and cause injury.¹⁰⁹ My studies show that people are willing to pay insurance premiums well above (hundreds of percent above) the expected value of the insurance coverage.¹¹⁰ In contrast to how the theory advises people to make such decisions, participants added some perceived-as-reasonable premium to the price of the product, neglecting the expected value of the coverage altogether. In fact, most participants were willing to pay between 25% to 35% of the product price, regardless of the expected value of the coverage.¹¹¹ For example, when asked how much they would pay for monetary and nonmonetary coverage when buying different products, participants were willing to pay \$316 for monetary coverage for tires (that cost \$800) and \$266 for nonmonetary coverage, where the expected value of the insurance coverage, for both types of insurance, was only \$1.¹¹²

¹⁰⁶ See Avraham, *supra* note 11.

¹⁰⁷ Interestingly, this approach was suggested and rejected by Calfee and Rubin. The reason they rejected it is that they believed that the optimal coverage of a pain-and-suffering insurance policy is zero (or negative). Thus, courts would be unlikely to use this measure. Calfee & Rubin, *supra* note 10, at 379–80.

¹⁰⁸ See *supra* note 85.

¹⁰⁹ See Avraham, *supra* note 11.

¹¹⁰ *Id.*

¹¹¹ *Id.*

¹¹² Indeed, in conversations we had with participants in the pretest stages we discovered that many participants, when deciding how much to spend, did not take into account the expected value of the coverage. This result was corroborated by the fact that providing participants with information about the

As McCaffery et al. showed, given the array of cognitive biases that decisionmakers are subject to, it is not surprising that they perform so poorly in this task.¹¹³

Assuming that juries make the same decisionmaking errors as the participants in my study, the empirical evidence suggests that quantifying the desired coverage (whether monetary or nonmonetary coverage) by asking juries to assess how much coverage a rational individual would have purchased in the market, would yield distorted measures of the actual value of pain and suffering, and therefore lead to overdeterrence. For this reason alone, this approach should not be implemented.

VII. THE SUGGESTED APPROACH: A SYSTEM OF NONBINDING AGE-ADJUSTED MULTIPLIERS (“NBAAM”)

At last, let me try to sketch a possible solution. Pain-and-suffering damages seek to compensate the victim for the severity of her injury, which is not already compensated in the monetary-loss component. The problem all previous proposals have attempted to solve was essentially how best to estimate the severity of a tort victim’s injuries. Research by psychologists show that jurors, plaintiff lawyers, defendant lawyers, and judges generally agree about the ranking of severity of a given injury, but vary with respect to the dollar amount that should be attached to the injury.¹¹⁴ As I argued before, many scholars (BSB included) have used the nine-point severity-of-injuries scale to categorize severities of injuries. But this approach is unsuccessful for reasons I explained above.¹¹⁵

Is there a simple proxy for severity of injury? I suggest using specific components of the monetary loss as a proxy for the nonmonetary loss is both administratively inexpensive and analytically precise. Specifically, I suggest using medical costs as the basis for calculating the pain-and-suffering loss. Under my approach, a system of nonbinding age-adjusted multipliers (“NBAAM”) would be associated with the medical costs of an injury in order to calculate the pain-and-suffering component. Consider the following table:¹¹⁶

expected value was not significantly correlated with a change in the premiums, but only with the mere likelihood of buying insurance. *See id.*

¹¹³ See McCaffery, *supra* note 15, at 1351–54.

¹¹⁴ Roselle L. Wissler et al., *Decisionmaking About General Damages: A Comparison of Jurors, Judges and Lawyers*, 98 MICH. L. REV. 751, 773–82 (1999). A possible critique of the Wissler et al. study is that the authors used only a five-point scale, which might have compressed ranking of variability of severity of injury. *See also* McCaffery et al., *supra* note 15.

¹¹⁵ *See* discussion *supra* notes 36–37 and accompanying text.

