

# Do Class Actions Deter Wrongdoing?

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## INTRODUCTION

The class action is said to serve three principal purposes: litigation efficiency, compensation of victims, and deterrence of wrongdoing.<sup>1</sup> When the claims at issue in a class action are small, as they usually are in the United States, it is unlikely that any litigation efficiency is gained because there would be no individual litigation at all in the absence of the class action. This leaves us with compensation and deterrence. But the class action is not known for its success at delivering compensation to class members in small-stake cases; sometimes it does it well—and it may get better as technology improves—but, in the run-of-the-mill case, only a small percentage of victims are made whole.<sup>2</sup> None of this has bothered me or many other scholars, because we have always pointed to the deterrence virtue of the class action, arguing that it alone is enough to justify the class device.<sup>3</sup>

In recent years, however, critics have begun arguing that class actions may not even offer any deterrence. This is a change from the usual complaint critics make about class actions and deterrence: that they deter too much.<sup>4</sup> But there they are nonetheless: some argue that the entire theory of deterrence is inapplicable to class actions and others argue that, whatever the theory, there is no empirical proof that class actions do what the theory says.<sup>5</sup>

In this article, I take up these critiques: Is there any reason to doubt the theory of deterrence as applied to class actions? Is it

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1. Jay TIDMARSH, *Class Actions: Five Principles to Promote Fairness and Efficiency*, LexisNexis, 2013, §1.03.
  2. Brian T. FITZPATRICK and Robert C. GILBERT, “An Empirical Look at Compensation in Consumer Class Actions”, (2015) 7 *New York University Review of Law & Business* 771-772 and 778.
  3. Brian T. FITZPATRICK, “Do Class Action Lawyers Make Too Little?”, (2010) 158 *University of Pennsylvania Law Review* 2067.
  4. John C. COFFEE, Jr., *Entrepreneurial Litigation*, Cambridge, MA, Harvard, 2015, p. 134.
  5. See text accompanying notes 26, 32, 45-46, *infra*.

true that there is no empirical evidence in favor of the theory? As I will show, the theory of deterrence remains just as strong today as it was when it was introduced 50 years ago by the “classical” law and economics movement. Moreover, although there is not a great deal of empirical evidence to support the theory for class actions, there is some, it is uncontroverted, and it is consistent with reams and reams of empirical evidence in favor of deterrence for individual lawsuits. In short, the conventional view that the class action can be justified by the deterrence rationale alone remains sound.

### 1. SPECIFIC VERSUS GENERAL DETERRENCE

Let me begin by making an important distinction that is sometimes overlooked in the discussion about class actions and deterrence. There are two types of deterrence, and it is hard to deny that class actions *do* accomplish one of them.

One type of deterrence is known as “specific deterrence.” Specific deterrence refers to how an *actual* wrongdoer responds to an *actual* lawsuit against it: does that wrongdoer stop the misbehavior after it gets caught?<sup>6</sup> General deterrence, by contrast, refers to how *potential* wrongdoers respond to a *potential* lawsuit: do potential wrongdoers decide not to commit misconduct to begin with because they are afraid of lawsuits against them?<sup>7</sup>

There is little doubt that class action lawsuits generate specific deterrence. How do we know this? We know this because when class action lawsuits are resolved they often include a court order obligating the defendant to change its behavior. Almost all class actions that are not dismissed are settled, and, when I examined every single one of them in U.S. federal court over a two-year period, I found that, almost one quarter of the time, the settlement included a provision requiring the defendant to change its behavior in some way.<sup>8</sup>

6. See, for example, Sean FARHANG: “specific deterrence refers to the effects of enforcement against a particular violator on *that* violator’s future conduct ...”, *The Litigation State: Public Regulation and Private Lawsuits in the U.S.*, Princeton, NJ: Princeton University Press, 2010, p. 9.

7. See, for example, FARHANG: “general deterrence refers to effects of visible enforcement efforts in the legal environment on other would-be violators who have yet to actually be the targets of enforcement and hope never to be”, *ibid.*

8. See Brian T. FITZPATRICK, “An Empirical Study of Class Action Settlements and Their Fee Awards”, (December 2010) 74 *Journal of Empirical Legal Studies* 811-846.

In some types of class action lawsuits, I found behavior-modification provisions as often as 75% of the time.<sup>9</sup> But even when there was no behavior modification provision, this does not mean the class action did not cause specific deterrence: sometimes defendants drop offending practices on their own after they get sued.<sup>10</sup>

Some critics complain that the behavior-modification provisions in class action settlements are cosmetic and do not impose real restrictions on corporations.<sup>11</sup> This is a difficult complaint to evaluate without digging into the merits of each and every one of the hundreds of class action settlements that are approved every year. Although I have examined these settlements for my research, I was in no position to assess the merits of each case. But I have served as an expert in dozens of class action cases where I did dig into the merits, with many of these cases having ended in settlements that included behavior-modification provisions, and the provisions in my cases were not toothless.<sup>12</sup> I also know that class action critics have not identified very many toothless provisions when they have had the chance to do so. Of the thousands upon thousands of class action settlements over the past few years, I could find only a small

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9. See *ibid.*

10. See, e.g., my declaration found in Exhibit 2 of the Motion for Attorneys' Fees in *Fernandez v. Merrill Lynch, Pierce, Fenner & Smith*, No. 15-22782 (S.D. Fla., Nov. 28, 2017), where I noted that the settlement did not include "an injunction obligating the defendant to secure mutual fund fee waivers in the future for class members' accounts ... only because the defendant already transitioned those accounts to a platform that ensures they will not be charged the improper mutual fund fees in the future."

11. See, for example, Erin L. Sheley and Theodore H. Frank's complaint that many injunctions "amount to no more than a rearranging of the deck chairs to create the illusion of value to justify attorney's fees." "Prospective Injunctive Relief and Class Settlements", (April 2012) 39:3 *Harvard Journal of Law and Public Policy* 779-780.

