Bringing Predictability to the Chaos of Punitive Damages

Benjamin J. McMichael*
W. Kip Viscusi†

ABSTRACT

Punitive damages remain unique in the American legal system. Awarded in the civil context with none of the protections offered in criminal law, courts levy punitive damages to punish and deter. The Supreme Court of the United States has clearly stated that courts may only seek to achieve these two goals when imposing punitive damages. A closer reading of the Court's punitive damages jurisprudence, however, reveals another goal that has largely been ignored: predictability. Unlike punishment and deterrence, predictability is not a purpose for which to award punitive damages. Instead, the Court requires that, when awarded, the level of punitive damages must be predictable. Failure to provide fair notice of the penalty for which a defendant may be liable amounts to a violation of the Fourteenth Amendment's Due Process Clause.

Though the Supreme Court has articulated that predictability is on par with punishment and deterrence in its punitive damages jurisprudence, the question remains as to whether this goal has been achieved. This Article answers that question with an empirical analysis of 167 blockbuster punitive damages awards—those over $100 million. These extreme awards offer a unique and important opportunity to investigate whether the Court's current approach to predictability has worked. Unfortunately, it has not. Our analysis reveals that blockbuster awards remain unpredictable. In general, the amount of blockbuster punitive damages awarded is roughly as predictable as deaths caused by catastrophic floods, and few would argue that devastating natural disasters are readily predictable.

Given the continued unpredictability of punitive damages, as evidenced by the random occurrence of blockbuster awards, this Article takes the next logical step of articulating a new constitutional framework. We argue that the Supreme Court should abandon its complicated system based on three "guideposts," which eschews bright-line rules. In its place, we offer a clear limit on punitive damages. We propose that punitive damages may not exceed the compensatory damages awarded against the same defendant by more than a factor of three. This 3-to-1 ratio limit stems from the same type of empirical evidence that the Court has historically embraced in its punitive damages jurisprudence. The lone exception to this limit applies when a person is killed or injured. In that case, the value of statistical life serves as the lodestar for determining the total damages payment,

* Associate Professor of Law, University of Alabama School of Law.

† University Distinguished Professor of Law, Economics, and Management, Vanderbilt University Law School.

thus guiding courts toward predictable punitive damages awards. If the Court takes predictability as seriously as it has stated, it can adopt our approach to take meaningful steps toward this important goal.

INTRODUCTION

At first glance, talcum powder and surgical gowns appear to have little in common. Both products fit within uses related to human health, broadly defined, but beyond that, they are not closely related products. These two products, however, have one important feature in common: They have both supported extremely large punitive damages awards. Based on claims that the use of talcum powder was linked to ovarian cancer, a Missouri jury imposed punitive damages over $4 billion.[1] Based on claims that "[d]efendants concealed material information from [plaintiffs] relating to a defect in [surgical gowns] and that, as a result, [plaintiffs] overpaid for the gowns," a California jury imposed punitive damages totaling $450 million.[2] Awards this large may seem unusual, but since 1980, courts have imposed at least 167 punitive damages awards over $100 million.[3] Because of their size and ability to have financial consequences not just for individual and corporate defendants, but entire industries, blockbuster punitive damages awards have attracted the attention of courts, policymakers, and scholars alike.[4] These extremely large awards are the focus of this Article.

Blockbuster punitive damages awards are a subset of punitive damages more generally. And punitive damages occupy a unique place in the American legal system. While they are not quite criminal sanctions, neither do they fit neatly into the civil system. Unlike the more familiar and more commonly awarded compensatory damages, punitive damages do not serve to compensate plaintiffs for wrongs they have suffered. Instead, they exist solely to punish defendants and deter wrongdoing. They do so by forcing defendants to pay above and beyond the amount necessary to compensate plaintiffs for their harms. Though punitive damages are rare, courts have demonstrated willingness to impose large awards. In theory, defendants fearing the imposition of punitive damages awards exceeding the accompanying compensatory awards by several multiples will take greater care to avoid harming potential plaintiffs. For this deterrent function to operate in practice, however, courts have increasingly recognized that

---

1. Ingham v. Johnson & Johnson, 608 S.W.3d 663, 678, 680 (Mo. Ct. App. 2020), *cert. denied*, 141 S. Ct. 2716 (2021).

2. Bahamas Surgery Ctr., LLC v. Kimberly-Clark Corp., No. CV148390DMGPLAX, 2017 WL 2120062, at *1 (C.D. Cal. May 15, 2017), *vacated and remanded*, 820 F. App'x 563 (9th Cir. 2020). This case was a class action.

3. *See infra* Part II.A.

4. *See, e.g.*, W. Kip Viscusi & Benjamin J. McMichael, *Shifting the Fat-Tailed Distribution of Blockbuster Punitive Damages Awards*, 11 J. EMPIRICAL LEGAL STUD. 350, 356, 363 (2014) (analyzing the fat-tailed distributions of blockbuster awards); Philip Morris USA v. Williams, 549 U.S. 346, 353–355 (2007) (representing one instance of an appellate analysis of a blockbuster award).

punitive damages awards "should be reasonably *predictable*."[5] Predictability enables potential injurers to take into account the financial ramifications of their actions at the time when they are making the risk decision.[6] Indeed, courts have recognized that imposing large damages awards on defendants without sufficient warning implicates "[e]lementary notions of fairness."[7]

Despite courts' recognition of the importance of predictability, punitive damages remain difficult to foresee in both the likelihood that courts will impose them and in the size of the award that is eventually imposed. In this Article, we focus our attention on the latter type of predictability and examine what are, simultaneously, the most salient and most variable punitive damages awards—the "blockbuster" awards. Blockbuster punitive damages awards include those awards that exceed $100 million and therefore have the potential to have the greatest impact on individuals, firms, and entire industries.[8] However, while courts have paid lip service to the relevance of predictability in large awards, they have not yet articulated a clear doctrine to impose this predictability. Currently, the only general limitations on blockbuster awards, and punitive damages more generally, stem from the Due Process Clause of the Fourteenth Amendment.[9]

This Article explores the next logical steps in punitive damages jurisprudence. If courts take predictability seriously, then they must acknowledge that current doctrines are simply inadequate to achieve this goal. The Supreme Court's most recent statement on the Fourteenth Amendment's limitations on punitive damages came in 2003.[10] Since then, lower courts have handed down at least 89 blockbuster punitive damages awards. While this most recent guidance may have marginally improved predictability, the 18 years since that ruling have proven that the goal of predictability remains elusive. Blazing a path toward predictability, this Article offers a novel analysis of punitive damages. Our analysis proceeds in four steps.

---

5. Exxon Shipping Co. v. Baker, 554 U.S. 471, 502 (2008) (emphasis added).

6. *See id.*

7. BMW of N. Am., Inc. v. Gore, 517 U.S. 559, 574 (1996).

8. For previous work on blockbuster punitive damages awards, see W. Kip Viscusi, *The Blockbuster Punitive Damages Awards*, 53 EMORY L.J. 1405, 1408 (2004); Joni Hersch & W. Kip Viscusi, *Punitive Damages: How Judges and Juries Perform*, 33 J. LEGAL STUD. 1, 4–10 (2004); Alison F. Del Rossi & W. Kip Viscusi, *The Changing Landscape of Blockbuster Punitive Damages Awards*, 12 AM. L. & ECON. REV. 116, 117–18 (2010); Viscusi & McMichael, *supra* note 4, at 363–64; Benjamin J. McMichael & W. Kip Viscusi, *Taming Blockbuster Punitive Damages Awards*, 2019 U. ILL. L. REV. 171, 173 (2019).

9. *See, e.g.*, State Farm Mut. Auto. Ins. Co. v. Campbell, 538 U.S. 408, 429 (2003); Pac. Mut. Life Ins. Co. v. Haslip, 499 U.S. 1, 19 (1991).

10. *State Farm*, 538 U.S. at 429.

First, we demonstrate the centrality of predictability in the current constitutional understanding of punitive damages. Prior scholars have offered alternative justifications for punitive damages and argued that the "flip sides [of predictability]—particularity and variability—serve similarly important functions."[11] Though such functions may be desirable in certain situations, they undermine the deterrence role played by punitive damages and are inconsistent with the Court's approach to punitive damages more generally. We explore the current jurisprudence on punitive damages in the constitutional context to demonstrate the rise of predictability as a key component of constitutionality in punitive damages awards.

Second, we offer a novel take on the underlying theory of punitive damages. Though scholars have offered alternative theories of punitive damages, we engage directly with the theoretical foundations endorsed by the Supreme Court. Doing so demonstrates an important disconnect in this theory with current jurisprudence. The Court has recognized only two permissible functions of punitive damages: punishment and deterrence. To fulfill this second function under the only theory of punitive damages acknowledged by the Court, punitive damages must remain unlimited. The Court, however, has imposed specific limits on these awards. Two explanations for this obvious disconnect are possible. Either the Court misunderstood the underlying theory on which it has consistently relied, or the Court implicitly acknowledged that the twin goals of punishment and deterrence must yield to predictability. This Article endorses the latter explanation as more accurate.

Third, and given the primacy of predictability, we examine empirically whether this goal has been achieved. Analyzing a novel dataset of blockbuster punitive damages awards shows that even the goal of actual predictability remains unachieved. We augment an existing dataset of blockbuster awards with new information on awards from the past decade and build a new evidence base for the predictability (or lack thereof) of these extremely large awards. Our analysis demonstrates the continued unpredictability of blockbuster awards. In particular, it shows that, while the Court's decisions between 2003 and 2008 may have marginally improved the ability of defendants to foresee blockbuster awards, or at least an upper limit on these awards, unpredictability in these awards has since returned.

Finally, we explore two recent cases involving blockbuster awards to examine what has gone wrong. These two cases, in conjunction with our empirical analysis, suggest that the Court's current constitutional guidance on punitive damages is simply inadequate. To remedy this underlying

---

11. Carleen M. Zubrzycki, *Punitive Damages in an Era of Consolidated Power*, 98 N.C. L. REV. 315, 315 (2020). *See also id.* at 338–44 (discussing the importance of predictability).

problem, we propose a new doctrine to improve predictability. In doing so, we acknowledge the tendency of scholars to impose complicated solutions that may offer little assistance to courts in practice. Mindful of this potential issue, our solution is straightforward and simple to apply. The Court's current guidance provides that punitive damages exceeding the accompanying compensatory damages award by less than factor of 10 *are more likely* to "comport with due process" than punitive damages awards exceeding this ratio.[12] We emphasize the probabilistic nature of the Court's statement because the Court has explicitly stated that this ratio limit is *not* a fixed limit. Larger punitive damages awards may be constitutionally permissible in certain vaguely defined situations and smaller punitive damages awards may fail the constitutionality test in other vaguely defined situations.[13] To offer more concrete guidance to lower courts, our solution is simple: Any punitive damages award more than three times as large as the accompanying compensatory award violates the Due Process Clause of the Fourteenth Amendment.[14] This 3-to-1 ratio is derived from other areas of law that routinely seek to achieve similar deterrence goals as punitive damages, and we argue that this approach achieves meaningful predictability without needlessly undermining the other important goals punitive damages seek to accomplish.

This Article proceeds in four parts. Part I engages with the legal foundations of punitive damages, tracing the constitutionality of these awards through various challenges over the past century. Part II delves into the theory of punitive damages. In doing so, we focus on the theory most consistently relied upon by the Court in articulating a role for punitive damages in the American legal landscape. Part III then details the blockbuster awards and provides a novel empirical analysis of these awards. This analysis demonstrates the continued failure to achieve predictability. Part IV explores two recent examples of blockbuster awards, tracing their routes through

---

12. *State Farm*, 538 U.S. at 425.

13. *See id.* ("Nonetheless, because there are no rigid benchmarks that a punitive damages award may not surpass, ratios greater than those we have previously upheld may comport with due process where 'a particularly egregious act has resulted in only a small amount of economic damages.' [BMW of N. Am., Inc. v. Gore, 517 U.S. 559, 582 (1996)]; see also *ibid*. (positing that a higher ratio *might* be necessary where 'the injury is hard to detect or the monetary value of noneconomic harm might have been difficult to determine'). The converse is also true, however. When compensatory damages are substantial, then a lesser ratio, perhaps only equal to compensatory damages, can reach the outermost limit of the due process guarantee. The precise award in any case, of course, must be based upon the facts and circumstances of the defendant's conduct and the harm to the plaintiff.").

14. We offer one deviation from this simple rule when human life has been lost. This deviation, however, is equally easy to apply and does not overcomplicate our proposed solution. *See infra* Part IV.B.

various levels of courts to examine why current constitutional guidance remains inadequate. This Part also articulates a simpler constitutional approach that is better suited to achieving the Court's stated goals. A brief Conclusion follows.

I. THE LEGAL FOUNDATIONS OF PUNITIVE DAMAGES

The Supreme Court has never wavered in articulating the only reasons courts may impose punitive damages: punishment and deterrence.[15] In *BMW of North America, Inc. v. Gore*, for example, the Court unambiguously stated that "[p]unitive damages may properly be imposed to further a State's legitimate interests in punishing unlawful conduct and deterring its repetition."[16] The Court has not made such a clear statement on the importance, or even role, of predictability. The Court has nevertheless promoted predictability to parity with the more traditional goals of punishment and deterrence.

Before delving into the specifics of predictability in punitive damages, however, this Part examines why predictability matters from a legal and constitutional perspective. The importance of predictability in punitive damages is not immediately obvious. After all, imposing damages can accomplish the goal of punishing wrongdoers even if those wrongdoers have little sense of the size of those awards ex ante. Engaging with the jurisprudence on punitive damages can elucidate why predictability has come to play such an important role in governing awards. In general, the foundations of current constitutional jurisprudence on punitive damages lie firmly within the Fourteenth Amendment, and the requirement of predictability arises directly from due process requirements. However, these due process requirements only arose after the Supreme Court rejected challenges to punitive damages under the Fifth and Eighth Amendments. This Section begins by engaging with these early challenges before tracing the later development of limits on punitive damages through the Court's Fourteenth Amendment approach.

---

15. Gertz v. Robert Welch, Inc., 418 U.S. 323, 350 (1974) ("[Punitive damages] are not compensation for injury. Instead, they are private fines levied by civil juries to punish reprehensible conduct and to deter its future occurrence."); Cooper Indus., Inc. v. Leatherman Tool Grp., Inc., 532 U.S. 424, 432 (2001) ("[Punitive damages] operate as 'private fines' intended to punish the defendant and to deter future wrongdoing.").

16. *Gore*, 517 U.S. at 568.

A. The Constitutionality of Punitive Damages

Early challenges to the constitutionality of punitive damages were rejected under the Fifth and Eighth Amendments before plaintiffs found more success under the Fourteenth Amendment.[17] Beginning with the Fifth Amendment, the plaintiff in *United States v. Halper* challenged a punitive damages award under the Double Jeopardy Clause.[18] The Court held that "[t]he protections of the Double Jeopardy Clause are not triggered by litigation between private parties" and explained that "a private party [may file] a civil suit seeking damages for conduct that previously was the subject of criminal prosecution and punishment."[19] In the Eighth Amendment context, the Court has similarly upheld the constitutionality of punitive damages as a general matter. The Court explained in *Browning-Ferris Industries of Vermont, Inc. v. Kelco Disposal, Inc.* that the "Excessive Fines Clause does not apply to awards of punitive damages in cases between private parties."[20] Commenting more broadly on the permissibility of punitive damages under the constitution, the majority noted that it had "never held, or even intimated, that the Eighth Amendment serves as a check on the power of a jury to award damages in a civil case."[21] The protections afforded by the Eighth Amendment are concerned "with criminal process and with direct actions initiated by government to inflict punishment."[22] The Court went on to explain that "[a]wards of punitive damages do not implicate these concerns."[23]

The theme of these early challenges under the Fifth and Eighth Amendments was that the constitution does not prohibit the imposition of punitive damages as a general matter. The Court's early Fourteenth Amendment cases began by continuing this approach, with several cases avoiding the constitutional question altogether,[24] before later cases placed

---

17. The Supreme Court has also considered punitive damages in the context of the Seventh Amendment. However, questions in this context relate to the appropriate role for federal courts reviewing punitive damages and not the validity of those damages. *See, e.g.*, *Cooper Indus.*, 532 U.S. at 436 ("Our decisions in analogous cases, together with the reasoning that produced those decisions, thus convince us that courts of appeals should apply a *de novo* standard of review when passing on district courts' determinations of the constitutionality of punitive damages awards.").