¹¹⁶ The table should not be taken at face value. The numbers are merely illustrative. Specifically, the table presents a system of progressive multipliers. It seems intuitively appealing to connect in a progressive manner the pain and suffering one goes through with one’s health costs. The more health costs one incurs and the more severe one’s injury is, the larger the pain and suffering. Moreover, it seems intuitive that people with more severe injuries (reflected in higher health costs) suffer proportionally

1	2	3
Medical Costs	Multiplier	Pain-and-Suffering Damages
\$0–\$100,000	0.5	\$0–\$50,000
\$100,001–\$500,000	0.75	\$75,000–\$375,000
\$500,001–\$1,000,000	1	\$500,001–\$1,000,000
Above \$1,000,000	1.25	Above \$1,250,000

As is shown in the table, in order to calculate the pain-and-suffering component, the jury will have to first determine the past and future medical costs associated with the injury (Column 1). This will be done in the same manner in which it is done today, by hearing testimony from expert witnesses and others. Then, the jury will have to multiply the health costs by the multipliers in Column 2. The result is the pain-and-suffering component found in Column 3.

The multipliers can be calculated in various ways. For example, multipliers could be derived from prior awards in the jurisdiction and then given to juries as nonbinding guides to valuations. The parties' lawyers can then present these multipliers to the jury on a case-by-case basis. Alternatively, the multipliers can be predetermined by the legislature, allowing the jury to make some adjustments for the case before it. Another possibility would be to establish a statewide, or nationwide, database of multipliers for this purpose, based on past multipliers and laboratory studies, for various types of accidents—e.g., medical malpractice, car accidents, and intentional torts.¹¹⁷ Moreover, one can think of a regime where pain-and-suffering will be awarded only if health costs are above some floor, to assure such damages are only awarded in the cases where the seriousness of injury would warrant pain-and-suffering compensation.

The multipliers should also vary by age in order to capture the fact that a younger person living with a disability or perpetual source of discomfort would require more compensation than an older person with a shorter life expectancy. A twenty-year-old person with sixty years of pain and suffering is not in the same position as a sixty-year-old person facing twenty years of pain and suffering.¹¹⁸ The exact way by which the multipliers should be determined is beyond the scope of this Essay, and should be informed by empirical data regarding how successful they are in explaining severity of injury. The point is, however, that the multipliers should eventually map medical costs and age onto dollar value for severity of injury.

tuitive that people with more severe injuries (reflected in higher health costs) suffer proportionally more from their injuries.

¹¹⁷ Assuming, of course, that society finds the current practice, which distinguishes between the pain and suffering awarded in different contexts for a given injury, desirable.

¹¹⁸ Baldus et al., *supra* note 81, at 1164–65. For authors who offer such adjustments, see, for example, BSB, *Valuing Life and Limb*, *supra* note 1, at 943–45.

My proposal seems consistent with existing empirical evidence. While no single study has explored the correlation between pain-and-suffering damages and medical costs, several studies have shown positive correlation between pain-and-suffering damages and economic damages, which include loss of income and property damages.¹¹⁹

Why would larger economic loss be correlated with larger pain-and-suffering damages? The reason seems to be that larger economic losses are correlated with higher severity of injury, which in turn is what pain-and-suffering is all about.¹²⁰ Indeed, BSB reported that an objective assessment of severity of injury is the best single predictor of awards (it can explain approximately 40% of the variance).¹²¹ Recent research has shown that subjective assessments of severity of injury are even better predictors of pain-and-suffering awards: they account for 61% to 74% of the variance.¹²²

Yet, if severity of the injury is highly correlated with victims' health costs but not with their loss of income, as one would think intuitively, then one would expect to see pain-and-suffering awards increase with economic losses, yet at a decreasing marginal rate such that cases with very high levels of economic losses receive proportionally less than cases with smaller economic losses. Indeed, this concave relationship between monetary loss and pain-and-suffering damages is exactly what Rodgers found analyzing 859 product liability cases involving nonfatal injuries.¹²³

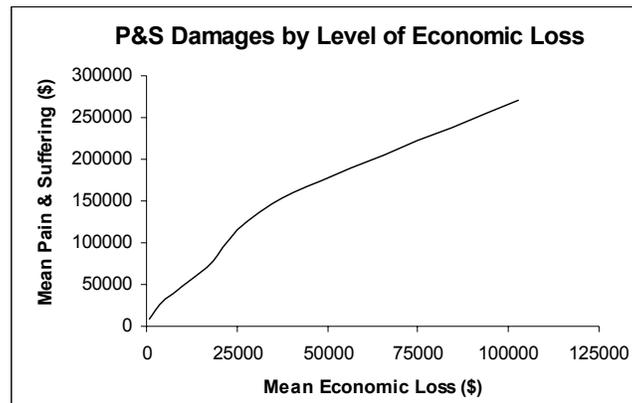
¹¹⁹ See Avraham, *supra* note 11; Viscusi, *Systematic Compensation*, *supra* note 2, at 212.