12. For example, in several settlements in class action lawsuits against banks for reordering their customers' debit card transactions from chronological order to an order that maximized the number of overdraft fees the bank could charge them, the settlements included provisions forbidding the banks from reordering their customers' transactions in the future. See *Harris v. Associated Bank, N.A.*, Docket No. 10-cv-22948-JLK (S.D. Fla., Aug. 2, 2013); *Wolfgeher v. Commerce Bank, N.A.*, Docket No. 10-cv-22017-JLK (S.D. Fla., Aug. 2, 2013); *McKinley v. Great Western Bank*, Docket No. 10-cv-22770-JLK (S.D. Fla., Aug. 2, 2013); *Eno v. M & I Marshall & Illsley Bank*, Docket No. 10-cv-22730-JLK (S.D. Fla., Aug. 2, 2013); *Blahut v. Harris Bank, N.A.*, Docket No. 10-cv-21821-JLK (S.D. Fla., Aug. 5, 2013); *Casayuran et al. v. PNC Bank, N.A.*, Docket No. 10-cv-20496-JLK (S.D. Fla., Aug. 5, 2013).

handful alleged to include cosmetic behavior modifications<sup>13</sup>—with one exceptional area of litigation.<sup>14</sup> In my view, critics have thus far not given us much reason to question the efficacy of specific deterrence in class actions.

But I will not discuss specific deterrence further here. In my mind, the more interesting debate in class action circles is about general deterrence.

## 2. THE THEORY OF GENERAL DETERRENCE

In the very first semester of the very first year in every law school in America, students have been taught for the last 50 years that the threat of a lawsuit deters misbehavior,<sup>15</sup> largely due to theories propounded by the famous “Chicago School” of law and

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13. The only list of any sort I could find was an article by Erin Sheley and Ted Frank identifying less than 10 cases outside the merger litigation I discuss below. “Prospective Injunctive Relief and Class Settlements”, *supra*, note 11, 779-784.
  14. The exception is class action lawsuits brought to challenge corporate mergers. In recent years, the great majority of mergers have faced one or more of these lawsuits and the lawsuits nearly always settle for an order mandating that the companies give more information about the merger to their shareholders. See Sean GRIFFITH and Anthony RICEY, “Who Collects the Deal Tax, Where, and What Delaware Can Do About It”, in *Handbook on Shareholder Litigation*, Jessica ERICKSON *et al.* (eds.), Edward Elgar, forthcoming. Scholars have shown these ordered disclosures to be meaningless to shareholders. See Jill E. FISCH, Sean J. GRIFFITH and Steven DAVIDOFF SOLOMON, “Confronting the Peppercorn Settlement in Merger Litigation: An Empirical Analysis and a Proposal for Reform”, (2015) 93 *Texas Law Review* 557-558. I agree these settlements should be rejected, and that is precisely what courts have started doing now that it has become known how meaningless these orders are to the class. See Sean J. GRIFFITH, “Private Ordering Post-*Trulia*: Why No Pay Provisions Can Fix the Deal Tax and Forum Selection Provisions Can’t”, in *The Corporate Contract in Changing Times*, Steven DAVIDOFF SOLOMON and Randall THOMAS (eds.), University of Chicago Press, forthcoming. Although these settlements have indeed been numerous in recent years, they are a very special—and very narrow—slice of our class action system. They are not a basis to conclude that most or even many behavior-modification orders are cosmetic.
  15. Scholars have identified this fact as a key part of the justification for private enforcement. As John C. Coffee writes: “The conventional theory of the private attorney general stresses that the role of private litigation is not simply to secure compensation for victims, but is at least equally to generate deterrence, principally by multiplying the total resources committed to the detection and prosecution of the prohibiting behavior.” “Rescuing the Private Attorney General: Why the Model of the Lawyer as Bounty Hunter is Not Working”, (1983) 42 *Maryland Law Review* 218.

economics.<sup>16</sup> By now, most of us in the academy accept the theory of general deterrence without question.

It is easy to see why the theory is so powerful. All we have to do is assume people are rational. A rational person does not want to get sued. Lawsuits cost money. You have to pay lawyers, and, if you lose, you have to pay the plaintiff. This means that lawsuits are a great way to stop people from misbehaving when we don't want them to: all you have to do is set the damages awarded in a lawsuit equal to an amount related to the harm the misbehavior inflicts on the injured party.<sup>17</sup> If the misbehavior benefits the corporation less than the harm it inflicts on others, then the corporation will rationally choose not to engage in the misconduct. Indeed, the only time the corporation will rationally choose to engage in the misconduct is when the benefits outweigh the harm, but that's ok: we want people to do things that generate more benefits than costs if we can make the injured party whole in the process. This is what we call "internalization of costs."<sup>18</sup> The rational-actor model of cost internalization is at the core of "classical" law and economics.<sup>19</sup>

It is true that lawsuits are not the only way we can deter misbehavior. Relying on word of mouth in the marketplace can also be effective. If a company mistreats its customers, employees, or shareholders, then the customers, employees, and shareholders can tell

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16. A description of the Chicago School's economic theory of deterrence can be found in William M. LANDES and Richard A. POSNER's landmark article "The Private Enforcement of Law", (January 1975) 4:1 *Journal of Legal Studies* 1-46. For a discussion of how the theory of general deterrence became a central part of modern law, one need only turn to a commonly assigned first-year torts textbook. See John C.P. GOLDBERG, Anthony J. SEBOK, and Benjamin C. ZIPURSKY, *Tort Law: Responsibilities and Redress*, New York, Wolters Kluwer, 2016, p. 211.
  17. Gary S. BECKER first set forth a criminal law version of the theory in "Crime and Punishment: An Economic Approach", (March–April 1968) 76:2 *Journal of Political Economy* 169-217. But the theory has been applied many times over to civil liability, such as by LANDES in "Optimal Sanctions for Antitrust Violations Antitrust Damage Reform", (1995) 50 *University of Chicago Law Review* 657. There is debate over how exactly to set the relationship between damages and harm, see Amanda ROSE, "Reforming Securities Litigation Reform: Restructuring the Relationship Between Public and Private Enforcement of Rule 10b-5", 108 (2008) *Columbia Law Review* 1328-1330.
  18. See, e.g., POSNER, "A Theory of Negligence", (1972) 1:1 *Journal of Legal Studies* 29-96.
  19. See, e.g., Claire FINKELSTEIN, "Legal Theory and the Rational Actor", in *The Oxford Handbook of Rationality*, Alfred R. MELE et al. (ed.), Oxford Oxford University Press, 2004, p. 399.