18. United States v. Halper, 490 U.S. 435, 451 (1989), *abrogated by* Hudson v. United States, 522 U.S. 93 (1997).

19. *Id.*

20. Browning-Ferris Indus. of Vt., Inc. v. Kelco Disposal, Inc., 492 U.S. 257, 260 (1989).

21. *Id.* at 259–60.

22. *Id.* at 260.

23. *Id.*

24. *See id.* at 276–77 (1989) (explaining that because a Fourteenth Amendment challenge was not properly before the Court, that challenge "must await another day"); Bankers Life & Cas.

greater limitations on courts' ability to impose punitive damages. *Pacific Mutual Life Insurance Co. v. Haslip* represented the Court's first real foray into punitive damages under the Due Process Clause.[25] After examining both state and federal jurisprudence, the Court endorsed the common-law method of imposing punitive damages.[26] It held that allowing juries to decide the amount of punitive damages did not violate due process.[27] The Court explained, however, that even though the common-law method of awarding punitive damages did not violate due process, it was "concern[ed] about punitive damages that 'run wild.'"[28]

With this concern in mind, the Court considered whether the Due Process Clause restricts punitive damages, even if it does not bar their imposition altogether.[29] The justices refused to "draw a mathematical bright line between the constitutionally acceptable and the constitutionally unacceptable that would fit every case," but they did explain "that general concerns of reasonableness and adequate guidance from the court when the case is tried to a jury properly enter into the constitutional calculus."[30] Applying this reasoning to the specific punitive award in *Haslip*, the Court determined that the jury had exercised its discretion within appropriate bounds and that the punitive damages it awarded were "confined to deterrence and retribution, the state policy concerns sought to be advanced."[31] The Court noted that the relevant state law provided the jury with a number of relevant factors to consider[32] and explained that "[t]he application of these standards . . .

Co. v. Crenshaw, 486 U.S. 71, 87–88 (1988) (O'Connor J., concurring) ("Appellant has touched on a due process issue that I think is worthy of the Court's attention in an appropriate case [; however,] . . . [t]his due process question, serious as it is, should not be decided today.").

25. Pac. Mut. Life Ins. Co. v. Haslip, 499 U.S. 1 (1991).

26. *Id.* at 15–18.

27. *Id.* at 17 ("So far as we have been able to determine, every state and federal court that has considered the question has ruled that the common-law method for assessing punitive damages does not in itself violate due process. In view of this consistent history, we cannot say that the common-law method for assessing punitive damages is so inherently unfair as to deny due process and be *per se* unconstitutional." (internal citations omitted)).

28. *Id.* at 18.

29. *Id.*

30. *Id.*

31. *Id.* at 19.

32. *See id.* at 21–22 ("It was announced that the following could be taken into consideration in determining whether the award was excessive or inadequate: (a) whether there is a reasonable relationship between the punitive damages award and the harm likely to result from the defendant's conduct as well as the harm that actually has occurred; (b) the degree of reprehensibility of the defendant's conduct, the duration of that conduct, the defendant's awareness, any concealment, and the existence and frequency of similar past conduct; (c) the profitability to the defendant of the wrongful conduct and the desirability of removing that profit

impose[d] a sufficiently definite and meaningful constraint on the discretion of . . . factfinders in awarding punitive damages."[33]

After *Haslip*, the Court returned to punitive damages two years later in *TXO Production Corp. v. Alliance Resources Corp*.[34] There, the court went further than expressing a general concern with punitive damages "run[ning] wild" to state that some awards may be so "'grossly excessive' as to violate the Due Process Clause of the Fourteenth Amendment." [35] The Court explained that concerns of reasonability animate the inquiry into whether a particular award is "grossly excessive."[36] Reasonability, according to the *TXO* court, did not require courts to consider any mathematical relationships.[37] Instead, the Court endorsed the factors used by several state courts when examining reasonability, though it did not indicate which specific factors were most relevant.[38]

The Court's categorical refusal to consider any mathematical relationships when determining reasonability did not last long, and it began to reverse course in its next punitive damages case, *BMW of North America, Inc. v. Gore*.[39] In *Gore*, the Court sought to provide more details and greater guidance to lower courts attempting to determine whether individual punitive damages awards were grossly excessive.[40] In doing so, the *Gore* Court held that the ability of defendants to anticipate whether punitive damages would be imposed on them and the size of any award was key to determining whether those damages were grossly excessive and therefore unconstitutional.[41] In particular, the Court held that "[e]lementary notions of

---

and of having the defendant also sustain a loss; (d) the 'financial position' of the defendant; (e) all the costs of litigation; (f) the imposition of criminal sanctions on the defendant for its conduct, these to be taken in mitigation; and (g) the existence of other civil awards against the defendant for the same conduct, these also to be taken in mitigation.").

33. *Id.* at 22.

34. TXO Prod. Corp. v. All. Res. Corp, 509 U.S. 443, 446 (1993).

35. *Id.* at 458 (quoting Waters-Pierce Oil Co. v. Texas, 212 U.S. 86, 111 (1909)).

36. *Id.*

37. *Id.*

38. *Id.* at 459–60 (endorsing the approaches used by the Alabama and West Virginia Supreme Courts in determining the reasonableness of a particular punitive damages award). The Court further added that the size of the potential harm to the plaintiff could be relevant in the reasonableness determination as well. *Id.* at 462 ("Thus, even if the actual value of the 'potential harm' to respondents is not between $5 million and $8.3 million, but is closer to $4 million, or $2 million, or even $1 million, the disparity between the punitive award and the potential harm does not, in our view, 'jar one's constitutional sensibilities.'" (quoting Pac. Mut. Life Ins. Co. v. Haslip, 499 U.S. 1, 18 (1991)).

39. BMW of N. Am., Inc. v. Gore, 517 U.S. 559, 568 (1996) ("[W]e believe[ ] that a review of this case would help to illuminate 'the character of the standard that will identify unconstitutionally excessive awards' of punitive damages." (internal citations omitted)).

40. *Id.* at 574.

41. *Id.*

fairness enshrined in our constitutional jurisprudence dictate that a person receive fair notice not only of the conduct that will subject him to punishment, but also of the severity of the penalty that a State may impose."[42] Providing greater detail and a more specific test for these "elementary notions of fairness," the Court articulated three guideposts to use when evaluating whether a given award was grossly excessive.[43] First, courts should consider the "degree of reprehensibility" of the defendant's conduct.[44] Second, the "disparity between the harm" caused by the defendant and the "punitive damages award" should factor into whether a given award is grossly excessive.[45] Third, the Court directed that lower courts consider the "difference between [the punitive damages award] and the civil penalties authorized or imposed in comparable cases."[46]

Among these three guideposts, the Court explained that "the most important indicium of the reasonableness of a punitive damages award is the degree of reprehensibility of the defendant's conduct."[47] Perhaps more relevant than this general guidance is the Court's holding that "exemplary damages must bear a 'reasonable relationship' to compensatory damages."[48] In *Gore*, the relationship between compensatory and punitive damages was extreme, with the punitive award exceeding the compensatory award by a factor of 500.[49] The Court, consistent with its earlier cases, refused to endorse a "mathematical formula" to "mark" the "constitutional line."[50] Given the absence of a mathematical formula, the Court was forced to apply the relatively nebulous "reasonable relationship" standard, concluding that the punitive damages award fell on the unconstitutional side of "constitutional line."[51]

Though *Gore* offered more guidance on what constituted a grossly excessive award than had previous cases, the absence of a bright-line rule nevertheless left lower courts with little clarity on which awards were grossly excessive.[52] The Court returned to this issue seven years later in *State Farm*

---

42. *Id.*
43. *Id.* at 574–75.
44. *Id.* at 575.
45. *Id.*
46. *Id.*
47. *Id.*
48. *Id.* at 580.
49. *Id.* at 582.
50. *Id.*
51. *Id.* at 585–86. The Court also considered the third guidepost in reaching this conclusion. *See id.* at 583–84 ("In this case the $2 million economic sanction imposed on BMW is substantially greater than the statutory fines available in Alabama and elsewhere for similar malfeasance.").
52. McMichael & Viscusi, *supra* note 8, at 183.

Mutual Automobile Insurance Co. v. Campbell and provided more specific guidance.[53] In *State Farm*, the jury awarded the plaintiffs $2.6 million in compensatory damages and $145 million in punitive damages at trial.[54] The trial court reduced these to $1 million and $25 million, respectively, before the Utah Supreme Court reinstated the full punitive damages award.[55] The case went to the United States Supreme Court with $1 million in compensatory damages and $145 million in punitive damages having been upheld on appeal.[56] This left the court to apply its reasonable relationship test from *Gore* to a compensatory-to-punitive damages ratio of 1 to 145.

The Supreme Court held that the *State Farm* punitive damages award was grossly excessive and therefore violative of the defendant's right to due process.[57] In reaching this conclusion, the Court emphasized its "concern[] over the imprecise manner in which punitive damages systems are administered."[58] It then applied the three *Gore* guideposts, offering a new approach to the second—the "disparity" guidepost.[59] The Court "decline[d] again to impose a bright-line ratio which a punitive damages award cannot exceed," but it held that "in practice, few awards exceeding a single-digit ratio between punitive and compensatory damages, to a significant degree, will satisfy due process."[60] Though the court went on to add a number of exceptions and qualifications to this holding—e.g., lower ratios may demarcate the constitutionality line when compensatory damages are high and higher ratios when compensatory damages are low[61]—this rule represents clearer guidance than the court had previously offered.

By pegging punitive damages to compensatory damages, the Court essentially offered defendants a new path to predictability. Compensatory damages, while not perfectly predictable, are at least more forecastable than punitive damages. By predicting the relevant compensatory damages award, defendants can then predict the range into which any accompanying punitive

---

53. State Farm Mut. Auto. Ins. Co. v. Campbell, 538 U.S. 408 (2003).

54. *Id.* at 415.

55. *Id.*

56. *Id.* at 415–16.

57. *Id.* at 418 ("Under the principles outlined in *BMW of North America, Inc. v. Gore*, this case is neither close nor difficult. It was error to reinstate the jury's $145 million punitive damages award.").

58. *Id.* at 417.

59. *See id.* at 419–28.

60. *Id.* at 425.

61. *Id.* ("When compensatory damages are substantial, then a lesser ratio, perhaps only equal to compensatory damages, can reach the outermost limit of the due process guarantee."); *id.* ("[R]atios greater than those we have previously upheld may comport with due process 'where a particularly egregious act has resulted in only a small amount of economic damages.'") (quoting BMW of N. Am., Inc. v. Gore, 517 U.S. 559, 582 (1996)).

award will fall.[62] While the Court did not explicitly rely on predictability in reaching its holding in *State Farm*, later cases would demonstrate the importance of predictability in reaching the single-digit ratio approach.[63] The next Section delves into these cases and elucidates the role of predictability in motivating the Court's approach to punitive damages.

B. Constitutional and Common-Law Guidelines: Imposing Predictability?

Despite the obvious undercurrents of the importance of predictability in the Court's early punitive damages jurisprudence, the Court has rarely talked about predictability or foreseeability directly. In later cases, particularly *Exxon Shipping Co. v. Baker*, the Court expounds on the importance of predictability.[64] Interestingly, this case was not decided under the Fourteenth Amendment but under the maritime law.[65] The relevance of a maritime law decision to the Due Process Clause may not be immediately clear, but Jill Wieber Lens has provided a thorough and cogent analysis of why a maritime case can elucidate the constitutional relevance of predictability.[66] This Section begins by tracing the arguments Lens makes as to why a maritime law case can shed light on constitutional limits before delving into how *Exxon Shipping* provides greater insight into the constitutional requirement of predictability.

1. Common-Law Insight into a Constitutional Issue

Lens begins by pointing out that the Due Process Clause of the Fourteenth Amendment embodies both procedural and substantive due process.[67]

---

62. Empirically, how courts address compensatory damages will affect the degree of predictability for punitive damages. If one can foresee compensatory damages perfectly, that offers a much better starting point to predicting punitive damages than if compensatory damages are more variable.

63. One case that is worth mentioning even though it is not relevant directly to the issue of predictability is *Philip Morris USA v. Williams*, in which the Court held that punitive damages may not be imposed on a defendant based on harm done to non-parties. Phillip Morris USA v. Williams, 549 U.S. 346, 354–57 (2007) (reasoning that "the fundamental due process concerns to which [the Court's] punitive damages cases refer—risks of arbitrariness, uncertainty, and lack of notice" are magnified when punitive damages are imposed for harms to non-parties).

64. Exxon Shipping Co. v. Baker, 554 U.S. 471, 499–501 (2008).

65. *Id.* at 481.

66. *See generally* Jill Wieber Lens, *Procedural Due Process and Predictable Punitive Damage Awards*, 2012 BYU L. REV. 1 (explaining the importance of a maritime law case to the constitutional analysis of punitive damages).

67. *Id.* at 10.

"Despite the distinction between the two components [of due process], the Court has often intertwined them in its punitive damages cases."[68] In general, procedural due process concerns issues that fall within the realm of predictability, such as what notice the government must provide citizens before taking action against them.[69] It "also helps to assure the uniform general treatment of similarly situated persons that is the essence of law itself."[70] Substantive due process, in contrast, "imposes substantive limits 'beyond which penalties may not go'" and requires that the government justify its actions.[71] "Substantive due process review of a punitive damage award looks to whether the particular award is excessive, meaning it does more than is justified by the State's interests in punishment and deterrence."[72]

Though the Court's early forays into punitive damages maintained the distinction between procedural and substantive due process, "the distinction became muddled and the two concepts have become almost intertwined in the Court's decisions."[73] In general, however, "the Court has relied only on substantive due process in invalidating punitive damage awards in its most recent cases."[74] Reviewing the Court's major punitive damages decisions in *Gore*, *State Farm*, and *Philip Morris USA v. Williams*,[75] Lens concludes that substantive, not procedural, due process provided the basis for all of these decisions even though the court referred only to due process more generally.[76] The "reason why the Court has intertwined the two violations . . . is that they are obviously related," as "[e]very substantive due process violation likely involves a procedural issue."[77] Indeed, "[t]he Court has developed a pattern of announcing a substantive restriction in one case and then mandating [a procedural mechanism] to help ensure that restriction in the next case."[78]

The Court's tendency to intertwine procedural and substantive due process in this way creates important problems in gleaning the underlying reasons for the Court's limitations on punitive damages awards. For example, the Court does not directly explain in *State Farm* how the single-digit-ratio limitation is connected to the Court's overarching procedural due process principle that

---

68. *Id.*
69. *Id.*
70. *Id.* at 10–11 (quoting BMW of N. Am., Inc. v. Gore, 517 U.S. 559, 587 (1996) (Breyer, J., concurring)).
71. *Id.* at 11 (quoting TXO Prod. Corp. v. Alliance Res. Corp., 509 U.S. 443, 454 (1993)).
72. *Id.* at 11.
73. *Id.* at 12.
74. *Id.*
75. Phillip Morris USA v. Williams, 549 U.S. 346 (2007).
76. Lens, *supra* note 66, at 12, 15–20.
77. *Id.* at 21.
78. *Id.* at 21–22.

"[e]lementary notions of fairness enshrined in our constitutional jurisprudence dictate that a person receive fair notice not only of the conduct that will subject him to punishment, but also of the severity of the penalty that a State may impose."[79] And it is this procedural due process principle from which the predictability requirement arises. Understanding this connection requires the consultation of later cases, in particular *Exxon Shipping*.

Though *Exxon Shipping* was technically decided under federal maritime law, Lens has correctly explained that this case was, at its core, about procedural due process and the imposition of predictability on punitive damages awards.[80] The case barely "even mentions maritime law, much less analyzes it."[81] The case also analyzes "the history of punitive damages in *all* cases" and, perhaps most importantly, "reviews studies of *all* punitive damage awards and declares them to be starkly unpredictable."[82] Based on this, Lens concludes that "[u]npredictability is not problematic because of maritime law—it is problematic because of procedural due process."[83] And this conclusion is key because it means the Court's analysis in *Exxon Shipping* can elucidate the reasons underlying the limitations that were clearly imposed under the Fourteenth Amendment in *State Farm*.