¹²⁰ See Viscusi, *Systematic Compensation*, *supra* note 2, at 212 ("Claims involving large financial losses tend to be particularly severe injuries, and one would expect such injuries to receive more compensation for the non-monetary losses associated with an injury."). For a list of experimental studies which examine mock jurors' awards, see Wissler et al., *supra* note 114, at 758 n.27.

¹²¹ BSB, *Valuing Life and Limb*, *supra* note 1, at 941. In another study, it explained twenty-three percent. See Wissler et al., *supra* note 114, at 783.

¹²² Wissler et al., *supra* note 114, at 760–61.

¹²³ Gregory Rodgers, *Estimating Jury Compensation for Pain and Suffering in Product Liability Cases Involving Nonfatal Injury*, 6 J. FORENSIC ECON. 252, 260 (1993).



Source: Gregory Rodgers, *Estimating Jury Compensation for Pain and Suffering in Product Liability Cases Involving Non Fatal Injury*.

The reason pain-and-suffering awards are concave with economic loss was considered a puzzle by scholars and led to different explanations.¹²⁴ The reason might be very simple. A substantial portion of economic losses is the loss-of-income component. The concavity probably represents a jury's tendency to increase pain-and-suffering awards as medical costs increase, and at the same time their tendency not to award high income people higher pain-and-suffering damages because they do not see pain-and-suffering losses being related to income. Put differently, the slope of pain-and-suffering damages decreases at higher levels of monetary damages because (1) the higher end of the curve might be driven mainly by high income losses and (2) rational juries are only increasing pain-and-suffering awards proportional to severity of injury, which increase with medical costs but not with higher levels of income loss.

My proposal to base pain-and-suffering damages on medical costs and age has both a normative and a positive perspective. On the normative side, the argument is that a system of nonbinding age-adjusted multipliers should exist.¹²⁵ On the positive side, the argument is that analysis of observed jury

¹²⁴ See *id.* at 260. Rodgers believes it demonstrates that juries "may simply believe that compensatory damages for pain and suffering should not increase proportionately to economic losses." Viscusi, in contrast, speculates that it might be due to some measurement errors or because plaintiffs inflate their demands for compensation. W.K. Viscusi, *The Determinants of the Disposition of Product Liability Claims and Compensation for Bodily Injury*, 15 J. LEGAL STUD. 321, 328-340 (1986).

¹²⁵ See Marcus L. Plant, *Damages for Pain and Suffering*, 19 OHIO ST. L.J. 200, 211 (1958) (proposing a limit on damages for pain and suffering, perhaps to be set at fifty percent of medical expenses proved at trial). My proposal is different. First, I do not set the multiplier, but rather let it be determined by the actual practice, which seems to be between six and ten times larger than Plant's proposal. Second, I suggest allowing the jury some flexibility in deviating from the multiplier in some cases. Third, I

awards disaggregated by type of damages may yield evidence consistent with the hypothesis that juries already perform the type of calculations described above. To establish the positive claim, more empirical research is required to show the relationship between pain-and-suffering awards and medical costs awards. Appropriate data for this task is hard to come by, as few good data sets have damage awards broken down into their components. In contrast, to establish the normative claim, one need only show that indeed severity of injury (which is the item for which pain-and-suffering damages compensate) is positively correlated with medical costs. While there is some evidence that this indeed is the case, data for this, too, is hard to find.¹²⁶ Observe, however, that for the normative claim one need not show that juries treat pain and suffering this way in practice. In fact, it could be that we see high variation in pain-and-suffering damage awards because juries do not do what they ought to do. I attempt to analyze the existing empirical data for both the normative and the positive perspectives elsewhere.¹²⁷

I chose only medical costs as the normative basis for calculating the pain-and-suffering component, thereby excluding the loss-of-income component of the monetary damages, for several reasons. First, it seems to me unjustified to link an individual's pain and suffering to her income. All else being equal, it seems unjustified to believe that high-wage earners experience more pain and suffering from an accident than do low-wage earners. Yet, linking the pain-and-suffering component with economic damages does just that. Second, it is relatively easy to estimate future health costs once the plaintiff's health condition has stabilized. In contrast, future loss of income is much more complicated to estimate. A host of factors may affect a future assessment of this sort, such as the possibility of promotion, career change, etc. Moreover, many victims are children whose future loss of income is still very speculative.