others to go elsewhere. But it should be noted that lawsuits *enhance* market feedback loops: lawsuits publicize wrongdoing to consumers, employees, and shareholders in a way that word of mouth does not on its own.<sup>20</sup>

Many scholars today do not fully accept classical law and economics because they think the underlying model of human behavior is inaccurate: people, it turns out, are not very rational.<sup>21</sup> There are

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20. As Russell M. Gold explains, “litigation can and frequently does inflict nonlegal harms on defendants such as harm to their reputation” because “legal process draws attention to and is seen to substantiate allegations.” “Compensation’s Role in Deterrence”, (1997) 91 *Notre Dame Law Review* 2007-2023. Indeed, a number of empirical studies have found that this risk of reputational harm from litigation is a more effective deterrent than the monetary penalties companies face from losing lawsuits. See Brent Fisse and John Braithwaite’s case studies of major corporate scandals in the 1960s and 1970s, *The Impact of Publicity on Corporate Offenders*, Albany, NY, State University of New York Press, 1983, p. 243. See also Jonathan M. Karpoff and John R. Lott, Jr.’s research indicating that from 1978-1987, 93.5% of companies’ stock price declines after initial press reports of alleged corporate fraud were attributable to reputational loss and only 6.5% was attributable to formal legal penalties. “The Reputational Penalty Firms Bear from Committing Criminal Fraud”, (October 1993) 36:2 *Journal of Law and Economics* 784. Similarly, John D. Graham writes that “the indirect effect of liability on consumer demand—operating through adverse publicity ... is often the most significant contribution of liability to safety.” “Product Liability and Motor Vehicle Safety”, in *The Liability Maze: The Impact of Liability Law on Safety and Innovation*, Peter W. HUBER and Robert E. LITAN (ed.), Washington D.C., Brookings Institution, 2010, p. 181-182. Joni Hersch’s research has found that the average drop in the equity value of a firm the day an employment discrimination class action is announced is triple the direct costs of settling the case. “Equal Employment Opportunity Law and Firm Profitability”, (1991) 26:1 *Journal of Human Resources* 152. See also Jonathan M. Karpoff, D. Scott Lee and Gerald S. Martin’s research indicating securities enforcement proceedings generate reputational losses seven and a half times larger than the legal penalties produced by the same proceedings. “The Cost to Firms of Cooking the Books”, (September 2008) 43 *Journal of Financial and Quantitative Analysis* 581-612. See also KOKU, “An analysis and the effects of class-action lawsuits”, (2006) 59 *Journal of Business Research* 508 (finding that stock-price “reactions to the announcement of class-action lawsuits are larger in magnitude” than non-class-action lawsuits).
21. As Nobel Prize winning economists Daniel Kahneman and Amos Tversky write: “In making predictions and judgments under uncertainty, people do not appear to follow the calculus of chance or the statistical theory of prediction. Instead, they rely on a limited number of heuristics which sometimes yield reasonable judgments and sometimes lead to severe and systematic errors.” “On the Psychology of Prediction”, (1972) 8:4 *Psychological Review* 237. See also KAHNEMAN and TVERSKY, “Prospect Theory: An Analysis of Decision Under Risk”, (1979) 47:2 *Econometrica*.

now countless studies<sup>22</sup> and even popular books<sup>23</sup> showing how all of us make the same types of mistakes over and over again when we try to process information; we do not simply add up the costs and compare them to the benefits before we act. These so-called “behavioral” economists seek to update the classical rational-actor model with findings from these studies.<sup>24</sup> The behavioral findings are admittedly powerful, but none of them suggest that the usual defendants in class actions—corporations—are predictably irrational in the same way the rest of us are.<sup>25</sup>

So why do critics think that the theory of general-deterrence-through-lawsuits is wrong when the lawsuits are class action lawsuits? There are two reasons.

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22. For a sense of the scope of this field, in July 2017, Google Scholar counted approximately forty-five thousand academic citations to Kahneman and Tversky’s 1979 article on prospect theory alone.
  23. See Dan ARIELY, *Predictably Irrational: The Hidden Forces that Shape our Decisions*, HarperCollins, 2008; Daniel KAHNEMAN, *Thinking Fast and Slow*, Farrar, Straus and Giroux, 2011; Richard H. THALER and Cass R. SUNSTEIN, *Nudge: Improving Decisions about Health, Wealth, and Happiness*, Yale University Press, 2008.
  24. See Justin FOX, “From ‘Economic Man’ to Behavioral Economics”, (May 2015) *Harvard Business Review* 79-85.
  25. Stefano DellaVigna explains why this is: “Unlike individual consumers, firms can specialize, hire consultants, and obtain feedback from large data sets and capital markets. Firms are also subject to competition. Compared to consumers, therefore, firms are less likely to be affected by biases ... and we expect them to be close to profit maximization.” “Psychology and Economics: Evidence from the Field”, (June 2009) 47:2 *Journal of Economic Literature* 361. It is true that there has been some research that indicates that firms are sometimes not perfectly rational actors. See Ulrike MALMENDIER and Geoffrey TATE, “CEO Overconfidence and Corporate Investment”, (2005) 60:6 *Journal of Finance*. However, there are three good reasons to think that firms behave more rationally than individuals. First, firm decision making tends to be done by groups, and group decision making tends to be more rational than individual decision making. See Tamar KUGLER *et al.*, “Are Groups more Rational than Individuals? A Review of Interactive Decision Making in Groups”, (2012) 3:4 *Wiley Interdisciplinary Review: Cognitive Science* 425. Second, much of the literature identifying irrational corporate behavior does so by finding circumstances in which certain firms deviate from the rational behavior of other firms—suggesting the default is rational behavior, punctuated by occasional failures. See Malmendier and Tate, above. Third, and perhaps most importantly, research indicates firms are consistent about pursuing their rational self-interest, unlike individuals who are often more concerned with non-rational considerations. Phanish PURANAM *et al.*, “Modelling Bounded Rationality in Organizations: Progress and Prospects”, (2015) 9 *Academy of Management Annals* 392.