2. The Supreme Court's Predictability Paradigm

The Court articulated a requirement that defendants have fair notice "not only of the conduct that will subject [them] to punishment, but also of the severity of the penalty that a State may impose" in both *Gore* and *State Farm*.[84] But it did not directly tie this general notice requirement to the narrower concept of predictability until *Exxon Shipping*. In that case, the court acknowledged that "the consensus today is that punitive[damages] are aimed not at compensation but principally at retribution and deterring harmful conduct" before delving into the need for predictability.[85]

---

79. State Farm Mut. Auto. Ins. Co. v. Campbell, 538 U.S. 408, 417 (2003) (quoting BMW of N. Am., Inc. v. Gore, 517 U.S. 559, 574 (1996)).

80. Lens, *supra* note 66, at 24–26. "Aside from introducing the case as being based in maritime law, the Court mentions maritime law just twice. . . . Neither of these mentions is relevant to unpredictability analysis, and they do little to convince the reader of a maritime law basis." *Id*. at 26.

81. *Id.* at 24.

82. *Id.* at 25.

83. *Id.* at 26.

84. *Gore*, 517 U.S. at 574; *State Farm*, 538 U.S. at 417.

85. Exxon Shipping Co. v. Baker, 554 U.S. 471, 492 (2008).

The Court began its predictability analysis bluntly: "The real problem, it seems, is the stark unpredictability of punitive awards."[86] It then analyzed the available empirical evidence on punitive damages.[87] From this analysis, the Court concluded that, "[e]ven to those of us unsophisticated in statistics, the thrust of these figures is clear: the spread is great, and the outlier cases subject defendants to punitive damages that dwarf the corresponding compensatories."[88] This large variation in punitive damages awards would not necessarily represent a problem "if [it] resulted from judges' and juries' refining their judgments to reach a generally accepted optimal level of penalty and deterrence in cases involving a wide range of circumstances, while producing fairly consistent results in cases with similar facts."[89] But that was not the case according to the Court.[90]

The Court explained its concern with such wide variation in punitive damages, noting "the implication of unfairness that an eccentrically high punitive verdict carries in a system whose commonly held notion of law rests on a sense of fairness in dealing with one another."[91] Instead of such stark unpredictability, "a penalty should be reasonably predictable in its severity, so that even Justice Holmes's 'bad man' can look ahead with some ability to know what the stakes are in choosing one course of action or another."[92]

Attempting to create a system that imposed predictable awards, the *Exxon Shipping* Court considered three potential approaches.[93] It first rejected an approach that would have provided juries more factors to consider when imposing punitive damages. Such an approach, according to the Court, would offer little improvement over the previous system by failing to direct juries toward consistent awards.[94] Next, the Court considered "a hard dollar cap on punitive damages" but rejected this approach because "there is no 'standard' tort or contract injury, making it difficult to settle upon a particular dollar figure as appropriate across the board."[95] Instead, the Court concluded that a third approach, which involved "pegging punitive to compensatory damages using a ratio or maximum multiple," was most appropriate.[96]

---

86. *Id.* at 499.
87. *Id.* at 498–500.
88. *Id.* at 499–500.
89. *Id.* at 500.
90. *Id.*
91. *Id.* at 502.
92. *Id.*
93. *Id.* at 503.
94. *Id.* at 504–06.
95. *Id.* at 506.
96. *Id.*

Because the Court decided to endorse a pegging approach, the next question was which peg to use. To answer this question, the Court again reviewed and engaged with the existing empirical literature on punitive damages. The Court explained that the relevant "studies cover cases of the most as well as the least blameworthy conduct triggering punitive liability, from malice and avarice, down to recklessness, and even gross negligence" and noted that "the median ratio for the entire gamut of circumstances [was] less than 1:1 . . . meaning that the compensatory award exceeds the punitive award in most cases."[97] Given this analysis and "the need to protect against the possibility (and the disruptive cost to the legal system) of awards that are unpredictable and unnecessary, either for deterrence or for measured retribution," the Court determined "that a 1:1 ratio, which is above the median award, is a fair upper limit in such maritime cases."[98]

As noted above, *Exxon Shipping* was technically a maritime law case, but, as Lens has cogently argued, "due process and *Exxon* predictability necessarily both require notice of the likely amount of the punitive award."[99] In other words, predictability matters. This leads to the next question: How much does it matter? In particular, how much does it matter relative to the goals of deterrence and punishment that the Supreme Court has repeatedly endorsed in the context of punitive damages? The next Section answers this question by examining the theory of punitive damages that the Supreme Court has explicitly acknowledged.

II. THE THEORY OF PUNITIVE DAMAGES

"Early common law cases offered various rationales for punitive-damages awards,"[100] and scholars have offered additional rationales in recent years.[101] To date, however, the Supreme Court itself has focused primarily on what may be called the economic theory of punitive damages. Under this theory, courts award punitive damages to account for the fact that not all wrongdoers will be held liable for their actions. By increasing the amount of damages these wrongdoers must pay commensurate with the likelihood that they will escape liability, punitive damages can efficiently deter these individuals and align their incentives to avoid harming victims in the first place. For example, the Court explained in *Exxon Shipping* that "[r]egardless of culpability,

97. *Id.* at 512.
98. *Id.* at 513.
99. Lens, *supra* note 66, at 29.
100. *Exxon Shipping*, 554 U.S. at 491.
101. *See, e.g.*, Zubrzycki, *supra* note 11, at 315 (offering a rationale for punitive damages based on democratic values).

however, heavier punitive awards have been thought to be justifiable when wrongdoing is hard to detect (increasing chances of getting away with it)."[102] Earlier, in *Gore*, the Court had noted that "[a] higher ratio [of punitive to compensatory damages] may also be justified in cases in which the injury is hard to detect."[103] Thus, the Court recognized that punitive damages should increase when wrongdoers are more likely to "get[] away with it," which is entirely consistent with the economic theory of punitive damages.[104] This Part lays out the economic theory that underlies the Court's conception of punitive damages. It then considers the importance of predictability in punitive damages by examining how the Court's limitations on those damages in the name of predictability interact with the goals of punishment and deterrence embodied in the economic theory of punitive damages.

A. The Economic Theory

Consistent with the only constitutional goals of punitive damages, the economic theory of these damages provides for both punishment and deterrence. Achieving the goal of punishment is straightforward under this theory. Defendants would prefer to pay the least amount of damages possible. By imposing punitive damages, courts make defendants worse off, thereby punishing them. Achieving the goal of deterrence is less straightforward, and the key to understanding deterrence is to realize, as the Court has noted, that some defendants will escape liability for their actions. And because they will sometimes escape liability, defendants may avoid taking precautions against harming others because these precautions are not cost justified from the defendant's perspective.

For example, suppose a company, Naturocorp, Inc., manufactures an "all natural ointment" designed to increase the appearance of youth and vigor of those who apply it daily. During the manufacturing process, pollutants accumulate and remain in the final product, which Naturocorp sells to the public. Naturocorp knows about the pollutants and faces a choice. It could leave the pollutants in its ointment, or it could invest $5 million per year to run a process that completely eliminates all pollutants. Naturocorp knows that a certain percentage of its customers will suffer an allergic reaction when they come into contact with the pollutants. Though not fatal, customers suffering

102. *Exxon Shipping*, 554 U.S. at 494.

103. BMW of N. Am., Inc. v. Gore, 517 U.S. 559, 582 (1996).

104. *Exxon Shipping*, 554 U.S. at 494. Of course, this conception of punitive damages, which focuses on their role in deterring wrongdoing, is also consistent with their role in punishing defendants. Increasing the amount of damages a defendant must pay necessarily makes the punishment worse from that defendant's perspective.

this allergic reaction will require medical attention. Based on the medical attention required and the percentage of the population allergic to these pollutants, Naturocorp expects to inflict $10 million worth of harm each year. Given the nature of the legal system and the nature of the harm from the pollutants, Naturocorp is confident that it faces only a 40% chance of being held liable for the $10 million worth of harm.[105]

Given the harm and chance of liability involved in this example, Naturocorp faces the following decision. It can incur the $5 million cost of running the decontamination process, or it can avoid this cost and risk incurring the cost of liability. Because the harm inflicted amounts to $10 million and Naturocorp faces only a 40% chance of liability, the expected cost of not running the decontamination process amounts to $4 million.[106] Comparing the $5 million cost of running the decontamination process to the expected liability cost of $4 million, the choice from Naturocorp's perspective is clear: leave the pollutants in the ointment and run the 40% risk of liability.[107] The cost of this choice is $1 million less than the alternative. Though leaving the pollutants in the ointment is the right one from Naturocorp's perspective, it is clearly the wrong outcome from the perspective of society. By incurring the $5 million cost of the decontamination process, Naturocorp would avoid the $10 million cost of harm associated with allergic reactions. This $10 million harm is certain to occur—only Naturocorp's liability is uncertain—and by investing $5 million, Naturocorp avoids a $10 million harm. This is a net savings of $5 million from society's perspective.

With respect to deterrence, the legal system's role is clear. It must align Naturocorp's choice with that of society's so that it makes the right social choice. In other words, the goal is to force Naturocorp to make the $5 million versus $10 million choice instead of the $5 million versus $4 million choice. By forcing Naturocorp to fully internalize the cost it imposes on society, the legal system can realign its incentives to make the socially desirable choice. The legal system has two means by which to realign Naturocorp's incentives in this way. First, it could increase the probability of finding liability. In the criminal system, this could involve devoting more resources to detection, policing, or prosecution, but these options are not available in the civil

105. This 40% chance could be due to the difficulty in tracing any harm to Naturocorp's ointment. Like many allergic reactions, it may be difficult to trace these reactions to the specific pollutants in Naturocorp's product.

106. The expected liability cost is the amount of liability imposed if Naturocorp is held liable ($10 million) multiplied by the probability of liability (40% or 0.4). This amounts to ($10 million)*(0.4) = $4 million.

107. This example assumes Naturocorp is risk neutral, but this example holds as long as Naturocorp is not too risk averse.

system, which relies on private parties to file suit. Thus, the civil system relies on the second means to realign Naturocorp's incentives—increasing the damages it must pay in the event it is held liable. It does so by relying on punitive damages.

In the Naturocorp example, a court would need to impose $15 million in punitive damages to align Naturocorp's incentives with those of society. If Naturocorp is held liable, it would be required to pay a total of $25 million in damages ($10 million in compensatory damages and $15 million in punitive damages). Multiplying $25 million by the 40% chance of liability (which has not changed) yields $10 million in expected liability costs. This is exactly the cost Naturcorp imposes on society by not running the decontamination process; therefore, Naturocorp faces the correct incentives to make the socially desirable choice.

Generalizing from this straightforward example yields the economic theory of punitive damages. Instead of specific numbers, suppose CD and PD represent the amount of compensatory damages and punitive damages, respectively, that a wrongdoer must pay in the event it is held liable. And suppose that p represents the probability that the wrongdoer will be held liable.[108] Within this framework, the wrongdoer's expected cost of liability, absent punitive damages, is $p * CD$. Under the assumption that CD represents full compensation for the cost of the harm imposed on society, the wrongdoer's incentives to avoid harmful actions are not aligned with society's.[109] As long as p is less than one, i.e., the probability of being held liable is less than 100%, the wrongdoer will face an expected cost of liability that is too low because it will discount the cost of harm by p. Courts can realign the wrongdoer's incentives by imposing punitive damages, PD, in addition to compensatory damages so that the wrongdoer must pay $CD + PD$ if it is held liable. This changes the wrongdoer's expected liability costs to $p * (CD + PD)$.

Realigning the wrongdoer's incentives with those of society requires changing its expected liability costs to exactly match the cost of the harm imposed on society, i.e., $p * (CD + PD) = CD$. Using this equation, we can derive a simple formula to always arrive at the amount of punitive damages necessary to force a wrongdoer to fully internalize the cost it imposes on

---

108. As with all probabilities, p must fall between zero and one.

109. This theory assumes that CD perfectly captures the cost of the wrongdoer's harm. In reality, this may not be the case, but courts routinely treat compensatory damages as full compensation for whatever harm the plaintiff has suffered. *See, e.g.*, State Farm Mut. Auto. Ins. Co. v. Campbell, 538 U.S. 408, 426 (2003) ("The compensatory award in this case was substantial; the Campbells were awarded $1 million for a year and a half of emotional distress. This was complete compensation.").

society. Rearranging the above equation yields the following: $PD = (\frac{1-p}{p}) * CD$. This equation implies that the amount of punitive damages necessary to properly realign the wrongdoer's incentives depends both on CD (the cost of the harm imposed) and p (the probability of liability).[110]

Law and economics scholars often refer to the amount of punitive damages represented in this equation as the "optimal" amount because it results in "optimal" deterrence.[111] A slightly lower amount will fail to deter some wrongdoers, which would rather run the risk of liability than incur the certain cost of precaution as in the Naturocorp example above. On the other hand, a slightly higher amount may "chill" potential wrongdoers from engaging in socially desirable behavior.[112] For example, consider a pharmaceutical company that produces a new antibiotic drug. The company could eliminate a potential side effect of the drug by producing it using a different process. However, this process is quite expensive, and the company decides to use the less expensive process. If courts impose punitive damages that are too high in an attempt to deter the company from using the cheaper process, the company may simply decide that producing the drug at all is too expensive. The company may then remove the drug from the market, leaving many people without access to a lifesaving or life-improving drug. In other words, too-high punitive damages chill the company, which decides to cease socially desirable activities.

Balancing the potential of under-deterrence and the possibility of chilling behavior is not easy in practice, and courts must constantly weigh the potential of these concerns when imposing damages. This delicate balancing is only made more difficult by the fact that punitive damages can also punish defendants, which may militate in favor of a higher or lower award than that required for optimal deterrence. Sometimes, courts (particularly juries) err in their attempts at balancing, which can yield unpredictable awards. The next Section explores how the Supreme Court's attempts at mandating predictability interplay with the constitutionally permissible functions of punitive damages. Exploring this interplay elucidates the proper role of predictability in the Court's constitutional framework.

---

110. *See also* A. Mitchell Polinsky & Steven Shavell, *Punitive Damages: An Economic Analysis*, 111 HARV. L. REV. 869, 874 (1998) ("When an injurer has a chance of escaping liability, the proper level of *total damages* to impose on him, if he is found liable, is the harm caused multiplied by the reciprocal of the probability of being found liable.").

111. Hersch & Viscusi, *supra* note 8, at 3.

112. Polinsky & Shavell, *supra* note 110, at 962 n.36 ("Obviously, any damages imposed on such a party are excessive and will chill participation in activities in which such mistakes occur.").

B. Fuzzy Math or Constitutionalizing Predictability?

The Supreme Court has repeatedly stated that the only constitutionally permissible functions of punitive damages are punishment and deterrence.[113] At the same time, the Court has repeatedly expressed concerns about unfairness, grossly excessive awards, and unpredictability.[114] Understanding the proper place for predictability in the constitutional framework requires understanding how the Court's predictability-justified limits on punitive damages interact with the ability of those damages to achieve punishment and deterrence.

Returning to the economic theory of punitive damages, the previous Section demonstrated that this Court-endorsed theory relies on higher punitive damages to more effectively punish defendants and the following formula for optimal deterrence: $PD = (\frac{1-p}{p}) * CD$. This formula usefully provides the optimal amount of punitive damages, but the Court has rarely discussed punitive damages in these terms.[115] Instead, it focuses on the punitive-to-compensatory damages ratio. Rearranging our optimality equation yields the following ratio, which has been the focus of the Court's jurisprudence: $\frac{PD}{CD} = (\frac{1-p}{p})$. In *State Farm*, the Court held that, except in unusual situations, this ratio could not exceed 10 to 1, i.e., $\frac{PD}{CD} < 10$.

While good reasons may favor a particular punitive-to-compensatory damages ratio in a particular case, neither the goal of punishment nor deterrence requires a general limitation on this ratio. In the case of punishment, there is no ex ante reason to limit this ratio. Particular cases of reprehensible or deplorable behavior may favor higher punitive damages

---

113. *See e.g.*, Philip Morris USA v. Williams, 549 U.S. 346, 352 (2007) ("This Court has long made clear that '[p]unitive damages may properly be imposed to further a State's legitimate interests in punishing unlawful conduct and deterring its repetition.'" (quoting BMW of N. Am., Inc. v. Gore, 517 U.S. 559, 568 (1996))).