Third, the loss-of-income component is problematic enough on its own terms; making pain-and-suffering damages dependent on it will exacerbate the problem. Loss of income has adverse effects on fairness and efficiency because (assuming everybody pays the same price for the product or service) low-wage earners cross-subsidize high-wage earners.¹²⁸ The result is a

allow for different multipliers for different levels of severity of injuries. Fourth, I suggest that the multiplier be adjusted for age.

¹²⁶ Eduard Zaloshnja et al., *Crash Costs by Body Part Injured, Fracture Involvement, and Threat to Life Severity, United States, 2000*, 36 ACCIDENT ANALYSIS & PREVENTION 415 (2004); see also SCI. POL'Y COUNCIL, EPA, HANDBOOK FOR NON-CANCER HEALTH EFFECTS VALUATION app. B (2000), available at <http://www.epa.gov/OSA/spc/noncancer.htm> (reviewing literature for economic valuation of pain and suffering); FRANK A. SLOAN ET AL., SUING FOR MEDICAL MALPRACTICE 136-47 (1993).

¹²⁷ Ronen Avraham, *Explaining Jury Awards for Pain-and-Suffering* (Sept. 23, 2005) (unpublished manuscript, on file with author).

¹²⁸ Both high earners and low earners pay the same price for the product or service. The price includes, among other things, the legal costs associated with a product failure or negligence in providing the service. But the legal costs defendants face are higher for high earners than for low earners because

regressive system, considered by many to be unfair. Additionally, as in other instances of cross-subsidization, it might lead to adverse selection, which could ultimately drive the product or service out of the market.

One may argue, as Jeffrey O'Connell has, that tying pain-and-suffering damages to medical costs might lead tort victims to behave strategically and to incur unnecessary medical costs.¹²⁹ Indeed, courts have long been concerned about strategic behavior of tort victims with regard to pain-and-suffering damages, as can be seen from their reluctance to recognize (until relatively recently) causes of action for intentional and negligent infliction of emotional distress.¹³⁰ But if at all, medical costs seem to be less susceptible to manipulation than other ways of measuring pain-and-suffering loss, such as economic loss (which includes loss of income) or the victim's own testimony about her grief. While a plaintiff may strategically go to excessive doctor's visits or get unnecessary X-rays, she will not volunteer to go through an operation merely to receive higher pain-and-suffering compensation down the road. Indeed, insurance companies have developed a practice where they do not pay for medical costs that seem unrealistic in their settlements.¹³¹ There is no reason to believe that juries will not be able to do a decent job combating victims' strategic behavior, too.¹³² If, in any case,

higher earners have higher loss of income. Thus, low earners cross-subsidize the high earners. See Priest, *supra* note 21, at 1559.

¹²⁹ See Jeffrey O'Connell, *A Proposal to Abolish Defendants' Payment for Pain and Suffering in Return for Payment of Claimants' Attorneys' Fees*, 1981 U. ILL. L. REV. 333, 334-35 (stating that the prospect of pain-and-suffering recovery encourages claimants to run up their medical expenses to buttress their pain-and-suffering claims and by inviting fraud); Jeffrey O'Connell & Andrew S. Boutros, *Treating Medical Malpractice Claims Under a Variant of the Business Judgment Rule*, 77 NOTRE DAME L. REV. 373, 379 (2002) ("[S]ince awards for pain and suffering are often roughly calculated as a multiple of medical expenses, the incentive to incur unnecessary medical services (already covered by the claimant's own health insurance) is rampant.").