The first reason is “principal-agent costs”: the corporations (and, ultimately, the shareholders) pay the bills, but the corporate executives make the decisions, and sometimes the twain shall not meet.<sup>26</sup> But this is a problem only if corporations do not try very hard to align the interests of corporate officers and the corporation. Much of the concern with principal-agent costs comes from the fact that corporate officers may have left the corporation by the time the bills for their decisions come due.<sup>27</sup> But companies can delay or rescind their compensation in such circumstances to equalize the corporate and officer time horizons, for example with vesting stock options.<sup>28</sup> Indeed, most companies already do this.<sup>29</sup> In theory, almost any agency problem can be solved with a well-designed contract.<sup>30</sup>

Indeed, one sign that principal-agent costs are weak reasons to doubt the theory of deterrence for class actions is what the implications are *beyond* class actions. The exact same principal-agent problems that critics say make corporate executives unresponsive to class action lawsuits would make them unresponsive to every

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26. This is an especially popular critique in the securities fraud literature. As Coffee explains, “the efficacy of deterrence ... rests on the validity of enterprise liability: that is, on the claim that by imposing large penalties on the corporation, society induces increased monitoring of the corporate officials...” “Reforming the Security Class Action”, (November 2006) 106 *Columbia Law Review* 1553. Coffee argues, however, that “securities litigation is distinctive [because corporate managers have] stock options. [As such,] enterprise liability may work less well than a strategy that focuses directly on the managers themselves.” “Reforming the Security Class Action”, 1562-1563.
27. See, for example, Daniel A. Crane’s analysis: “[T]he average CEO holds her job for about six years. Mid-level executives, such as divisional managers, typically hold their jobs for an even shorter period, perhaps less than four years. Thus, most of the executives responsible for an antitrust violation will no longer be with the firm by the time a damages award is entered against the company.” “Optimizing Private Antitrust Enforcement”, (April 2010) *Vanderbilt Law Review* 677, 693.
28. Coffee’s analysis is helpful here as well. “[E]conomic theory suggests that vicarious liability is efficient so long as the principal and agent can enter into contracts that reduce the probability of the wrong that is to be deterred. Even given the ‘final period’ problem, there are conceivable means by which the corporation could write such contracts with its managers, for example, by restricting stock options and other incentive compensation.” *Supra*, note 26, 1565.
29. As many as 90% of major publicly traded American companies have compensation recoupment policies—often termed “clawback” policies—that permit them to recover bonuses and other performance incentives under certain circumstances. PriceWaterhouseCoopers, “Executive Compensation: Clawbacks 2014 Proxy Disclosure Study”, January 2015.
30. See Posner’s conclusion that “[a] corporation has effective methods of preventing its employees from committing acts that impose huge liabilities on it.” *Antitrust Law*, 2nd ed., Chicago, University of Chicago Press, 2011, p. 271.

other type of lawsuit as well; are critics saying the *entire* theory of general deterrence is wrong? Indeed, not only does this criticism suggest that the theory of deterrence is wrong, it also suggests that the theory of market feedback loops is wrong as well. If we cannot make corporate executives respond to the threat of lawsuits, then why would we think we can make them respond to the threat of consumer, employee, or shareholder boycotts?<sup>31</sup> That is, if class action lawsuits can't deter corporate misconduct because of agency costs, then nothing else that costs the corporation money can either. Thus, if we contend that class action lawsuits are failures, then we have to admit that other lawsuits and the market feedback loops are, too. But no one wants to admit all that.

This brings me to the second reason some critics say class actions don't generate deterrence: corporations cannot avoid the misconduct that leads to class actions because corporations cannot predict which of their activities will lead to class actions.<sup>32</sup> Class actions, they say, target behavior at random; no corporate executive can guess why he will be sued. But, if you can't predict beforehand why you will be sued, then you can't change your behavior to avoid the lawsuit.

There is no doubt that there is uncertainty in our system of justice. Some of this uncertainty is a good thing: we don't want rigid rules in place that box companies in and prevent them from innovating; we'd rather let companies do what they want to do and make

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31. Robert H. Land and Joshua P. Davis highlight this inconsistency: “[T]here is an odd—and usually unexplained—inconsistency when proponents of the free market claim that corporations should not be subject to civil liability ... : if the free market works in the sense that corporations respond in an efficient manner to market incentives, including by encouraging corporate representatives to act for the benefit of the corporation, why shouldn't the same be true of legal sanctions?” “Comparative Deterrence from Private Enforcement and Criminal Enforcement of the U.S. Antitrust Laws”, (2011) 2 *Brigham Young University Law Review* 316.
32. For example, Walter K. Olson complains that litigation has become “essentially a random matter”, *The Litigation Explosion: What Happened When America Unleashed the Lawsuit*, New York, Talley, 1992, p. 176–77. Similarly, the U.S. Chamber of Commerce has claimed: “[t]he class action ... does not impose burdens only on businesses that engage in wrongful conduct. Instead, the burdens of class actions are chiefly a function of who plaintiffs’ lawyers choose to sue...” Letter to Consumer Financial Protection Bureau 53 (December 11, 2013), available online: <<http://blogs.reuters.com/alison-frankel/files/2013/12/mayerbrown-chamberletter.pdf>>. See also E. Donald Elliott’s argument that tort law may not be predictable enough to shape how activities are undertaken; only how often they are undertaken. “Why Punitive Damages Don’t Deter Corporate Misconduct Effectively”, (1989) 40 *Alabama Law Review* 1058.

them pay the costs later if they harm people. Uncertainty means flexibility.