114. *See e.g.*, *id.* ("At the same time, we have emphasized the need to avoid an arbitrary determination of an award's amount. Unless a State insists upon proper standards that will cabin the jury's discretionary authority, its punitive damages system may deprive a defendant of 'fair notice . . . of the severity of the penalty that a State may impose.'" (quoting *Gore*, 517 U.S. at 574)).

115. The reason for this is partly practical. Juries generally do not think in these types of terms. Additionally, this theory requires that a factfinder determine the ex ante value of p. But given that the defendant and the harm has been identified, the ex post value of p is 1.0. Given the vagaries of hindsight bias, it is hard for factfinders to take themselves back to the pre-accident situation to estimate the value of p. The law and economics theory goes back to Jeremy Bentham before it was revived by modern scholars. In general, this was not a secret formula, so the Supreme Court could have adopted if it had wanted to do so. For a richer discussion of this history and these issues, see W. Kip Viscusi*, Deterrence Instructions: What Jurors Won't Do*, *in* PUNITIVE DAMAGES: HOW JURIES DECIDE, 142, 142–70 (Cass R. Sunstein et al. eds., 2002).

awards in connection with relatively low compensatory damages. In the case of deterrence, the optimal punitive-to-compensatory ratio can take any positive value greater than one. Consider the definition of the optimal ratio: $\frac{PD}{CD} = (\frac{1-p}{p})$. The right-hand side of this equation is defined solely in terms of the probability of liability and can take any value greater than one. In fact, as p approaches zero, the optimal punitive-to-compensatory damages ratio approaches infinity. In the case of deterrence and punishment, these two goals may sometimes be in tension with one another,[116] but even that tension does not imply that the punitive-to-compensatory ratio should be limited in any way.

The fact that neither punishment nor deterrence requires, or even justifies, a limit on the punitive-to-compensatory ratio means that the Supreme Court had a reason beyond these constitutional goals for imposing that limit. One explanation for the Court's ratio limit is mathematical misunderstanding. The Court may have simply not realized that limiting the punitive-to-compensatory ratio would necessarily undermine furthering the goals of punishment and deterrence. This explanation is flimsy at best. The Court has clearly recognized the relationship between the probability of liability and punitive damages in its jurisprudence, and it is unlikely that such an obvious mathematical error would escape nine highly intelligent jurists.[117] The better explanation, therefore, is that the Court implicitly chose to elevate the requirement of predictability to constitutional status alongside punishment and deterrence.

This explanation fits well with the Court's discussion of fair notice and predictability in its cases. From the Court's "emphasi[s on] the need to avoid an arbitrary determination of an award's amount"[118] and its statement that defendants must have "fair notice . . . of the severity of the penalty that a State may impose"[119] in its cases under the Fourteenth Amendment, the constitutional relevance of predictability becomes clear. While predictability is not a goal in the sense that punishment and deterrence are, it serves as a barrier beyond which punitive damages may not go in achieving their constitutional goals. In this way, predictability is on par with punishment and deterrence in the constitutional scheme, even if it fits into that scheme differently than these twin goals. Not only is this understanding of predictability consistent with the Court's rhetoric around avoiding arbitrary

116. For example, optimal deterrence may require a punitive-to-compensatory ratio of five based on the optimality formula discussed above, but achieving the punishment goal may require a much higher ratio because of the heinousness of the defendant's conduct.

117. Exxon Shipping Co. v. Baker, 554 U.S. 471, 494 (2008).

118. *Philip Morris*, 549 U.S. at 352.

119. BMW of N. Am., Inc. v. Gore, 517 U.S. 559, 574 (1996).

awards and providing fair notice to defendants,[120] it entirely explains the Court's willingness to undermine the goals of punishment and deterrence in *State Farm* by imposing a single-digit limit on the punitive-to-compensatory ratio. If predictability were not the constitutional equal of punishment and deterrence, it would be exceedingly difficult to explain the Court's approach in *State Farm* and its later explanation in *Exxon Shipping*.

With this clearer understanding of predictability in place, the next obvious question becomes: Are punitive damages predictable? If so, then the Court has no remaining problems to solve. It has instituted predictability within the constitutional scheme, and defendants remain protected from arbitrary awards. If not, then the Court must take additional steps to further the constitutional order. The next Section reviews the available evidence on the predictability of punitive damages awards.

C. From Theory to Practice: Predictability of Punitive Damages

Many scholars have attempted to answer the question of whether punitive damages are predictable in practice. And attempts to answer this question predate the Court's current approach to punitive damages. Writing in the 1990s, A. Mitchell Polinsky framed the predictability question in two components: (1) whether punitive damages will be imposed and (2) if they are imposed, what amount will be awarded.[121] Theodore Eisenberg and a cadre of other scholars examined these components. As to the question of whether punitive damages are imposed, their analysis "suggest[ed] a difficulty in predicting, based on available data, in precisely which cases punitive damages will be awarded."[122] As to the second component, however, the Eisenberg group concluded that "compensatory damages explain about 47 percent of the variance in punitive damages awards."[123] In other words, the amount of compensatory damages awarded explains nearly half of the variation in punitive damages. Based on these conclusions, the group argued that "[i]n one respect, therefore, punitive damages awards levels may be . . . predictable."[124] Viscusi notes three caveats regarding the Eisenberg et al.

120. *See, e.g.*, State Farm Mut. Auto. Ins. Co. v. Campbell, 538 U.S. 408, 417 (2003) ("To the extent an award is grossly excessive, it furthers no legitimate purpose and constitutes an arbitrary deprivation of property.").

121. A. Mitchell Polinsky, *Are Punitive Damages Really Insignificant, Predictable, and Rational? A Comment on Eisenberg et al.*, 26 J. LEGAL STUD. 663, 672–73 (1997).

122. Theodore Eisenberg et al., *The Predictability of Punitive Damages*, 26 J. LEGAL STUD. 623, 646 (1997); *see also id.* ("[T]he model confirms the expected relationships but still leaves us unable to predict accurately precisely when punitive damages will be awarded.").

123. *Id.* at 650.

124. *Id.*

results.[125] First, their sample did not focus on the volatile punitive damages contexts.[126] Rather, one-third of the sample consisted of relatively routine automobile accident cases and only 17% of the sample consisted of volatile areas such as products liability and medical malpractice.[127] Second, their predictions of the level of punitive damages are conditional on there being a nonzero punitive damages award.[128] However, their model explains only 12% of the variation in the probability of a punitive damages award.[129] Third, their article did not predict the level of awards, but rather the natural logarithm of the level, which compresses much of the variation at the high end of awards.[130]

Polinsky countered that the Eisenberg group's "results are consistent with the possibility that in each jurisdiction and case category jury decisions to award punitive damages are random."[131] Acknowledging that the level of compensatory damages offers some explanatory power for punitive damages that are, in fact, imposed, the "inability to predict when . . . punitive damages will be awarded . . . negates" the conclusion that punitive damages are predictable.[132] Noting that "Polinsky raises serious concern about the Eisenberg et al. study," as "it excludes cases that have been settled and explains variation in punitive damages only when they have been awarded," Jonathan Karpoff and John Lott "address[ed] this issue by examining the predictability of punitive awards using data from both settlements and verdicts."[133] The results of their analysis were "consistent with Polinsky's prediction: [they could] explain the level of punitive damages if [they knew punitive damages] w[ould] be awarded, but [they] ha[d] a difficult time explaining any of the overall variation in awards."[134]

Taking one step back from actual punitive damages awards, some studies have examined these awards using studies of mock jurors that incorporated an experimental design. Cass R. Sunstein, Daniel Kahneman, and David Schkade used a sample of hundreds of potential jurors and found that "[p]eople have a remarkably high degree of moral consensus on the degrees

125. W. Kip Viscusi, *Why There Is No Defense of Punitive Damages*, 87 GEO. L.J. 381, 384–86 (1998).

126. *Id.* at 385.

127. *Id.*

128. *Id.* at 386.

129. *Id.* at 385.

130. *Id.* at 386.

131. Polinsky, *supra* note 121, at 672.

132. *Id.* at 672–73.

133. Jonathan M. Karpoff & John R. Lott, Jr., *On the Determinants and Importance of Punitive Damage Awards*, 42 J.L. & ECON. 527, 529 (1999).

134. *Id.* at 543.

of outrage and punishment that are appropriate for punitive damage cases."[135] However, "[t]his consensus fractures when the legal system uses dollars as the vehicle to measure moral outrage."[136] The authors explain that "[e]ven when there is a consensus on punitive intent, there is no consensus about how much in the way of dollars is necessary to produce appropriate suffering in a defendant."[137] Thus, "widely shared and reasonably predictable judgments about punitive intent become highly erratic judgments about appropriate dollar punishment."[138] Subsequent work by the same authors yielded similar results: "[Their] evidence suggests that different juries considering the same case would often assign very different damages, even if they agree in their punitive intent."[139]

Later empirical work moved away from the simple question of predictability to examine different aspects of it. Eisenberg and several co-authors focused on whether judges and juries differed in how they award punitive damages.[140] These scholars found no statistically significant evidence that juries awarded punitive damages differently than judges.[141] This result extended to both whether and what amount of punitive damages were awarded.[142] Later work by Joni Hersch and W. Kip Viscusi, however, contradicted these findings. They concluded that "juries are significantly more likely to award punitive damages than are judges and award higher levels of punitive damages."[143] The Eisenberg group later concluded that "judges and juries perform similarly in some punitive damages tasks and differently in others."[144]

The next phase of empirical work on punitive damages began to examine the effect of different legal changes on those awards, as both states and federal courts had taken steps to limit punitive damages. Multiple studies evaluated the impact of *State Farm* on punitive damages awards. Studies by

---

135. Cass R. Sunstein, Daniel Kahneman & David Schkade, *Assessing Punitive Damages*, 107 YALE L.J. 2071, 2077–78 (1998).

136. *Id.* at 2078.

137. *Id.*

138. *Id.*

139. Daniel Kahneman, David Schkade, & Cass R. Sunstein*, Shared Outrage and Erratic Awards: The Psychology of Punitive Damages*, 16 J. RISK & UNCERTAINTY 49, 50 (1998).

140. Theodore Eisenberg et al., *Juries, Judges, and Punitive Damages: An Empirical Study*, 87 CORNELL L. REV. 743, 743 (2002).

141. *Id.* at 773–74 ("None of the models support the hypothesis that judges and juries differ in the way they set levels of punitive awards or in the amount of punitive damages awarded per unit of compensatory damages.").

142. *Id.*

143. Hersch & Viscusi, *supra* note 8, at 1.

144. Theodore Eisenberg et al., *Judges, Juries, and Punitive Damages: Empirical Analyses Using the Civil Justice Survey of State Courts 1992, 1996, and 2001 Data*, 3 J. EMPIRICAL LEGAL STUD. 263, 264–65 (2006).

Benjamin J. McMichael and by Theodore Eisenberg and Michael Heise both found evidence that *State Farm* did little to reduce (and may have even increased) typical punitive damages awards.[145] Viscusi and Del Rossi found that *State Farm* decreased the number of blockbuster punitive damages awards, the total value of blockbuster awards, and the ratio of punitive damages to compensatory damages.[146] Viscusi and McMichael found that *State Farm* reduced the size of blockbuster punitive damages awards and the likelihood that these large awards exceed a single digit ratio between punitive and compensatory damages.[147] Later work focusing on state reforms to punitive damages found that state punitive damages caps reduced the amount of punitive damages awarded and that reforms to the evidentiary standards governing punitive damages reduced the likelihood that they are imposed.[148] With respect to blockbuster punitive damages awards, the evidence suggested "that punitive damages caps only have an effect on the frequency of these awards, suggesting that their effect is limited to preventing awards from crossing the $100 million threshold (*i.e.*, having no effect on the size of the awards that cross this threshold)."[149]

Many of these studies proved invaluable to the *Exxon Shipping* court as it was deciding the appropriate limits on punitive damages.[150] However, the question of whether punitive damages are predictable remains open. And this Article seeks to provide novel and critically important evidence on this question. To do so, it employs a direct approach to examine predictability in blockbuster awards, which remain the most salient awards and the awards that attract the most attention from scholars, policymakers, and courts. The next Part details this analysis.

---

145. Benjamin J. McMichael, Note, *Constitutional Limitations on Punitive Damages: Ambiguous Effects and Inconsistent Justifications*, 66 VAND. L. REV. 961, 993–96 (2013); Theodore Eisenberg & Michael Heise, *Judge-Jury Difference in Punitive Damages Awards: Who Listens to the Supreme Court?*, 8 J. EMPIRICAL LEGAL STUD. 325, 346–51 (2011).

146. Rossi & Viscusi, *supra* note 8, at 116.

147. Viscusi & McMichael, *supra* note 4, at 362–70. *See also* Viscusi & McMichael, *supra* note 8, at 174–75 ("Our empirical evidence demonstrates that *State Farm* has reduced both the frequency with which punitive awards over $100 million have been imposed as well as the size of those blockbuster awards that are imposed.").

148. Benjamin J. McMichael & W. Kip Viscusi, *The Punitive Damages Calculus: The Differential Incidence of State Punitive Damages Reforms*, 84 S. ECON. J. 82, 91–94 (2017).

149. Viscusi & McMichael, *supra* note 8, at 174–75.

150. Exxon Shipping Co. v. Baker, 554 U.S. 471, 499 (2008) ("A recent comprehensive study of punitive damages awarded by juries in state civil trials found a median ratio of punitive to compensatory awards of just 0.62:1, but a mean ratio of 2.90:1 and a standard deviation of 13.81." (citing Eisenberg et al., *supra* note 144, at 269)).

III. THE BLOCKBUSTER AWARDS

In principle, courts may impose punitive damages in any amount. However, only a subset of these awards attracts the attention of higher courts (as well as policymakers and scholars). This Article focuses on this subset of the largest awards. Though the Supreme Court has referred to "outlier" awards that deserve special attention in the past, it has never formally defined what it meant by the term "outlier."[151] The blockbuster awards are certainly good candidates. Blockbuster awards include all punitive damages awards that exceed $100 million at the time they are imposed, and they were first defined and analyzed as a separate category of damages by Viscusi.[152] While uncommon, such large awards have the potential to impact not just the defendants in the relevant case but entire industries.[153] *Grimshaw v. Ford Motor Co.* represents the first blockbuster punitive damages award that we have identified. The court imposed it in response to Ford's design of the Pinto, which tended to catch fire following rear-end collisions.[154] Nearly thirty years after this case was decided, it is still interpreted as a warning to automobile manufacturers.[155] Other awards have impacted other industries similarly.[156] Before delving into the (un)predictability of these extremely large awards, this Part details the history of blockbuster awards. This history elucidates both the relevance of these awards and the importance of confronting predictability within punitive damages.

A. Understanding the Blockbuster Awards

Blockbuster punitive damages awards include all punitive damages awards of at least $100 million. In identifying these awards, we focus on the amount awarded after trial. Starting with *Grimshaw v. Ford Motor Co.* in

151. *See id.* at 501 ("The Court's response to outlier punitive-damages awards has thus far been confined by claims at the constitutional level, and our cases have announced due process standards that every award must pass."); *id.* at 506 ("This is why our better judgment is that eliminating unpredictable outlying punitive awards by more rigorous standards than the constitutional limit will probably have to take the form adopted in those States that have looked to the criminal-law pattern of quantified limits.").

152. Viscusi, *supra* note 8, at 1408.

153. *See* Viscusi, *supra* note 8, at 1407–08.