¹³⁰ See PROSSER & KEETON, *supra* note 5, at 54-55. Interestingly, the authors argue that mental suffering is "no harder to estimate in terms of money than the physical pain of a broken leg, which never has been denied compensation." *Id.* at 55. For an interesting analysis of this point, see Goldberg & Zipursky, *supra* note 103, at 1668-71.

¹³¹ Interviewing insurance adjusters, Ross writes:

The constant by which the bills are multiplied will vary, and, more significantly, adjusters must satisfy themselves as to the nature of the bills. For instance, X-rays will be dismissed by statements such as: "I'll be damned if I'll pay for your movie pictures." Repeated treatments for sprains will be disallowed as physical therapy rather than medical expenses.

H. LAURENCE ROSS, *SETTLED OUT OF COURT, THE SOCIAL PROCESS OF INSURANCE CLAIMS ADJUSTMENT* 108 (1980). While adjusters are more sophisticated than jurors in fighting strategic behavior, it does not seem implausible to expect juries to be able to ignore repeated claims which look unnecessary on their face.

¹³² At least that is what many lawyers seem to think. See, e.g., FreeAdvice.com, *How Do Insurance Companies and Juries Assign Values to Pain and Suffering?*, http://www.personalinjurylawadvice.com/injury_help.php/117_156_835.htm (last visited Sept. 16, 2005). Explaining what juries consider when they award pain-and-suffering damages, the company mentions, among other things, medical costs. The company then states: "Of course, running up the bills unnecessarily is looked at with a fair degree of suspicion. Stretching out treatment for a minor injury may look like greed to a jury and certainly to an insurance company." *Id.*

medical costs will prove to be too easy to manipulate, hospitalization costs could be considered instead. Again, the exact set of proxies to be eventually used should be determined based on empirical data regarding how successful they are in explaining severity of injury.

Interestingly, it has long been argued that a common practice in settlements reached by parties is to compute pain-and-suffering damages as some multiple of the economic costs incurred by the plaintiff.¹³³ This practice has been criticized by Geistfeld as senseless.¹³⁴ I agree. My proposal, however, is to multiply the medical costs and not the entire economic loss. This was probably practiced when victims suffered medical loss but no loss of income. Yet, it is not clear whether this was practiced when victims did suffer loss of income (in addition to their medical costs), and whether this is still the practice today.¹³⁵

I contend that the system of nonbinding age-adjusted multipliers (“NBAAM”) solves the problem of unpredictability and, at the same time, approximates optimal deterrence, all at very low administrative costs. NBAAM combines the advantages of efficiency and fairness, gained by having a jury deciding on a case-by-case basis, without the high complexity of assessing pain-and-suffering losses present in other proposals.

NBAAM provides predictability because lawyers will have a realistic idea regarding the pain-and-suffering component of potential damages once they have reviewed the evidence regarding the medical costs, and the table of relevant multipliers. NBAAM approximates optimal deterrence because, absent any other reliable measure, linking the pain-and-suffering damages to the victim’s health costs is the best approximation of the social nonmonetary costs of the defendant’s conduct. Lastly, it avoids the complexity present in other proposals because it does not burden the policymaker with designing schedules, scenarios, matrices, or guidelines, nor does it burden the juries with applying them in practice.¹³⁶

¹³³ See O’CONNELL, *supra* note 8, at 51; Neil Vidmar & Jeffrey Rice, *Assessment of Noneconomic Damage Awards in Medical Negligence: A Comparison of Jurors with Legal Professionals*, 78 IOWA L. REV. 883, 883–94 (1993).

¹³⁴ Geistfeld, *supra* note 35, at 787.

¹³⁵ See ROSS, *supra* note 131, at 107–08 (explaining that the multiplier is an “arbitrary coefficient—typically from two to five, depending on the practice of the area”). Wissler et al. argue, without citing any authority, that lawyers settle for some multiplier of medical costs, usually three. Wissler et al., *supra* note 114, at 812–13; see also Boutros, *supra* note 129, at 379; O’Connell & Boutros, *supra* note 129, at 341–42. More recently, in 2002 Stephen Daniels and Joanne Martin reported that the multiplier for special damages had decreased from roughly 3.1 to 1.7 over the previous five years. Stephen Daniels & Joanne Martin, *It Was the Best of Times, It Was the Worst of Times: The Precarious Nature of Plaintiffs’ Practice in Texas*, 80 TEX. L. REV. 1781, 1807 n.61 (2002).