But uncertainty also means that it is sometimes hard to predict what will happen when a company does something new. But hard to predict does not mean impossible. If there is a 50-50 chance a company might lose a lawsuit, then the corporate executives do not just throw up their hands and say “we don’t know what will happen so let’s not worry about it.” They do what any other rational person would do: they discount the amount of money they would pay out if they lose the lawsuit by the 50% chance they might *not* lose the lawsuit.

But this assumes the company knows it might be sued to begin with. What if it is impossible for the company to know which of its business decisions might get it into trouble? Is it supposed to assume every decision might lead to a lawsuit? How does the company figure out what the damages would be in the lawsuit if it can’t even figure out what it might be sued for to begin with?

These are all hard questions, but corporations long ago found a solution to them: they hire lawyers. Yes, they hire dozens or even hundreds of them, pay them big salaries, and ask them to do something called “risk assessment.” I am most familiar with risk assessment departments in the automotive industry because one of my colleagues, Kip Viscusi, has chronicled them in great detail,<sup>33</sup> but every other industry does the same sort of thing in one way or another with their in-house legal departments.<sup>34</sup> And it is not only in-house lawyers that do this: companies rely on outside counsel to do it as well. For example, my old law firm sent around this apropos missive not so long ago: “Mitigating Consumer Fraud Class Action Litigation Risk: Top Ten Methods for 2015.”<sup>35</sup>

33. Viscusi comprehensively outlines extensive and pervasive safety design risk analyses done at Ford, Chrysler, and GM in “Pricing Lives for Corporate Risk Decisions”, (2015) 68:4 *Vanderbilt Law Review* 1117. See also Graham’s claim that “[a]ccording to one large vehicle manufacturer, in 1960 the typical in-house liability spent 5 percent of his time working with design engineers. Today such an attorney spends 40 to 50 percent...” *The Liability Maze: The Impact of Liability Law on Safety and Innovation*, *supra*, note 20, p. 126.

34. As Richard Marcus notes, “articles about the importance corporations place on compliance are rife in the professional literature.” “Revolution v. Evolution in Class Action Reform”, (preprint, submitted April 2017) *North Carolina Law Review*.

35. See Sidley Austin LLP, email to clients, “Mitigating Consumer Fraud Class Action Litigation Risk: Top Ten Methods for 2015” (January 5, 2015).

Of course, all these lawyers are expensive, and it may be that deterrence through litigation comes with greater transaction costs than deterrence through other means. Moreover, I will admit that sometimes even all these lawyers are completely hopeless at seeing what the future might hold. In some physical injury cases where the harm caused by a company's products does not manifest itself for decades after the company sold the product, I admit that it may be impossible for a company to anticipate that it might be sued.<sup>36</sup> Who knows what law and even science will look like 20 years from now? On the other hand, there are almost no class action lawsuits of this sort anymore; physical injury cases must be brought individually today.<sup>37</sup> Thus, to the extent the 20-years-later problem is a problem, it is not a problem with our class action system.

But you do not have to take my word that corporations can anticipate class action lawsuits. A legal scholar at Suffolk Law School, Linda Simard asked the corporate executives directly.<sup>38</sup> She sent a questionnaire to the general counsel at every company in the Fortune 500,<sup>39</sup> asking them about the class action lawsuits they had faced, and whether they had any ability to predict the lawsuits at the time their corporations made the business decisions giving rise to the class actions.<sup>40</sup> They responded that their ability to predict the class actions they had faced varied based on what kind of lawsuits they were. For some class actions, over 90% of the time they said they had "moderate" or "high" ability to predict that they would be sued.<sup>41</sup> But even for the wildest class actions of all—those resting on a completely "novel" legal theory—still 25% of the corporate lawyers said

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36. Viscusi makes precisely this argument, positing that, in some cases, constant changes in the law and the lag between when a product is manufactured and when a company may face liability mean that "the tort liability system cannot create effective risk reduction incentives for producers." *Reforming Products Liability*, Cambridge, MA, Harvard University Press, 1991, p. 158.

37. See, for example, Robert Klonoff's findings: "A few courts have been willing to certify personal injury class actions for settlement purposes. Examples include the National Football League concussion litigation and the *Deepwater Horizon* case. For the most part, however, personal injury mass torts continue to be adjudicated outside of the class action arena." "Class Actions in the Year 2026: A Prognosis", (2011) 6 *Emory Law Journal* 1600.

38. See Linda Sandstrom SIMARD, "A View From Within the Fortune 500: an Empirical Study of Negative Value Class Actions and Deterrence", (2014) 47:3 *Indiana Law Review* 739.

39. See *ibid.*, 750.

40. See *ibid.*, 757-761.

41. See *ibid.*, 760.

they had a “moderate” or “high” ability to predict they were coming.<sup>42</sup> Our system is hardly random if even the *new* legal theories can be anticipated 25% of the time. Professor Simard is not the only person corporate lawyers have told such things to.<sup>43</sup>

Of course, this survey also shows that even though some corporate lawyers knew they might be sued in a class action lawsuit, their companies did not always decide to refrain from the behavior; they sometimes went ahead and harmed people anyway. You might be asking yourself: how are class actions deterring anything if corporations are committing misconduct even when they know they might be sued? One answer is that even if the deterrence is imperfect (*e.g.*, maybe damages are set too low by the substantive law), it is better than nothing. But another answer goes back to the cost-benefit analysis I described earlier: we do not always want to stop corporations from harming people because sometimes the benefits to society outweigh the harms. What we do want, however, is for corporations to know they will pay for the harms before they decide to act so they only act when the benefits outweigh the harms. Class actions help corporations know that.

We law professors have not been misleading our students for the past 50 years: the theory of general deterrence is sound. We still

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42. See *ibid.*, 757.