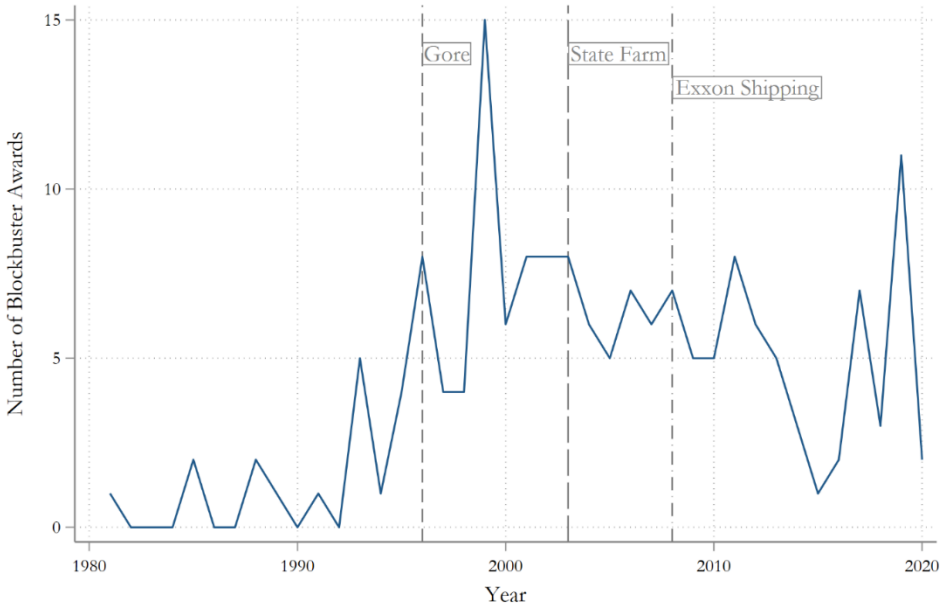
154. Grimshaw v. Ford Motor Co., 174 Cal. Rptr. 348, 358–63 (Ct. App. 1981).

155. Carol J. Williams, *Toyota Is Just the Latest Automaker To Face Auto Safety Litigation*, L.A. TIMES (Mar. 13, 2010, 12:00 AM), https://www.latimes.com/archives/la-xpm-2010-mar-13-la-fi-toyota-litigate14-2010mar14-story.html [https://perma.cc/LGA7-WHA9] (noting that the award "signaled to the auto industry that it would be harshly sanctioned for ignoring known defects").

156. *See* Viscusi, *supra* note 8, at 1410–11.

1981, which is the earliest award, we identified 167 blockbuster awards through 2020.[157] As Figure 2 demonstrates, courts did not impose blockbuster awards evenly over the 1981–2020 period, and Figure 1 provides an overview of the timing of these awards. Few awards were imposed in the 1980s, but award numbers began to increase in the early 1990s. The Supreme Court's decision in *BMW v. Gore*, which Figure 1 denotes with a vertical line, had a modest impact on the number of awards at best. After falling in the years immediately after the case, the number of blockbuster awards spiked at the end of the 1990s.[158] The Court's decision in *State Farm v. Campbell* had a stronger impact, as the number of awards trended downward after 2003.[159] The impact of *Exxon Shipping* is not as clear. Award numbers initially trended down, spiked briefly, trended down again, and then became erratic.[160]

Figure 1: Number of Blockbuster Punitive Damages Awards Over Time



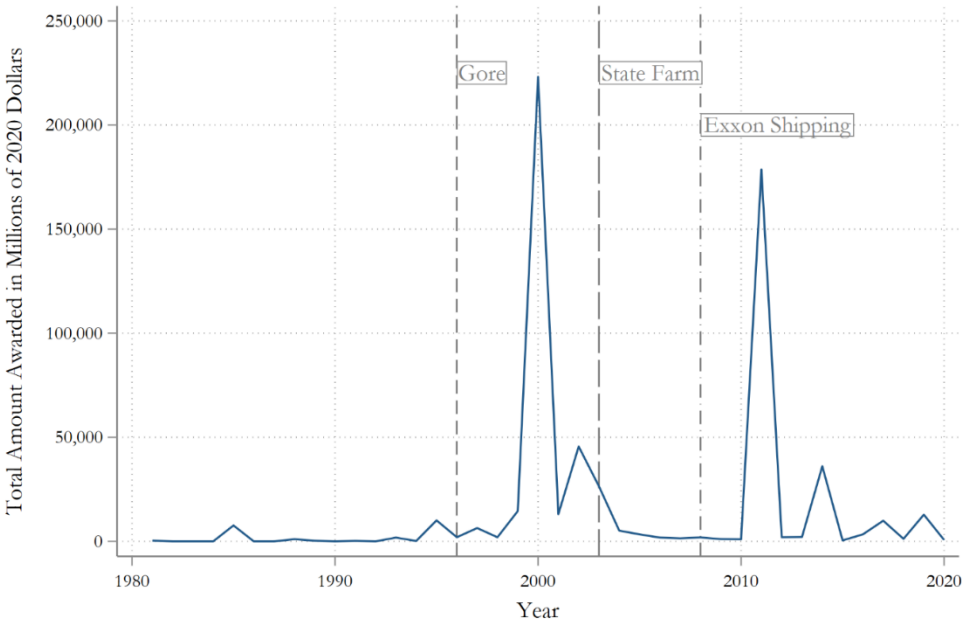
157. The Appendix provides a complete list of all awards we have identified.
158. *See infra* Figure 1.
159. *Id.*
160. *Id.*

While Figure 1 cannot, by itself, establish any causal relationship between the Court's various cases and the number of blockbuster awards,[161] it nevertheless provides insight into the patterns of awards over time. In general, the number of awards per year is highly unstable. And, if anything, Figure 1 demonstrates a recent return to the volatility that had previously defined the blockbuster awards prior to *State Farm*.

Figure 2 provides further insight into the unpredictable nature of blockbuster punitive damages awards. Instead of the number of awards, it plots the total amount of punitive damages imposed in connection with blockbuster awards each year. The most immediately obvious feature of Figure 2 is the highly variable amount of punitive damages awarded each year. The amount of damages imposed in connection with blockbuster awards clearly spiked in 2000 and 2011, with smaller spikes in the early 2000s and mid-2010s.[162] Though transitory, these spikes were not small. For example, courts awarded over $200 billion in blockbuster punitive damages in 2000. In 1998 and 2001, this amount was closer to $20 billion—an order of magnitude smaller. Overall, Figure 2 demonstrates a general inconsistency in the amount of blockbuster punitive damages imposed over the years.

161. *See* Viscusi & McMichael, *supra* note 8, at 207–17 (providing a causal analysis).
162. *See supra* Figure 2.

Figure 2: Total Amount of Blockbuster Punitive Damages Awards Over Time



In addition to their unequal distribution over time, the blockbuster punitive damages awards are also unequally distributed across geography. Many states have never seen a blockbuster award, while others have seen more than 30. Figure 3 reports the number of blockbuster awards imposed across all 50 states. Unsurprisingly, states with large populations like California, Florida, and Texas, have seen a relatively larger number of blockbuster awards. However, population alone does not appear to explain the number of awards. Smaller states like Alabama and Maryland fall into the second tier of states in terms of number of awards. Louisiana, Mississippi, and Nevada, have each also had more than two awards. Indeed, these states fall into the same category as New York and Pennsylvania and have had more awards than states such as Ohio and Washington.

Figure 3: Number of Blockbuster Punitive Damages Awards Across the United States

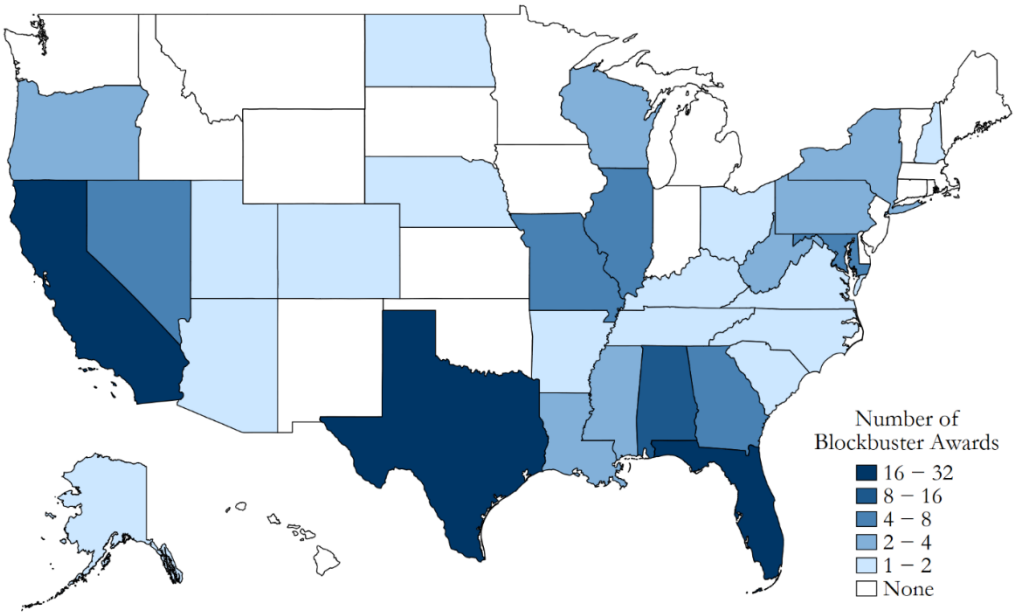
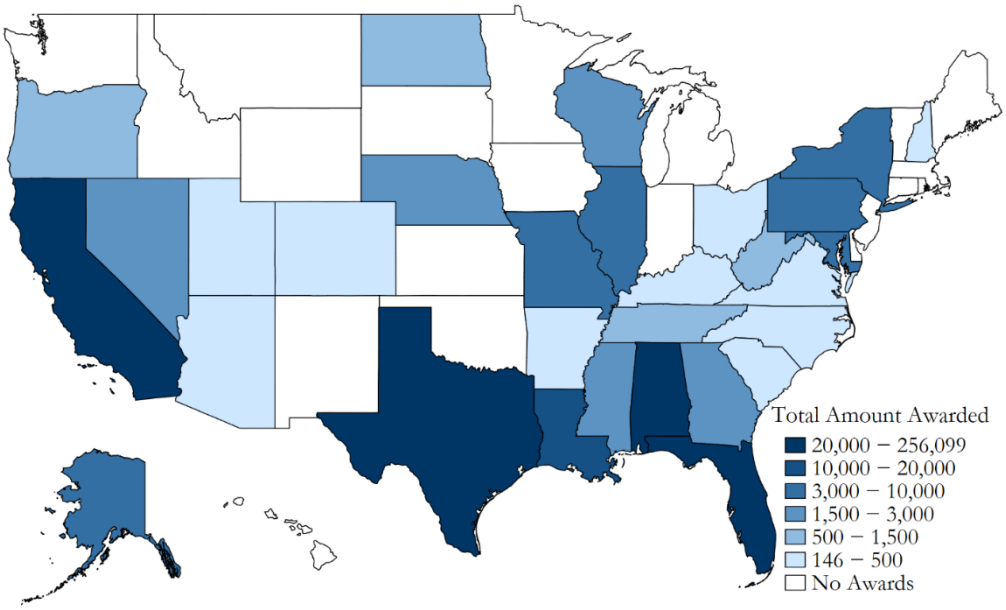


Figure 4 reports the total amount of punitive damages awarded as part of blockbuster awards across the United States. Interestingly, while the states with the largest number of awards tend to fall into higher categories in terms of total punitive damages awarded, Figure 4 shows that some states with relatively few awards nevertheless tend to have very large awards. Alabama, for example, joins the highly populated states of California, Texas, and Florida in the highest category for damages awarded. New York and Pennsylvania, which fell into one of the lower categories in Figure 3 above, fall into the second highest category in Figure 4. Collectively, Figures 3 and 4 demonstrate the somewhat chaotic nature of punitive damages. The fact that some states tend to experience a larger number of awards but do not necessarily have the highest total damages awarded suggests a level of inconsistency that undermines predictability. The next Section considers the predictability of the blockbuster awards in more depth.

Figure 4: Total Amount of Blockbuster Punitive Damages Awards Across the United States



B. Predictability in the Blockbuster Awards

When examining predictability in the blockbuster awards, the first question we must answer is what it means to be "predictable." While the Supreme Court has gone to great lengths to define "predictability" and "fair notice" in the context of appellate evaluation of punitive damages awards—such as whether those awards are "reasonable" or "grossly excessive"—it has not articulated a formal definition of predictability that would facilitate measuring predictability across a large group of awards.[163] Thus, the first task in evaluating predictability in the blockbuster awards is defining "predictability" in a way that (1) facilitates measurement across many awards and (2) is consistent with the Court's understanding of punitive damages more generally.

Though the Court has not clearly articulated a formal definition of predictability, it has discussed punitive damages in ways that indicate a potential measure. For example, the Court has explained that "the penalty scheme [defendants] face ought to threaten them with a fair probability of suffering in like degree when they wreak like damage."[164] Furthering this statement, the *Exxon Shipping* Court compared punitive damages to criminal

163. *See supra* Part I.
164. Exxon Shipping Co. v. Baker, 554 U.S. 471, 502 (2008).

sentencing prior to the introduction of the Federal Sentencing Guidelines.[165] The Court noted "that in the last quarter century federal sentencing rejected an 'indeterminate' system, with relatively unguided discretion to sentence within a wide range, under which 'similarly situated offenders were sentenced [to], and did actually serve, widely disparate sentences.'"[166] This system had transformed into "a system of detailed guidelines tied to exactly quantified sentencing results."[167] Prior to this, the Court in *Gore* and *State Farm* clearly articulated a guidepost against which punitive damages must be judged that required the consideration of civil penalties that would apply to the defendant's conduct.[168]

In these statements, the Court suggests a potential measure of punitive damages: the degree to which the punitive damages imposed deviate from punitive awards for the same conduct. In other words, for a given level of conduct, how widely does the final punitive damages award vary? The more punitive damages awards vary, the more unpredictable they are for the purposes of due process. This variability in award amount for the same underlying conduct suffices as a measure of predictability in the abstract, but its practical relevance is less clear. It may be possible for researchers to create a database of standardized conduct that gives rise to specific amounts of punitive damages and compare those awards to court-imposed damages for the same or similar conduct. The problem, of course, is that the actual conduct giving rise to punitive damages varies widely.[169] Even if it were possible to create a standardized database of conduct that gives rise to specific punitive damages awards, the chances of this conduct matching the conduct for which punitive damages are actually imposed in a large proportion of cases are likely quite small. And, assuming these challenges did not exist, it is not clear that courts, acting alone under the Due Process Clause of the Fourteenth Amendment, could create such a database to use in actual cases.

Thus, the problem is how to create a measure of the variability or complexity of punitive damages based on their deviations from the same underlying conduct without relying on complicated and difficult-to-construct standardized measures. The solution to this problem comes from an unexpected source: Chaos Theory. One of the founders of Chaos Theory, Edward Lorenz, summarized it as "Chaos: When the present determines the

---

165. *Id.* at 505.

166. *Id.* (quoting Ilene H. Nagel, *Structuring Sentencing Discretion: The New Federal Sentencing Guidelines*, 80 J. CRIM. L. & CRIMINOLOGY 883, 895–99 (1990)).

167. *Id.*

168. State Farm Mut. Auto. Ins. Co. v. Campbell, 538 U.S. 408, 428 (2003); BMW of N. Am., Inc. v. Gore, 517 U.S. 559, 582–85 (1996).

169. *See* Viscusi, *supra* note 8, at 1410–11.

future, but the approximate present does not approximately determine the future."[170] This statement fundamentally describes the Court's issue with the predictability of punitive damages. Punitive damages are unpredictable when the same or similar conduct (the "present" in Lorenz's quote) does not yield the same or similar punitive damages (the "future" in Lorenz's quote).

Lorenz's pathbreaking work on Chaos Theory began with what seems, at first glance, like a simple problem. He studied a "simple system representing cellular convection," which represented important phenomena within atmospheric sciences.[171] Lorenz discovered that "solutions are ordinarily unstable with respect to small modifications, so that slightly differing initial states can evolve into considerably different states."[172] Lorenz later explained some of the key insights of Chaos Theory with the now-familiar "butterfly effect." Specifically, Lorenz inquired "[whether] the flap of a butterfly's wings can be instrumental in generating a tornado."[173] He asked this question not to inquire about the relative importance of butterflies but "to illustrate the idea that some complex dynamical systems exhibit unpredictable behaviors such that small variances in the initial conditions could have profound and widely divergent effects on the system's outcomes."[174] This description of the butterfly effect fits well with the Supreme Court's fundamental concern about predictability in punitive damages.