¹³⁶ One might argue that under my approach potential injurers will not take “optimal” precautions, but instead respond to the expected awards or settlement amounts resulting from this approach. These precautions, so goes the objection, do not reflect the “real” pain-and-suffering loss and might cause either over- or underdeterrence, depending on the expected awards. Geistfeld, *supra* note 35, at 787. This critique, however, simply raises the question of what real pain-and-suffering loss is.

In any case, as the previous Parts reveal, there is probably no superior way to actually calculate the “real” pain-and-suffering loss.¹³⁷

Of course, any solution to the problem of pricing the unpriceable—human pain and suffering—will have its deficiencies. The NBAAM is not different in that respect. As was explained above, it is based on the intuitively acceptable assumption (yet an assumption at this point nonetheless) that comparable injuries incur similar medical costs, and that more severe injuries incur higher medical costs. For example, the medical costs associated with leg amputation would probably be lower than the medical costs associated with saving the leg. Yet, the pain and suffering of the amputee might be higher. Or, consider a bystander’s claim for pain-and-suffering damages for witnessing the severe injury of a relative. The medical costs (of the bystander) may be relatively small, but the grief may be very large. The same would hold for other cases, such as facial disfigurement as a result of defective facial cream, losing one’s fetus as a result of medical malpractice, and so on. The question, of course, is how strong the correlation between severity of injury and medical costs (adjusted for age) is. It will not be a perfect correlation. The empirical challenge is to show that the correlation is strong enough. In any case, since the NBAAM (as its name suggests) is a system of nonbinding multipliers, the jury is permitted to deviate from the conventional multipliers. It seems plausible to estimate that for the vast majority of injuries NBAAM can work.

Another problem with the NBAAM is that it cannot be applied to wrongful death claims, as there are usually no medical costs involved. This problem is not unique to the NBAAM system. Under the current tort system, as well as under several (but not all) of the schemes proposed in the literature, death is treated in a different way than injuries in terms of calculating pain-and-suffering awards. With respect to survivor causes of action for wrongful death, the pain and suffering sought may have little to do with medical costs of the deceased as in many cases the medical costs are zero. Proceeding from the assumption that all human life has the same noneconomic worth (that is, an intrinsic moral value independent of earnings potential), I would propose that a fixed sum should be established for all pain and suffering from wrongful deaths calculated independent of any economic loss component.

In sum, NBAAM is not perfect, yet it seems to be able to do a better job than the current system, as well as all of the other proposals put forward to date.

¹³⁷ As Baldus et al. indicated, “there is no ‘correct’ general damages award for any non-pecuniary harm. Rather, the test is the impact of the award under review on the general level of consistency among similar cases.” Baldus et al., *supra* note 81, at 1182.

VIII. CONCLUSION

BSB's paper was a significant contribution to our understanding of not only the problems, but also some possible solutions to the challenge of putting a price on pain and suffering. In this Essay, I have argued that non-binding age-adjusted multipliers ("NBAAM") might best achieve this goal by mapping age and medical costs onto dollar value for severity of injury. Should gender play a role? On the one hand, women might experience injuries differently than men as an empirical matter. On the other hand, whether, as a matter of policy, these differences should be accommodated is a more complicated question. Establishing the superiority of the NBAAM requires further theoretical, and especially empirical, investigation. By no means did I intend to do this here. I did, however, attempt to sketch out the contours for how a system of NBAAM would work.

NBAAM enhances a jury's ability to make an informed decision, while avoiding procedural complexity. It preserves the power of the jury, as it essentially leaves the determination of the pain-and-suffering damages in the jury's hands.¹³⁸

This approach should be supported by two distinct groups of people. Those who seek to maintain maximum jury discretion should support my approach for the reasons just mentioned. Those who see award variability as caused mostly by jury errors should support my approach because pain-and-suffering awards will be guided by a set of rational guidelines informed by considerations of fairness and efficiency. They will be highly correlated with the evidence-dependent medical costs.