43. George C. Eads and Peter H. Reuter interviewed corporate product safety officials and found “[o]f all the various external social pressures, products liability [lawsuits] ha[ve] the greatest influence on product design decisions,” and also found that corporations deal with the uncertainty of liability by “monitoring the development of the law in many jurisdictions.” *Designing Safer Products: Corporate Responses to Product Liability Law and Regulation*, Santa Monica, CA, RAND Corporation, 1983, pp. vii–ix. Similarly, when Andrew Popper conducted a survey of in-house counsel at Fortune 500 businesses, “73% [of respondents] agreed that a tort judgment against a company in the same line of commerce would prompt their company to ‘examine methods of production ... and, if needed, quietly take steps to make sure our products are in compliance...’” “In Defense of Deterrence”, (2012) 75:1 *Albany Law Review* 197. E. Patrick McGuire’s survey of 500 CEOs found similar results; lawsuits caused 35% of the surveyed CEOs to improve safety, 47% to improve warnings, 36% to close companies or discontinue products, 15% to lay off workers, and 8% to close plants. *The Impact of Product Liability*, New York, Conference Board Research Reports, 1988. Small business owners also report that fear of litigation has caused them to change their business practices; E. Christopher J. S. Hodges’s survey of small businesses found that 26% said fear of liability kept them from releasing new products or services. *Law and Corporate Behavior: Integrating Theories of Regulation, Enforcement, Compliance and Ethics*, Portland, OR, Hart Publishing, 2015, p. 79.

have every reason to think that lawsuits—including class action lawsuits—deter corporate misconduct.

### 3. THE DATA ON GENERAL DETERRENCE

Thus far, my defense of general deterrence has been theoretical. It is a strong theory, as even many class action critics admit<sup>44</sup>—this, again, is why every law school teaches it to every incoming class of students every single year—but it is still a theory. Naturally, the critics of class actions have picked up on this fact. Thus, the last argument critics raise about deterrence is this one: the theory may be good, but you have no evidence that it actually works in practice.<sup>45</sup> Until we have some evidence, they suggest, we cannot assume class actions generate any deterrence. As Professor Linda Mullenix at the University of Texas puts it:

[T]he deterrence theory suffers from a lack of empirical evidence and is based on conjectured hypotheses about corporate behavior ... [S]ocial scientists have not been able to empirically measure ... the deterrent effect of class litigation ... Thus, judicial and scholarly arguments relating to the deterrent effect of class litigation are largely theoretical, conclusory pronouncements.<sup>46</sup>

This criticism is a bit unfair. We have a strong theory that class action lawsuits generate deterrence. The critics do not have a strong theory that they do not. If anyone should have the burden of coming up with some evidence, it should be the people without a theory, not the people with a theory.

44. As Sheley and Frank concede, “it seems intuitive that the prospect of litigation might deter potential defendants from misconduct.” “Prospective Injunctive Relief and Class Settlements”, *supra*, note 11, 827.

45. See, for example, Michael S. Greve’s claim: “we have strikingly little evidence that torts acts as a deterrent...” *Harm-Less Lawsuits?: What’s Wrong With Consumer Class Actions*, Washington D.C., AEI Press, 2005, p. 16. Hodges expands on this line of argument: “There is almost no direct evidence on the actual effect of private enforcement of law, or on how litigation actually affects corporate decisions. The basic assumption is that since economic theory postulates that the imposition of a financial penalty will deter later wrongdoing, it must be so.” *Law and Corporate Behavior*, *supra*, note 43, p. 67. Popper notes this line of argument in his study as well, writing that “the deniers believe there is insufficient empirical evidence to prove the power of deterrence...” “In Defense of Deterrence”, *supra*, note 43, 195.

46. Linda S. MULLENIX, “Ending Class Actions as We Know Them: Rethinking the American Class Action”, (2014) 64 *Emory Law Journal* 23.

But, in fact, there is indeed evidence that general deterrence works. There now are several studies of the theory. They span different time periods and involve different types of class actions, and, with one exception, they all say the same thing: class actions deter misconduct.

These are just the class action studies. There are far more studies showing that other types of lawsuits deter misconduct. These other studies are not as uncontroverted as the class action studies, but there are many, many more studies finding that lawsuits generate deterrence than finding that they don't. These other studies are important because, as I noted above, some of the arguments critics raise about the theory of deterrence are not specific to class action lawsuits: if the evidence shows corporate executives respond to the threat of individual lawsuits, then there is reason to think they respond to the threat of class action lawsuits, too. I will discuss these other studies after I discuss the class action studies:

But before I do, one note about these studies: many of them do not measure misconduct directly. That is because it is often impossible to measure misconduct directly. For example, it is impossible to observe whether companies are secretly conspiring with one another to fix prices—they do it in secret. Thus, most of the studies below measure deterrence by looking at proxies for misconduct rather than misconduct itself—for example, for price fixing, the studies look at whether prices go up or down. It's not perfect, but it is the best science can do right now. That is, that the best science can do suggests that lawsuits deter misconduct.

In 1981, several economists set out to examine whether increasing the threat of an antitrust enforcement action by the federal government deterred companies from price fixing.<sup>47</sup> The economists examined the white bread industry. They looked at the “markup” (the price above the price of the ingredients) on a loaf of white bread in various places in the United States between 1965 and 1976; the markup was their proxy for potential price fixing.<sup>48</sup> They compared these markups to the enforcement budget of the U.S. Department of Justice's Antitrust Division over time. They hypothesized that

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47. See Michael Kent BLOCK, Fredrick Carl NOLD, and Joseph Gregory SIDAK, “The Deterrent Effect of Antitrust Enforcement”, (June 1981) 89:3 *Journal of Political Economy* 429.

48. See *ibid.*, 437.

the more money the federal government devoted to enforcement, the greater the threat of an enforcement action against price fixers; thus, if federal enforcement deterred price fixing, the markups would be smaller when the federal government's enforcement budget was bigger.<sup>49</sup>

That's not what they found. The federal government's enforcement budget had no effect on price markups until 1972; only then did a bigger budget lead to lower prices.<sup>50</sup> Why? The economists concluded that only after 1972 did companies face the threat of private antitrust class action lawsuits (only in 1966 was the modern money damages class action created) and *it was the private lawsuits that the companies were afraid of!*<sup>51</sup> They found that "settlements in class actions for price fixing in the bread industry were almost 10 times greater than government-imposed fines," and that "the deterrent effect of DOJ's enforcement efforts came not from the threat of publicly imposed fines or imprisonment, but from the likelihood of an award of private treble damages..."<sup>52</sup> In other words: "class actions represent the effective penalty in price-fixing cases."<sup>53</sup>

There have been several more recent studies, all of them concerning securities fraud class actions or their close cousins corporate derivative lawsuits, and, with one exception, all of them likewise finding that, the greater the threat of a class action lawsuit, the less corporate misconduct.