Fully engaging with Chaos Theory is well beyond the scope of this Article, but legal scholars have found various aspects of Chaos Theory useful and have applied it to areas of law as disparate as insurance form interpretation to derivatives and securities law.[175] The aspect of Chaos Theory most germane to this Article is the development of techniques to measure the complexity of phenomena and thus capture their unpredictability. In particular, the measurement of fractal dimensions, which is related to Chaos Theory, provides a way to capture the volatility of data and the complexity of the

---

170. Christopher M. Danforth, *Chaos in an Atmosphere Hanging on a Wall*, MATHEMATICS OF PLANET EARTH (Mar. 17, 2013), http://mpe.dimacs.rutgers.edu/2013/03/17/chaos-in-an-atmosphere-hanging-on-a-wall/ [https://perma.cc/5LK3-8JTB].

171. Edward N. Lorenz, *Deterministic Nonperiodic Flow*, 20 J. ATMOSPHERIC SCIS. 130, 130 (1963).

172. *Id.*

173. Edward N. Lorenz, Professor of Meteorology, Address at the Am. Assoc. for the Advancement of Sci. (Dec. 29, 1972), https://home.cs.colorado.edu/~lizb/chaos/lorenz_1972.pdf [https://perma.cc/R23C-6RMK].

174. Jamie L. Vernon, *Understanding the Butterfly Effect*, AM. SCIENTIST, https://www.americanscientist.org/article/understanding-the-butterfly-effect [https://perma.cc/6BPT-Z59W] (last visited Mar. 12, 2022).

175. Michelle E. Boardman, *The Unpredictability of Insurance Interpretation*, 82 LAW & CONTEMP. PROBS. 27, 27 (2019); Steven L. Schwarcz, *Regulating Derivatives: A Fundamental Rethinking*, 70 DUKE L.J. 545, 594 (2020).

process underlying that data.[176] At its core, the idea of a fractal dimension is an index of complexity. For example, a jagged coastline has a higher fractal dimension than a smooth coastline because the jagged coastline is more complex.

Unsurprisingly, fractal dimensions and the phenomena to which they are relevant are complex. One of the few legal scholars to examine fractal dimensions described them as follows:

> With respect to time-series data, dimensionality depends on whether the system from which the data are taken is random or nonrandom. If a system is random, then time-series data taken from it will reflect that randomness and have as large a dimension as can possibly be—usually infinity. In the case of data being presented on a sheet of paper, the highest possible dimension is two (the dimension of the paper itself). In any case, the data will fill a plane. If a system is nonrandom, then time series of data taken from it will reflect that nonrandomness and will have a fractal dimension: the data will not fill the plane but rather will clump together. That clumping together reflects the correlations influencing the data (i.e., causing it to be nonrandom).[177]

While helpful in describing fractal dimensions generally, the volatility of punitive damages over time is only one element to consider in their predictability. A separate series of examples further illustrates the utility of fractal dimensions in the context of punitive damages.

Like punitive damages, natural disasters, such as hurricanes and tornadoes, have the potential to inflict substantial harm.[178] Staff at the United States Geological Survey (USGS) analyzed the losses (measured as the number of fatalities) associated with earthquakes, floods, hurricanes, and tornadoes and calculated the fractal dimensions associated with each type of disaster. They explained that "[n]atural high-energy events, such as hurricanes and earthquakes, are complex phenomena whose cumulative size-

---

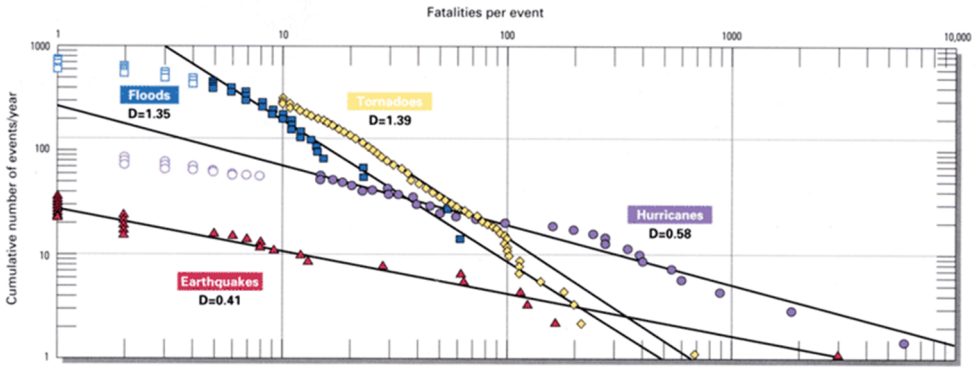
176. *See* James Theiler, *Estimating Fractal Dimension*, 7 J. OPTICAL SOC'Y AM. A 1055, 1055 (1990) ("The geometry of fractals and the mathematics of fractal dimension have provided useful tools for a variety of scientific disciplines, among which is chaos."). *See generally* BENOIT B. MANDELBROT, THE FRACTAL GEOMETRY OF NATURE (1982) (discussing fractal dimensions, Chaos Theory, and the connection between the two).

177. Lawrence A. Cunningham, *From Random Walks to Chaotic Crashes: The Linear Genealogy of the Efficient Capital Market Hypothesis*, 62 GEO. WASH. L. REV. 546, 591 (1994).

178. In the case of natural disasters, the harm is unambiguously undesirable, while in the case of punitive damages, inflicting harm is part of the purpose of awarding these damages in the first place. *See supra* Part I.

frequency distributions exhibit fractal scaling properties."[179] Figure 5 presents the results of their analysis. Among the types of natural disasters they examine, earthquakes have the smallest fractal dimension and tornadoes have the largest.

Figure 5: Fractal Dimensions of Natural Disasters[180]



To compare blockbuster punitive damages to natural disasters, we calculated the fractal dimension of the 167 awards we have identified (with the amount awarded as the measure of loss). The fractal dimension of the blockbuster awards is 1.36.[181] This dimension is comparable to that of floods and higher than all natural disasters with the exception of tornadoes.[182] Though fractal dimensions do not perfectly measure predictability in the abstract, the calculated dimension suggests that losses associated with blockbuster punitive damages are roughly as predictable as fatalities associated with floods. Interestingly, previous work calculated a fractal dimension of 1.19 for blockbuster punitive damages awarded between 1981 and 2012.[183] The lower value of the fractal dimension in this earlier period

179. Christopher Barton & Stuart Nishenko, *Natural Disasters—Forecasting Economic and Life Losses*, U.S. GEOLOGICAL SURV. (Nov 29, 2016, 5:58 PM), https://pubs.usgs.gov/fs/natural-disasters/index.html [https://perma.cc/3T5W-V3CV].

180. *Id.*

181. We do not reproduce the graphical representation that the USGS researchers created because it is not particularly informative. The USGS researchers created a graph to demonstrate the differences between types of natural disasters. Because we only focus on punitive damages, the graph of a single line is not useful.

182. *See supra* Figure 5.

183. Viscusi & McMichael, *supra* note 4, at 356 n.17 ("[B]lockbuster punitive damages awards have a fractal dimension . . . equal to 1.19, which is between that of hurricanes and floods.").

suggests that the fractal dimension has grown over time and that blockbuster punitive damages have become relatively more unpredictable in the 2010s.

The same research offered a slightly different way to analyze the unpredictability of punitive damages that is connected to the fractal dimension. Building on the USGS researchers' explanation that "[e]arthquakes are examples of complex natural high-energy phenomena whose cumulative size-frequency distributions have long been known to exhibit fractal (power-law) scaling properties,"[184] Viscusi and McMichael examined the power-law distribution of blockbuster punitive damages awards.[185] The shape of power law distributions is different than the bell-shaped curves of normal distributions in that there could be a very long tail of very large punitive damages. "With [power-law] distributions, the event with the greatest impact may be several times as large as the next most significant event," just as is seen in the distributions of natural disasters in Figure 5.[186]

Power-law distributions contrast with the more familiar normal distributions. Normal distributions, which arise in many different contexts and are deliberately imposed in many others, allow for relatively easy prediction.[187] This ease of prediction is related to how thick or thin the tails of a distribution are.[188] In the case of a normal distribution, much of the variation that occurs within that distribution happens relatively close to the mean. Because the tails of a normal distribution are relatively thin,[189] there are exceedingly few outlying events.[190] This means that individuals attempting to predict an event that follows a normal distribution can effectively ignore the possibility that a very large event will occur. These events may be outcomes in legal cases, the size of a particular plant species, or anything else that follows a normal distribution. "While ignoring extreme or catastrophic events may be justified when they are distributed normally, doing so when they follow a fat-tailed distribution can prove problematic."[191]

---

184. Barton & Nishenko, *supra* note 179.

185. Viscusi & McMichael, *supra* note 4, at 353–56.

186. Viscusi & McMichael, *supra* note 4, at 354.

187. Perhaps the most salient encounter with imposed normal distributions for many readers are law school grades. Many schools impose grading distributions that approximate normal distributions.

188. *See* Viscusi & McMichael, *supra* note 4, at 353–56.

189. By "thin," we mean that the tails of a normal distribution approach zero sufficiently quickly that the probability of large, outlying outcomes quickly becomes very small.

190. *See* Viscusi & McMichael, *supra* note 4, at 353–56.

191. *Id.* at 354. *See also* IAN BREMMER & PRESTON KEAT, THE FAT TAIL: THE POWER OF POLITICAL KNOWLEDGE IN AN UNCERTAIN WORLD 1–2 (2009) (explaining that fat tails "represent the risk that a particular event will occur that appears so catastrophically damaging, unlikely to happen, and difficult to predict, that many of us choose to simply ignore it").

In general, blockbuster punitive damages awards follow a power-law distribution with a fat-tail.[192] Figure 6 demonstrates the "fatness" of this tail. Each point in Figure 6 represents a single blockbuster punitive damages award. Because the tail of the distribution is so fat, Figure 6 does not include a graph of actual award amounts. Instead, it graphs award amounts after applying a natural logarithmic transformation.[193] The natural logarithmic transformation compresses all award amounts, but it compresses higher awards more than smaller awards.[194] Effectively, this compresses the entire distribution of blockbuster punitive damages awards so that they can fit onto a readable graph.[195] For comparative purposes, Figure 6 also includes a graph of a lognormal distribution. A lognormal distribution is the result of applying a natural logarithmic transformation to a normally distributed variable.[196] This lognormal distribution has the same mean and standard deviation as the distribution, so it is directly comparable.

192. Viscusi & McMichael, *supra* note 4, at 355.

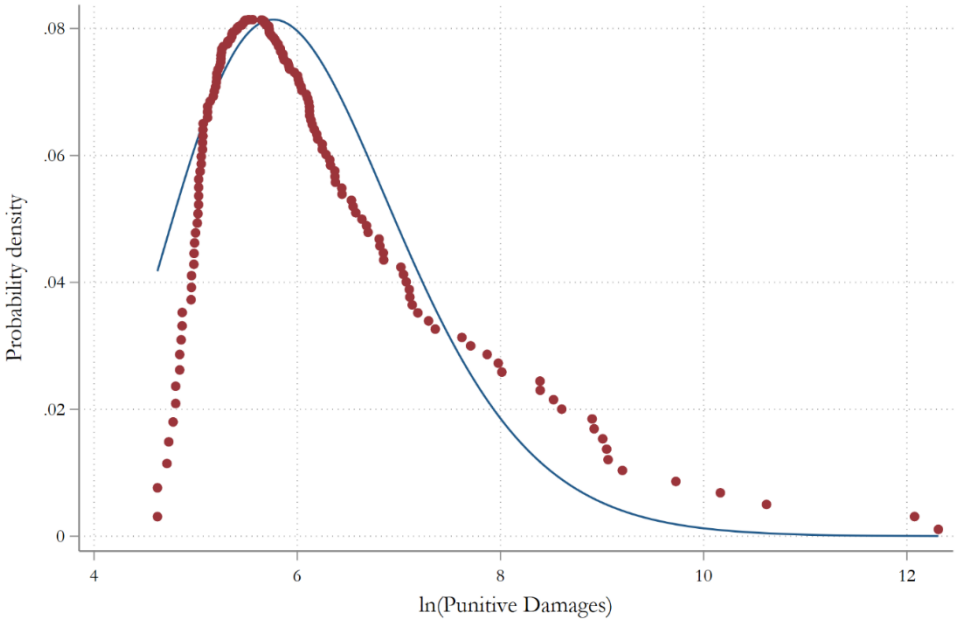
193. Essentially, we calculate the log of each blockbuster punitive damages award and graph this log amount instead of the actual amount. We calculate the natural logarithm of punitive damages in hundreds of millions of 2020 US dollars.

194. *See* Hersch & Viscusi, *supra* note 8, at 10 ("Taking the logarithm of both punitive and compensatory damages greatly compresses the range of values, particularly for large awards.").

195. A graph of actual blockbuster punitive damages awards requires such a long tail that it is nearly impossible to read.

196. Eric W. Weisstein, *Log Normal Distribution*, WOLFRAM: MATHWORLD, https://mathworld.wolfram.com/LogNormalDistribution.html [https://perma.cc/49VM-XXUU].

Figure 6: Distribution of Blockbuster Punitive Damages Awards



The tail fatness of the actual distribution of blockbuster awards is evident in the right portion of the graph. In general, the "fatness" of a distribution's tail is represented graphically by the distance between the tail and zero. The points representing actual awards in Figure 6 are uniformly above the line representing a lognormal distribution, demonstrating that the actual distribution of blockbuster awards has a fatter tail than a lognormal distribution.[197] Because blockbuster punitive damages awards follow a fat-tailed distribution, instead of a more familiar normal distribution, they are more difficult to predict.[198] To quantify the "fatness" of the distribution's tail, we calculate the excess kurtosis of the blockbuster awards. Excess kurtosis measures the difference in the thickness of a distribution's tails from a standard normal distribution which, by definition, has an excess kurtosis of zero.[199] The distribution of blockbuster punitive damages awards has an excess kurtosis of 76.04, indicating that its tails are meaningfully thicker than

197. Viscusi & McMichael, *supra* note 4, at 355 ("Instead of a normal distribution, or even a lognormal distribution, a power-law distribution best describes blockbuster awards.").

198. *Id.* at 353 ("[B]lockbuster awards follow a fat-tailed distribution, meaning that extremely large awards (catastrophic events) occur much more often than if awards were distributed normally. Thus, awards following a fat-tailed distribution are more difficult to predict than normally distributed awards.").

199. *Id.* at 358 ("The typical point of comparison for excess kurtosis is the standard normal, which has an excess kurtosis of zero.").

those of a standard normal distribution.[200] This effectively means that extremely large awards are more common than if the blockbuster awards were normally distributed.

In general, the fractal dimension and fat-tailed distribution of the blockbuster punitive damages awards demonstrates that they do not behave as many would expect. While extremely large values almost never occur when those values are normally distributed, such extreme outcomes are relatively common in the blockbuster punitive damages awards. "With these distributions, the largest loss may be several times larger than the next largest loss."[201] This fact makes the blockbuster punitive damages awards quite difficult to predict. In other words, the Supreme Court's goal of rendering punitive damages awards predictable (even at the expense of punishment and deterrence) has not yet been achieved. Indeed, the trend in the blockbuster award data indicates that they are becoming more difficult to predict. The lack of predictability also undermines the deterrent effect of punitive damages, as Viscusi found that states that permit punitive damages fare no better than states that do not permit punitive damages in terms of toxic chemical accidents, toxic chemical releases, surface water discharges, accidental fatality rates, and per capita insurance premiums.[202] The next Section explores some reasons why this may be the case and options to help accomplish the Court's goal of predictability.

IV. EVALUATING CURRENT CONSTITUTIONAL GUIDELINES

The evidence reported above demonstrates that blockbuster punitive damages remain unpredictable. It does not, however, demonstrate why. This Section explores that critical question in two ways. First, it considers two recent blockbuster cases—*Bahamas Surgery Center v. Kimberly-Clark Corporation* and *Ingham v. Johnson & Johnson*.[203] These cases offer some insight into the difficulties lower courts have when applying the current constitutional framework around punitive damages. In general, that framework offers lower courts, at best, limited guidance, and it lends itself to

200. As with the fractal dimension of the blockbuster awards, the excess kurtosis has increased in the last decade. *See id.* (noting that the excess kurtosis of awards through 2012 was 63.5).