NBAAM seems superior to many of the other approaches because there is no need to group together similar injuries as is required by schedules, matrices, or scenarios. Not all leg injuries, skin burns, or even amputations are ever the same.¹³⁹ Under the NBAAM approach, there is no need to argue about the right level of categorization of injuries.¹⁴⁰ Nor is there

¹³⁸ It does this in few ways. First, jurors have some discretion regarding the medical damages they award. This serves as a basis for the nonmonetary awards as well. Second, the multipliers, being non-binding, enable the jurors to respond to idiosyncratic cases and preserve their authority to exceed even the amount governed by multipliers. It does not then abrogate the sanctity of trial by jury, a sensitive issue in the American legal system.

¹³⁹ Chase, *supra* note 32, at 786.

¹⁴⁰ *Id.* at 786. Baldus et al. indicated that

[i]njuries are . . . of many different types and [occur] in many different locations. To identify similar personal injury cases, one ideally would pursue cases in which the *location* and *type* of injury are identical. An injured arm is not necessarily the same as an injured leg, nor is a certain type of injury to an arm (e.g., a burn) the same as a comparable injury to a leg. Different symptoms occur, different treatments are required, and different functional outcomes result. All of these factors may affect the level of a plaintiff's pain, suffering, and loss of enjoyment of life. Nevertheless, comparison cases with the same location and type of injury are often in short supply.

Baldus et al., *supra* note 81, at 1161 n.126 (emphasis in original). This problem is exacerbated in cases of multiple injuries because there, as Baldus et al. indicate, "the injury that most substantially contributes to the plaintiff's non-pecuniary harms should be selected to define the primary anatomical charac-

any need to account for inflation because the multipliers are unaffected by inflation.¹⁴¹ The enhanced predictability of awards under the NBAAM approach might well promote settlements and make tort liability a more readily insurable event.

A significant issue in any proposal is the tension between doing justice in individual cases and aggregate justice across cases. A system of predetermined NBAAM is expected to narrow the distribution of pain-and-suffering awards (and thus increase the predictability of the awards in any given case), while still responding to unusually worthy (and unworthy) cases. In contrast, capping pain-and-suffering damages addresses only the outliers, leaving untouched the large variation of damage awards in mid-range cases. Similarly, the matrix of dollar values based on the age of the victim and the severity of the injury insufficiently responds to unusually worthy (and unworthy) cases. The scenario-based system, as well as Geistfeld's ex ante willingness-to-pay approach, would not be successful in simplifying the process of jury valuation, and may be difficult to review for error or unfairness.¹⁴²

Overall, it seems to me that implementing a system of NBAAM should not be too difficult, although I do expect that interest groups might challenge the Supreme Court to determine whether the multipliers are constitutional, very much as we see happening with punitive damages multipliers.

All in all, it is uncertain whether, at the time of the 150th issue of the *Northwestern University Law Review*, putting a price on human pain and suffering will have evolved from the current practice in order to deal with some of the issues that have been identified in this Essay. But what is certain is that BSB's seminal paper will remain the starting point for people seeking to understand tort reform in the United States. I believe that it will continue to serve as a source of inspiration for new ideas about reforming tort law. It certainly was such a source for me.

teristic of the plaintiff's injury." *Id.* Furthermore, as Baldus et al. note, the amount of pain a person experiences as the result of a certain injury is further complicated by the fact that

an injury that is perceived by one person to cause a mild degree of pain may be perceived by another person to cause a moderate degree of pain. For this reason, health providers have been reluctant to state that a certain type of injury will result in a certain or predictable degree of pain. Nevertheless, for a certain type of injury (e.g., a second-degree burn on the back of the hand), it is common that people experiencing the injury will report that they experienced about the same degree of physical pain.

Id. at 1233. For a discussion of a similar problem, see also Diamond, Saks & Landsman, *supra* note 13, at 320–321.

¹⁴¹ As Baldus et al. argued,

the effects of inflation fatally undercut the comparability of verdicts awarded and approved in different years. While preference should be given to recent comparison cases, the risk of using earlier comparison cases to enlarge the pool of comparable cases can be substantially reduced by adjusting the awards for inflation in the earlier cases.

Baldus et al., *supra* note 81, at 1182.

¹⁴² BSB, *Valuing Life and Limb*, *supra* note 1, at 965. Yet, as medical CPI does not necessarily follow the general CPI, distortions might occur after all.