Two of these studies examined what happened when a U.S. Supreme Court decision in 2010 insulated some foreign companies from American securities fraud class action lawsuits. The securities fraud laws make it illegal for companies to misrepresent or hide relevant information from shareholders. When the threat of class

49. As Block, Nold and Sidak write, "[o]ur theoretical model suggests that increases in enforcement levels or penalties for price fixing generally reduce collusive markups." (*Ibid.*, 434).

50. See *ibid.*, 443. It should be noted that another economist found the DOJ's budget had a weaker deterrent effect when other variables were included in the analysis, but this study did not challenge the original findings regarding the class-action effect. See Craig M. NEWMARK, "Is Antitrust Enforcement Effective?", (1988) 96:6 *Journal of Political Economy* 1315.

51. Block, Nold and Sidak write that "only in the latter period, when class actions represented a credible threat, did a significant deterrent effect result..." *Supra*, note 47, 443.

52. *Ibid.*, 440-41.

53. *Ibid.*, 443.

action lawsuits went away, did the companies disclose less information to their shareholders than they had before? Both studies found that the answer was a resounding “yes”: the threat of a class action lawsuit had induced the companies to be more forthcoming to their shareholders.<sup>54</sup>

A third study examined disclosures to shareholders over a larger set of companies and over a longer time period, 1996 to 2010.<sup>55</sup> The authors attempted to compare disclosure made by companies at a higher risk of facing securities fraud class actions to those at a lower risk; the authors identified which companies faced higher risks with a model that depended on the size of the company, the company’s industry (e.g. was it a software company or a biotechnology company), and a host of other variables.<sup>56</sup> They found that companies at higher risk of being sued disclosed more information to shareholders, updated their disclosures more often, and rendered those disclosures in more readable language than companies at lower risk!<sup>57</sup> They also examined whether this “disclosure gap” narrowed after 2005 when the Securities and Exchange Commission started requiring all companies—whether they were at high or low risk of being sued—to disclose all the same information on the forms they file every year with the federal government.<sup>58</sup> The authors found that the gap did indeed narrow when the companies no longer had any choice but to make the disclosures.<sup>59</sup> This means that, when the companies did have a choice, it was the threat of a securities fraud class action that made them do it.

A fourth study looked at what influenced corporate decisions to misrepresent their earnings to shareholders in the years 1997

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54. See James P. NAUGHTON *et al.*, “Private Litigation Costs and Voluntary Disclosure: Evidence from the Morrison Ruling” (Working paper, last updated February 2017), online: <<https://ssrn.com/abstract=2432371>>. See also Anywhere SIKOCHI, “The Effect of Shareholder Litigation Risk on the Information Environment” (Working paper, Harvard Business School, last updated September 4, 2016), online: <[http://www.hbs.edu/faculty/Publication%20Files/17-048\\_413e9658-649c-4904-8d49-6779f11910ac.pdf](http://www.hbs.edu/faculty/Publication%20Files/17-048_413e9658-649c-4904-8d49-6779f11910ac.pdf)>.

55. Karen K. NELSON and A.C. PRITCHARD, “Carrot or Stick? The Shift from Vocabulary to Mandatory Disclosure of Risk Factors”, (2016) 13:2 *Journal of Empirical Legal Studies* 266.

56. See *ibid.*, online appendices A, B and C: <<http://onlinelibrary.wiley.com/store/10.1111/jels.12115/asset/supinfo/jels12115-sup-0001-suppinfo.pdf?v=1&s=76449fae2e3ccb147074d3b2224d45fb071b5742>>.

57. See *ibid.*, 295.

58. See *ibid.*, 267.

59. See *ibid.*, 295.

through 2008. Did the fact that a company got sued in a securities fraud class action for earnings manipulation discourage *other companies* in that same industry or geographic region from manipulating their own earnings? Here again, after controlling for numerous other variables, the authors concluded that the answer was “yes”: class actions deter misbehavior.<sup>60</sup>

A fifth study looked at whether corporate derivative liability deterred executives from introducing measures to entrench themselves in management. A corporate derivative lawsuit is much like a shareholder class action: one shareholder sues corporate executives, but instead of suing on behalf of other shareholders, the shareholder technically sues on behalf of “the corporation.”<sup>61</sup> Beginning in 1989, roughly half of the states in America adopted a legal change that made it much more difficult to win a derivative lawsuit. When derivative liability went down in those states, did corporate executives adopt fancy measures (with names like “poison pills” and “blank check stock”) to entrench themselves in management over the wishes of shareholders? You bet they did.<sup>62</sup>

Against these six class action studies, I have found only one study that points in the opposite direction. Three scholars examined whether American corporations disclose more information to shareholders than Canadian corporations do.<sup>63</sup> Because American securities fraud laws are more robust, that is what the deterrence theory would suggest. But they found precisely the opposite: more disclo-

60. See Simi KEDIA, Kevin KOH, and Shivaram RAJGOPAL, “Evidence on Contagion in Earnings Management”, (2015) 90:6 *Accounting Review* 2337, 2363-2367.

61. See Deborah A. DEMOTT and David F. CAVERS, *Shareholder Derivative Actions: Law and Practice*, Eagan, Minnesota, Clark Boardman Callaghan, September 2016, Westlaw edition.