201. Viscusi & McMichael, *supra* note 4, at 353.

202. W. Kip Viscusi, *The Social Costs of Punitive Damages Against Corporations in Environmental and Safety Torts*, 87 GEO. L.J. 285, 288–89 (1998).

203. Ingham v. Johnson & Johnson, 608 S.W.3d 663, 677 (Mo. Ct. App. 2020), *cert. denied*, 141 S. Ct. 2716 (2021); Bahamas Surgery Ctr., LLC. v. Kimberly-Clark Corp., No. 14-CV-8390-DMG-PLA, 2018 WL 11274489, at *2 (C.D. Cal. Apr. 11, 2018), *vacated and remanded*, 820 F. App'x 563 (9th Cir. 2020).

widely different applications. Second, this Section examines a wider array of appellate attempts to apply the *State-Farm–Exxon-Shipping* framework. This examination reveals continued problems with achieving coherent and consistent limits on punitive damages awards and a framework fundamentally incapable of achieving predictability. Based on these two inquiries, this Section concludes by offering a new constitutional framework which can better achieve predictability in punitive damages awards. Admittedly, this framework sacrifices more in deterrence and punishment than the Court's current approach, but such a sacrifice is justified in light of the Court's promotion of predictability to constitutional parity with these two traditional goals.

A. Problematic Application of Guidelines Among Blockbuster Awards

We begin our exploration of the "why" behind the failure of the current constitutional regime to achieve predictability with two recent blockbuster cases. While investigating every single case may be warranted, doing so is well beyond the scope of this Article. Accordingly, we chose two recent cases that illustrate problems in blockbuster cases generally. One case involves a federal district court's attempt to apply the *State-Farm–Exxon-Shipping* framework following the jury's imposition of a $450 million punitive award. The second involves an intermediate state appellate court grappling with similar issues following a trial court's imposition of a multi-billion-dollar punitive award. In examining these cases, we focus exclusively on the punitive damages awards and courts' attempts to apply the current constitutional framework. These cases involve other important and complicated issues that are not relevant to our punitive-damages analysis, and we leave those non-trivial issues to future scholars.

1. Blockbuster Example 1: Surgical Gowns

In April 2017, a federal jury imposed $450 million in punitive damages and approximately $4.15 million in compensatory damages following a trial over defective surgical gowns.[204] The underlying class action alleged that defendants had "concealed material information from Plaintiff and the class relating to a defect in the [surgical] Gowns and that, as a result, Plaintiff and

204. *Bahamas*, 2018 WL 11274489, at *1.

the class overpaid for the gowns."[205] Following the jury's verdict, defendants moved for a new trial, remittitur, or amendment of the judgment.[206] As part of that motion, defendants argued that the jury's punitive damages award violated the Due Process Clause of the Fourteenth Amendment and thereby called upon the district court to apply the current constitutional framework to the punitive damages award imposed by the jury.[207]

The court began by reiterating the fundamental goals of punitive damages, noting "[p]unitive damages are 'aimed at deterrence and retribution.'"[208] It then diligently applied the three guideposts from *Gore* and *State Farm* to the jury's award.[209] Beginning with the reprehensibility guidepost, the court took the unusual step of inferring reprehensibility from the size of the punitive damages award instead of evaluating whether the defendant's conduct was sufficiently reprehensible to support such a large award. The court explained that "the sheer size of the jury's punitive damages award speaks loudly and clearly that the jury found Defendants' conduct in this case to be exceedingly reprehensible."[210] The court then noted that "[t]hree of the five reprehensibility factors appear to be at issue: reckless disregard, deceitfulness, and repeated conduct."[211] After a lengthy factual analysis, the court concluded that all three factors were present in the defendant's conduct.[212] The court relied on the jury's implicit findings that defendants knew of underlying defects, continued to sell millions of gowns knowing of these defects, and attempted to conceal these defects from various parties.[213] Accordingly, the court refused to disturb the punitive damages awarded by the jury based on the first *Gore* guidepost.[214]

The court reached a different conclusion based on the second guidepost, however. The court began its second-guidepost analysis, as do many courts, by pointing out the vagaries of the Supreme Court's guidance, noting that "the Supreme Court has 'been reluctant to identify concrete constitutional limits on the ratio between harm, or potential harm, to the plaintiff and the

---

205. Bahamas Surgery Ctr., LLC v. Kimberly-Clark Corp., No. 14-CV-8390-DMG-PLA, 2017 WL 2120062, at *1 (C.D. Cal. May 15, 2017), *vacated and remanded*, 820 F. App'x 563 (9th Cir. 2020).

206. *Bahamas*, 2018 WL 11274489, at *1.

207. *Id.* at *10.

208. *Id.* at *14 (quoting State Farm Mut. Auto. Ins. Co. v. Campbell, 538 U.S. 408, 416 (2003)).

209. *Id.* at *14–18.

210. *Id.* at *14.

211. *Id.*

212. *Id.* at *14–16.

213. *Id.*

214. *Id.* at *16.

punitive damages award.'"[215] The court then engaged in the ratio analysis required by *State Farm*, explaining that "[t]he punitive damages award against [one defendant] represents a ratio of 90 to 1 while the award against [another defendant] represents a ratio of 382 to 1."[216] Apparently relying on the fact that the injuries here were economic—as opposed to physical—the court determined that "the punitive damages awards against Defendants [we]re constitutionally excessive."[217]

However, without a Supreme-Court-imposed "bright-line ratio which a punitive damages award cannot exceed," the district court turned to the Ninth Circuit's interpretation of Supreme Court caselaw to explain that "[i]n cases where there are significant economic damages and punitive damages are warranted but behavior is not particularly egregious, a ratio of up to 4 to 1 serves as a good proxy for the limits of constitutionality."[218] Based on this and other cases involving ratios of 9 to 1 and 7 to 1, the district court "f[ound] that Defendants' conduct is sufficiently egregious to justify a ratio of 5 to 1, which comports with the requirements of due process."[219] In other words, instead of choosing the highest permissible ratio—10 to 1 under *State Farm*—or the 1-to-1 ratio recommended by *State Farm* when compensatory damages are substantial or the 4-to-1 ratio that the Ninth Circuit observed, the district court chose a 5-to-1 ratio. The court is quite correct that this comports with the Supreme Court's nebulous guidance on "the requirements of due process," but the court offered no reasoning or justification to support its arbitrary determination that a 5-to-1 ratio was correct in this case.[220]

Turning to the third guidepost, the *Bahamas* district court, like other courts before it, found this guidepost unhelpful. The court rejected both plaintiffs' and defendants' proposed statutory and civil penalty points of comparison. And "[b]ecause the Court [was] unaware of any 'statutory penalty for misconduct that is comparable in a meaningful way to the misconduct at issue here, . . . [t]he third guidepost . . . play[ed] no significant role in [its] analysis.'"[221]

Thus, the *Bahamas* court reduced the punitive damages award based on the second guidepost alone. In doing so, however, it did not reach a principled decision about the appropriate ratio within the *State-Farm–Exxon-Shipping*

---

215. *Id.* (quoting State Farm Mut. Auto. Ins. Co. v. Campbell, 538 U.S. 408, 424–25 (2003)).

216. *Id.*

217. *Id.*

218. *Id.* (quoting Planned Parenthood of the Columbia/Willamette Inc. v. Am. Coal. of Life Activists, 422 F.3d 949, 962 (9th Cir. 2005)).

219. *Id.* at *16–17.

220. *Id.*

221. *Id.* (quoting Bullock v. Philip Morris USA, Inc., 198 Cal. App. 4th 543, 555, 570 (Ct. App. 2011)).

framework. Instead, it simply chose a 5-to-1 ratio and noted that this fell within the permissible range. Such an arbitrary determination is not an aberration within the realm of punitive damages, as the next case illustrates.

2. Blockbuster Example 2: Talcum Powder

Ingham centered on the familiar consumer product talcum powder (or talc), which was produced by a subsidiary of Johnson & Johnson.[222] Talcum powder is found in myriad consumer products, and many people each year apply talc or talc-containing products to their bodies.[223] Plaintiffs alleged that "Defendants knew for decades their Products contained asbestos fibers and other dangerous carcinogens but persisted in producing and marketing the Products despite the dangerous health hazards they posed."[224] Plaintiffs further alleged that they later developed cancer as a result of the contaminated products.[225] A Missouri state trial court found the defendants liable.[226] "The jury awarded each individual Plaintiff $25 million in compensatory damages, totaling $550 million, with judgment entered jointly and severally against Defendants. The jury awarded $4.14 billion in punitive damages, with [Johnson & Johnson] responsible for $3.15 billion and [a Johnson & Johnson subsidiary] responsible for $990 million."[227]

On appeal, "Defendants argue[d] the trial court erred in denying their motion to vacate or remit the jury's punitive damages award because the award violate[d] due process."[228] The state intermediate appellate court applied the Supreme Court's current constitutional framework. The court began with the typical refrain that the Supreme Court had failed to provide a "simple mathematical formula"[229] to evaluate punitive damages and noted that "the relevant constitutional line is 'inherently imprecise.'"[230] Beginning with the first guidepost, the court found the defendants' actions sufficiently reprehensible to support the punitive damages award.[231] "The harm suffered by Plaintiffs was physical, not just economic[, and] Plaintiffs each developed

222. Ingham v. Johnson & Johnson, 608 S.W.3d 663, 678 (Mo. Ct. App. 2020), *cert. denied*, 141 S. Ct. 2716 (2021).

223. *Id.* at 678–80.

224. *Id.* at 678.

225. *Id.*

226. *Id.* at 680.

227. *Id.*

228. *Id.* at 719.

229. *Id.* at 720 (quoting Krysa v. Payne, 176 S.W.3d 150, 156 (Mo. Ct. App. 2005)).

230. *Id.* (quoting *Krysa*, 176 S.W.3d at 156 (quoting Cooper Indus., Inc. v. Leatherman Tool Grp., 532 U.S. 424, 434–35 (2001))).

231. *Id.* at 721.

and suffered from ovarian cancer," including all of the deleterious side effects associated with cancer and the required chemotherapy.[232]

Applying the second guidepost, the court again lamented the absence of a "mathematical bright line between the constitutionally acceptable and the constitutionally unacceptable."[233] In addition to this absence, the *Ingham* court had to address two additional complicating factors: (1) the court held that the trial court lacked personal jurisdiction for the purposes of some claims (meaning those judgments were void) and (2) both corporate defendants were jointly and severally liable for part of the compensatory award.[234] The appellate court addressed the first factor relatively easily. After declaring judgements for some plaintiffs void, the court reduced the compensatory damages, holding that the Johnson & Johnson subsidiary was "liable for $500 million in actual damages ($25 million multiplied by twenty Plaintiffs) and [Johnson & Johnson was] jointly and severally liable for $125 million in actual damages with [the subsidiary] ($25 million multiplied by five Plaintiffs)."[235] And "[g]iven [this] reduction of actual damages, [the court] reduce[d] the punitive damages awards against Defendants proportionally."[236] The court reduced the punitive damages imposed against Johnson & Johnson to "$715,909,091" and the award imposed against the Johnson & Johnson subsidiary to "$900 million."[237]

Unfortunately, the state appellate court was less successful in addressing the second complicating factor.[238] Following state supreme court guidance, the *Ingham* court committed a basic mathematical error. It calculated punitive-to-compensatory ratios under the assumption that all parties would pay the entire compensatory award for which each was jointly and severally liable.[239] The Eighth Circuit has correctly observed that "[t]his method assumes [the] impossibility" that "each defendant will ultimately pay the full

232. *Id.*

233. *Id.* (quoting BMW of N. Am., Inc. v. Gore, 517 U.S. 559, 580 (1996)).

234. *Id.* at 721–22.

235. *Id.* at 722.

236. *Id.*

237. *Id.*

238. For the purposes of examining this second complicating factor, we assume the court correctly addressed the first. However, the flaws identified in addressing this second factor may well impact the first. While legally important, the court's failure to properly address both of these complicating factors or the failure to properly address only one has little impact on our analysis for the purposes of due process.

239. *Ingham*, 608 S.W.3d at 722.

compensatory damages award."[240] Employing this flawed methodology, the *Ingham* court calculated "ratios of 1.8:1 for [the Johnson & Johnson subsidiary] and 5.72:1 for [Johnson & Johnson]."[241] The court then concluded that "[t]hese ratios, as adjusted, are well within the limits of punitive damages consistently upheld."[242] Though defendants challenged these awards as excessive in light of the Supreme Court's guidance that "[w]hen compensatory damages are substantial, then a lesser ratio, perhaps only equal to compensatory damages, can reach the outermost limit of the due process guarantee,"[243] the *Ingham* court refused to overturn the awards.[244] It gave few reasons for doing so, explaining simply that it "f[ound] the ratios of 1.8:1 for [the subsidiary] and 5.72:1 for [Johnson & Johsnon] appropriate, given the facts and circumstances [of the case]."[245] The court did note, however, that "[b]ecause Defendants are large, multi-billion dollar corporations, [it] believe[d] a large amount of punitive damages [wa]s necessary to have a deterrent effect."[246]

Finally, with respect to the third guidepost, the *Ingham* court compared the punitive damages awarded to state civil and criminal penalties for fraud and concealment.[247] The court concluded that "[t]he punitive damages awards here, as adjusted, [were] significantly larger than the penalties authorized under [Missouri law]."[248] However, because the third guidepost is accorded less weight than the other two, the court declined to overturn the awards.[249]

---

240. Grabinski v. Blue Springs Ford Sales, Inc., 203 F.3d 1024, 1026 (8th Cir. 2000); *see also* Horizon Health Corp. v. Acadia Healthcare Co., 520 S.W.3d 848, 878–79 (Tex. 2017) (holding that the total "joint-and-several compensatory award" is not "the proper denominator for calculating the ratio of compensatory to [punitive] damages").

241. *Ingham*, 608 S.W.3d at 722.

242. *Id.*

243. Exxon Shipping, Co. v. Baker, 554 U.S. 471, 501 (2008) (quoting State Farm Mut. Auto. Ins. Co. v. Campbell, 538 U.S. 408, 425 (2003)).

244. *Ingham*, 608 S.W.3d at 722–23.

245. *Id.* at 723.

246. *Id.* Though the use of this type of reasoning is not explicitly unconstitutional, the Supreme Court has expressed reservations over the use of net worth in punitive damages awards,

> admonish[ing] that "[p]unitive damages pose an acute danger of arbitrary deprivation of property. Jury instructions typically leave the jury with wide discretion in choosing amounts, and the presentation of evidence of a defendant's net worth creates the potential that juries will use their verdicts to express biases against big businesses, particularly those without strong local presences."

State Farm Mut. Auto. Ins. Co. v. Campbell, 538 U.S. 408, 417 (2003) (quoting Honda Motor Co., Ltd. v. Oberg, 512 U.S. 415, 432 (1994)).

247. *Ingham*, 608 S.W.3d at 724.

248. *Id.*

249. *Id.*

In general, *Ingham* offers another example of a lower court struggling to apply the current constitutional guidance on punitive damages. Even ignoring the court's mathematical error, this case demonstrates, as do many blockbuster cases, the inconsistency of the application of current constitutional guidelines. And without consistency in these guidelines, the Supreme Court's goal of predictability will remain elusive.[250] Before turning to ways to improve the current framework, however, it is useful to explore a few non-blockbuster awards that have been appealed. These examples demonstrate that inconsistency is not unique to the largest punitive damages awards.

3. Non-Blockbuster Examples

While a full review of every punitive damages appeal remains well beyond the scope of this Article, it is nevertheless helpful to review a few appellate attempts to apply the *State-Farm–Exxon-Shipping* framework to non-blockbuster awards. In general, federal and state courts disagree on the proper ratio between punitive and compensatory damages. For example, the Third, Sixth, Eighth, and Tenth Circuits hew closely to a 1-to-1 ratio as the outermost limit under the Due Process Clause. They are relatively willing to declare a compensatory award to be "substantial" and follow *State Farm*'s guidance that "[w]hen compensatory damages are substantial, then a lesser ratio, perhaps only equal to compensatory damages, can reach the outermost limit of the due process guarantee."[251]

In *Jurinko v. Medical Protective Co.*, the Third Circuit followed this guidance and reduced a $6.25 million punitive damages award to $1.66 million—the amount of compensatory damages awarded.[252] The Sixth Circuit similarly adopted this reasoning in *Morgan v. New York Life Insurance Co.*, where it vacated a $10 million punitive damages award and "remand[ed] the case to the district court for an order of remittitur that will set the punitive damages in an amount that it determines is compatible with due process, not to exceed the amount of compensatory damages."[253] In *Boerner v. Brown and Williamson Tobacco Co.*, the Eighth Circuit "conclude[d] that the [$15 million] punitive damages award [wa]s excessive when measured against the substantial [$4,025,000] compensatory damages

250. Interestingly, the Court declined to hear an appeal in *Ingham*. Johnson & Johnson v. Ingham, 141 S. Ct. 2716 (2021) (mem.).

251. State Farm Mut. Auto. Ins. Co., 538 U.S. at 425.

252. Jurinko v. Med. Protective Co., 305 F. App'x 13, 15, 30 (3d Cir. 2008).

253. Morgan v. N.Y. Life Ins. Co., 559 F.3d 425, 443 (6th Cir. 2009).

award."[254] The court reduced the punitive damages award to $5 million.[255] The Tenth Circuit in *Lompe v. Sunridge Partners* similarly explained that "[b]ecause [the court] concluded that the amount of the compensatory damages . . . is substantial, an award of punitive damages equal to the compensatory award . . . may represent the outermost limit of the due process guarantee."[256]

In contrast to this approach, other federal and state courts view 10 to 1 as the most appropriate ratio limit and act accordingly. For example, in *Cote v. Philip Morris*, the Eleventh Circuit rejected *State Farm*'s guidance that a 1-to-1 ratio "can reach the outermost limit of the due process guarantee," explaining that it was merely dicta.[257] The court then upheld a 3.3-to-1 ratio.[258] As noted above, the Ninth Circuit generally approves of 4 to 1 as "a good proxy for the limits of constitutionality," but it has held that "a single-digit ratio greater than 4 to 1 might be constitutional" when the defendant's conduct is "more egregious."[259]

Similarly, some state supreme courts tend to approve any punitive-to-compensatory ratio under 10 to 1. The Supreme Court of West Virginia has explained that "the ratio statements by the United States Supreme Court, do not represent strict standards."[260] These standards, "[i]nstead, . . . merely provide a guide."[261] The Supreme Court of Arkansas upheld a punitive damages award that was five times as large as the accompanying compensatory award because such a ratio was not "breathtaking"—a word that the Supreme Court of the United States has never used in evaluating punitive damages.[262] And the Supreme Court of Arkansas is not the only court to have mutated the Court's guidance. The Supreme Court of Oregon affirmed an award with a 97-to-1 punitive-to-compensatory ratio because "two guideposts—reprehensibility and comparable sanctions—can provide a basis for overriding the concern that may arise from a double-digit ratio."[263] The Supreme Court of the United States has never employed the guideposts in this way.

---

254. Boerner v. Brown & Williamson Tobacco Co., 394 F.3d 594, 603 (8th Cir. 2005).

255. *Id.*

256. Lompe v. Sunridge Partners, LLC, 818 F.3d 1041, 1073 (10th Cir. 2016).

257. Cote v. Philip Morris USA, Inc., 985 F.3d 840, 849 (11th Cir. 2021) (quoting State Farm Mut. Auto. Ins. Co. v. Campbell, 538 U.S. 408, 425 (2003)).

258. *Id.*

259. Planned Parenthood of Columbia/Willamette Inc. v. Am. Coal. of Life Activists, 422 F.3d 949, 962–63 (9th Cir. 2005).

260. Manor Care, Inc. v. Douglas, 763 S.E.2d 73, 103 (W. Va. 2014).

261. *Id.*

262. Union Pac. R.R. Co. v. Barber, 149 S.W.3d 325, 348 (Ark. 2004).

263. Williams v. Philip Morris Inc., 127 P.3d 1165, 1181 (Or. 2006).

Our goal in reviewing these various punitive damages awards on appeal is not to suggest that any court has committed a specific error. With the exception of supreme courts of Arkansas and Oregon, which appear to have transformed the *State-Farm–Exxon-Shipping* framework, all of the decisions mentioned above could plausibly fit within the Supreme Court's current constitutional framework. And even the Arkansas and Oregon outliers may be plausibly justifiable because the Court has repeatedly insisted that no constitutional bright line exists. Instead of criticizing these courts, our goal is to highlight the fundamental flaws within the current framework. This framework simply cannot achieve predictability in any meaningful sense because it leaves so much up to individual courts and provides so little in the way of concrete guidance. The next Section proposes a simple solution that would remedy these pervasive problems.

B. Toward Clearer Guidelines and Greater Predictability

If the Supreme Court takes predictability in punitive damages awards as seriously as it has indicated in its caselaw, that caselaw has failed to provide an appropriate framework in which to achieve this goal. This Section provides a new framework that can maintain the Court's focus on punishment and deterrence while simultaneously injecting a new degree of predictability into punitive damages. In crafting this framework, our goal is not to develop a complicated system that works only in theory. Instead, we seek to provide a useable framework that will always work in both theory and practice and require little of courts in terms of its application. Indeed, our goal in offering a new framework is to remove the burden of implementing the complicated three-guidepost system that invariable invites inconsistency (and occasional incoherence) in its application. We begin by outlining our framework before delving into its fit within the current constitutional context.

Our new framework is simple. First, for all punitive damages imposed in cases not involving any human deaths or injuries, punitive damages may not exceed three times the accompanying compensatory award. In other words, the punitive-to-compensatory ratio may not exceed 3 to 1.[264] This new ratio limit replaces the guideposts from *Gore* and *State Farm* and abandons all pretext of avoiding a bright line restriction—this restriction is as stark as

264. This ratio will be calculated based on compensatory damages actually imposed. In the event a court imposes damages jointly and severally and does not include any means of allocating those damages to individual defendants, then reviewing courts should assume those damages will be split equally among all defendants held jointly and severally liable. At no time may a court calculate the punitive-to-compensatory ratio under the assumption that all defendants will pay the full damages for which they have all been held jointly and severally liable.

possible. Second, in all cases involving one or more human deaths or injuries, punitive damages may not exceed the value of statistical life for each death or injury. Under this approach, punitive damages could not exceed $11 million per injury or death.[265] Depending on the case, this may or may not result in a higher than 3-to-1 compensatory-to-punitive ratio. In general, these two limitations may not be conflated with one another. The only way a single defendant may be required to pay above a 3-to-1 ratio is if a court explicitly determines that the defendant was responsible for one or more deaths or injuries. If deaths or injuries occur and more than one defendant has been sued, then a court may only authorize a greater than 3-to-1 ratio if it determines that a given defendant caused a death or injury.[266] In situating this new framework within the Court's current constitutional approach, we begin with the 3-to-1 ratio before delving into our separate limit for human deaths and injuries.

4. A New Ratio Restriction

Our choice of a 3-to-1 ratio limit stems from substantial empirical evidence and the fact that the *Exxon Shipping* Court explicitly endorsed such an empirically founded approach. In that case, the Court considered three ratio limits before arriving at its choice of a 1-to-1 limit for maritime cases.[267] It began with our proposed 3-to-1 limit, which many states have adopted in connection with caps on punitive damages.[268] It declined this approach as too broad, however, noting "that there is no 'standard' tort or contract injury, making it difficult to settle upon a particular dollar figure as appropriate across the board."[269] In other words, this limit was too broad for maritime cases. The Court then rejected a lower 2-to-1 ratio limit that many statutes use in connection with treble damages provisions. It reasoned that "Congress devised the treble-damages remedy for private antitrust actions with an eye to supplementing official enforcement by inducing private litigation," which was not relevant in the punitive damages context.[270] The Court ultimately

265. The value of statistical life was roughly $10 million in 2015 dollars. *See* W. KIP VISCUSI, PRICING LIVES: GUIDEPOSTS FOR A SAFER SOCIETY 28–29 (2018). Inflating this to 2020 dollars yields a value of roughly $11 million.

266. Splitting responsibility for death or injury among more than one defendant is permissible, but the amount of punitive damages may not exceed the proportion of responsibility attributed to a particular defendant multiplied by the value of statistical life.

267. Exxon Shipping Co. v. Baker, 554 U.S. 471, 503–12 (2008).

268. McMichael & Viscusi, *supra* note 8, at 211.

269. *Exxon Shipping*, 554 U.S. at 506.

270. *Id.* at 511.

settled on a 1-to-1 ratio limit for maritime cases after a careful review of the available empirical evidence.[271]

Our approach relies on installing the 3-to-1 ratio limit in constitutional cases that the Court rejected under maritime law. Though Lens has cogently argued, and we agree, that *Exxon Shipping* was fundamentally a due process case,[272] it's limits on punitive damages technically only apply in maritime law. And the Court's concern "that there is no 'standard' tort or contract injury" assumes a slightly different meaning in the constitutional context.[273] Because no standard injury exists, it is necessary to preserve the ability of courts to more than double the compensatory damages award.

Our goal is to promote predictability while maintaining the ability of courts to further the goals of punishment and deterrence. Reducing the ratio limit of punitive damages from a vague 10-to-1 with many (unstated) exceptions to a hard 3-to-1 cap necessarily undermines the ability of courts to punish certain defendants who may have behaved egregiously and deter defendants whose conduct is highly likely to escape detection. As discussed above, any cap on punitive damages undermines both the punishment and deterrence goals.[274] The Court has demonstrated a willingness to sacrifice these goals in furtherance of predictability, but this does not mean these goals must be abandoned altogether. Our 3-to-1 ratio limit best balances the three goals of punishment, deterrence, and predictability, without making predictability subservient to the other two or vice versa.

We did not choose the 3-to-1 ratio limit at random or even choose the first option presented by the *Exxon Shipping* Court. Instead, we took a page from the Court's book and relied on empirical evaluations to arrive at this ratio limit. Previously, we have argued that "[n]ot only do the regression results above and from other work support a 3:1 ratio limit, but the raw data from blockbuster awards similarly support such a limitation."[275] Among all 167 blockbuster awards analyzed here, the median punitive-to-compensatory ratio is 7.3. And 52 of these cases fall at or below the 3-to-1 ratio limit. In total, 115 awards would have been impacted by our proposed limit, which would have reduced the total amount of blockbuster punitive damages awarded by approximately $569 billion. This amount represents approximately 92 percent of all blockbuster punitive damages awarded. Our proposed limit would be binding on the majority of blockbuster awards but not all such awards. By adopting this ratio limit, courts could meaningfully

---

271. *See supra* Part I.B(discussing this reasoning and evidence).
272. Lens, *supra* note 66, at 26.
273. *See Exxon Shipping*, 554 U.S. at 506.
274. *See supra* Part II.B.
275. McMichael & Viscusi, *supra* note 8, at 214.

improve predictability by culling many of the largest awards without completely eviscerating the ability of judges and juries to punish particularly blameworthy conduct or deter particularly difficult-to-detect behavior.

Overall, the 3-to-1 ratio limit imposed here allows courts to continue to pursue punishment and deterrence in awarding punitive damages while also promoting predictability within those awards. As Sunstein, Kahneman, and Schkade recognized, "[a] basic source of arbitrariness within the existing system of punitive damages . . . is the use of an unbounded dollar scale."[276] Capping punitive damages at a multiple of compensatory damages places a clear bound on the dollar scale. It avoids, however, the problem the Court expressed in *Exxon Shipping* that the lack of a standard injury "mak[es] it difficult to settle upon a particular dollar figure as appropriate across the board."[277] We do, however, allow for one exception to the ratio limit, replacing it with a dollar cap in certain situations. The next subsection delves into this exception.

5. Removing Human Deaths from the Ratio Restriction

In all cases involving human death or injury, the pertinent cap on the punitive damages award comes from the value of statistical life and not the accompanying compensatory award. The reason for this narrow exception stems from both the Court's previous approach to punitive damages and a more general understanding of the tendency to impose extreme damages awards. In particular, our sole exception to the ratio limit comes directly from Hersch and Viscusi.[278] They "propose a methodology for setting punitive damages in bodily injury cases that will enable punitive damages to fulfill their proper deterrence role."[279] More specifically, "[t]he damages structure [they] propose to promote efficient levels of safety uses the value of statistical life ('VSL') to establish the punitive damages award."[280] In the interest of brevity, we do not offer a complete review of their approach here, but incorporate it into our proposed approach as an exception to the more general ratio limit described above.

Incorporating a different rule for human injury and death follows directly from the Court's current approach but adds important structure that that approach lacks. For example, within the first (reprehensibility) guidepost, the

---

276. Sunstein, Kahneman, & Schkade, *supra* note 135, at 2078.

277. *Exxon Shipping*, 554 U.S. at 506.

278. Joni Hersch & W. Kip Viscusi, *Saving Lives Through Punitive Damages*, 83 S. CAL. L. REV. 229, 230 (2010); VISCUSI, *supra* note 265, at 144.

279. Hersch & Viscusi, *supra* note 278, at 230.

280. *Id.*

Court "instructed courts to determine the reprehensibility of a defendant by considering whether: the harm caused was physical as opposed to economic."[281] As seen in the examples above, courts have taken this instruction seriously and consider economic harms differently than they do deaths and injuries.[282] Incorporating an exception for death and injury into our ratio limit remains faithful to the Court's approach.

Perhaps more importantly, this VSL-based exception addresses the problem that judges and juries may be more inclined to impose extremely large awards when people suffer physical injuries. For example, one of the largest punitive damages awards we have identified came not from a case of massive fraud or nefarious corporate activities, but from a case of one person attacking another. A teenager attacked an eight-year-old child by dousing him with gasoline and setting him on fire. After local prosecutors declined to file criminal charges, a civil jury imposed $310 million in compensatory damages and $150 *billion* in punitive damages.[283] Cases involving human death and injury may evoke a different psychological response than those involving only financial harm. The Supreme Court recognized this and incorporated the economic-vs.-physical consideration into the first *Gore* guidepost. We similarly recognize this difference in our approach. But instead of incorporating it into a nebulous guidepost, we systematically incorporate it as an exception. This exception provides an avenue for judges and juries to punish egregious behavior and deter its repetition while simultaneously offering a concrete limit on punitive damages, thus improving their predictability.

In general, our approach has multiple advantages over the current approach. By eliminating the three guideposts and replacing them with a clear ratio limit and a narrow, well-defined exception, our approach allows courts to continue their pursuit of punishment and deterrence while maintaining predictability as required by the Due Process Clause of the Fourteenth Amendment.

CONCLUSION

Punitive damages exist to punish and deter defendants. The Supreme Court of the United States has never wavered from these goals. Over the years, however, the Court's jurisprudence has evolved to place predictability on par with these goals in the context of punitive damages. Unlike the more

281. State Farm Mut. Auto. Ins. Co. v. Campbell, 538 U.S. 408, 419 (2003).
282. *See supra* Part IV.A.
283. *See* Viscusi & McMichael, *supra* note 4, at 375 (discussing this case in more detail).

traditional goals, predictability does not serve as a justification for awarding punitive damages in the first place. Instead, it achieves parity in the constitutional framework only once a court has decided to impose punitive damages. Having made a decision to do so, not only must a court consider punishment and deterrence, but also predictability in order to remain within the bounds of the Fourteenth Amendment. The importance of predictability is apparent in the language the Court uses to impose limits on punitive damages and its willingness to sacrifice the ability to achieve punishment and deterrence in furtherance of increasing predictability.

Despite the importance of predictability, achieving it in practice remains elusive. For the last quarter century, the Court has relied on its three-guidepost framework to impose predictability on punitive damages awards. This attempt has failed. As illustrated by the blockbuster awards, punitive damages remain unpredictable. The empirical analysis presented above demonstrates that these extremely large awards mimic natural disasters like floods in their predictability—that is to say, they are not. To address this important shortcoming, this Article presents a simpler approach. By eliminating the complicated guidepost methodology and replacing it with a simple bright-line rule limiting punitive damages to three times the amount of the accompanying compensatory damages, the Supreme Court could allow lower courts to achieve predictability in punitive damages awards. The lone exception would change this limit if a person was harmed or killed. If the Supreme Court takes predictability as seriously as it has stated, it should take meaningful steps toward achieving it. Our approach offers those meaningful steps, supported by the same type of empirical evidence the Court has relied on in the past.