62. The author, Ian Appel, found a higher use of anti-takeover provisions such as poison pills, blank check stock, classified boards, and supermajority voting requirements. “Governance by Litigation”, available online: <[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2532278](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2532278)>, p. 21-22. He surmises that the decline of derivative liability led to these changes through channels of both specific and general deterrence: “First, the drop in the prevalence of litigation may lead to fewer settlements containing governance reforms. Second, weakened deterrence effects may lead managers to deploy governance provisions for the purpose of entrenchment...” *Ibid.*, 23. Because the changes he observed occurred so quickly after derivative liability declined—i.e., too quickly for there to have been many derivative lawsuits filed and settled—he suspects the changes came about more from general than specific deterrence. *Ibid.*

63. Stephen BAGINSKI *et al.*, “The Effect of Legal Environment on Voluntary Disclosure: Evidence from Management Earnings Forecasts Issued in U.S. and Canadian Markets”, (2002) 77 *The Accounting Review* 25-50.

sure in Canada.<sup>64</sup> I do not put as much stock in this study as I do the others because it is very hard to do cross-country empirical studies; it is impossible to control for all the ways in which different countries differ from one another. And this study is directly contradicted by the several American-only studies, above, that show more liability leads to more disclosure. Nonetheless, for sake of completeness, I include this study here. But, as I said, it is the *only* contrary study I have found.

What about studies of other lawsuits? These studies are even more numerous. For decades and decades, scholars have studied the data on deterrence, and, for decades and decades, the studies have generally corroborated what the class action studies show: the threat of a lawsuit deters misconduct.

The studies outside the class action realm are too numerous to discuss comprehensively here. And not all of them deal with misconduct by corporations. But I will summarize them to give you a taste of what they say:

- *Tort liability and safety research*: scholars have found that the industries that face more tort liability spend more money researching safety measures for their products.<sup>65</sup>
- *Workers' compensation and workplace injuries*: scholars have found that, when the benefits employers would have to pay out for workplace injuries increased, fewer workplace deaths followed.<sup>66</sup>

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64. *Ibid.*, 43-47.

65. Viscusi and Moore found that industries with higher tort liability loss ratios spent more on product-related research and development, and concluded that "tort liability does ... have safety incentive effect." "An Industrial Profile of the Links Between Product Liability and Innovation", in *The Liability Maze*, *supra*, note 20, p. 114. However, Viscusi and Moore establish in other scholarship that this effect may taper off or become negative if liability grows too large. VISCUSI and MOORE, "Product Liability, Research and Development, and Innovation", (February 1993) 101:1 *Journal of Political Economy* 161-184. Furthermore, Viscusi's scholarship also casts doubt on the effectiveness of punitive damages, finding that they do not affect the incidence of chemical accidents, chemical releases, accident fatalities, or increase insurance premiums. "The Social Costs of Punitive Damages against Corporations in Environmental and Safety Tort", (November 1998) 87:2 *Georgetown Law Journal* 296-98.

66. See MOORE and VISCUSI, *Compensation Mechanisms for Job Risks: Wages, Workers' Compensation, and Product Liability*, Princeton, NJ, Princeton University Press, 1990, 133; James R. CHELIUS, "Liability for Industrial Accidents:

- *Bartender liability and alcohol-related traffic deaths*: scholars have found that, when liability was imposed on bartenders for inebriated driving by their patrons, fewer alcohol-related traffic deaths followed.<sup>67</sup>
- *Medical malpractice liability and negligence, deaths, and defensive medicine*: scholars have found that, when liability for medical malpractice decreases, doctors and hospitals spend less time and money on patients,<sup>68</sup> and more medical negligence and deaths follow.<sup>69</sup>

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A Comparison of Negligence and Strict Liability Systems”, (June 1976) 5:2 *Journal of Legal Studies* 303-306.

67. See SLOAN *et al.*, *Drinkers, Drivers, and Bartenders: Balancing Private Choices and Public Accountability*, Chicago, University of Chicago, 2000.
68. A number of scholars have found similar results supporting this conclusion. Daniel Kessler and Mark McClellan’s research finds that medical malpractice reforms reduce hospital expenditures. “Do Doctors Practice Defensive Medicine?”, (May 1996) 111:2 *Quarterly Journal of Economics* 353. Patricia M. Danzon has outlined the evidence indicating that liability induces physicians to spend more time per patient visit. “Liability for Medical Malpractice”, (1991) 5:3 *Journal of Economic Perspectives* 62. Similarly, Donald N. Dewees *et al.* has outlined the evidence showing greater malpractice insurance premiums are associated with more diagnostic testing. *Exploring the Domain of Accident Law Taking the Facts Seriously*, New York, Oxford University Press, 1996, 104-105. However, there is scholarship that points the opposite direction. Danzon reviews the evidence that medical malpractice liability is negatively correlated with frequency of lab tests. “Liability for Medical Malpractice”, *ibid.*, 62. Michael Frakes recites conflicting studies on whether malpractice liability is associated with more c-sections, “Defensive Medicine and Obstetric Practices”, (2012) 9 *Journal of Empirical Legal Studies* 457-462.
69. As with the previous footnote, a number of scholars have found results that support this conclusion, though this view is not unanimous. Zenon Zabinski and Bernard S. Black find that medical malpractice tort reforms increase the incidence of adverse outcomes other than death. “The Deterrent Effect of Tort Law: Evidence from Medical Malpractice Reform” (Working paper, Northwestern University, last updated February 15, 2015), online: <<https://ssrn.com/abstract=2161362>>. Michelle Mello and Troyen Brennan present evidence that liability for medical malpractice reduced negligence rates. “Medical Malpractice and the Tort System: What Do We Know and What (If Anything) Should We Do About It?” (2002) 80 *Texas Law Review* 1598. Joanna M. Shephard found that medical malpractice tort reforms increased deaths. “Tort Reforms’ Winners and Losers: The Competing Effect of Care and Activity Levels”, (2008) 55 *UCLA Law Review* 905. Paul C. Weiler *et al.* concluded that “the more malpractice suits that are brought ... the fewer the number of negligent medical injuries”, despite the fact that “this result did not reach the conventional level of statistical significance”, *A Measure of Malpractice: Medical Injury, Malpractice Litigation, and Patient Compensation*, Cambridge, MA, Harvard University Press, 1993, p. 129. However, as in the previous footnote, there is scholarship that points in the other direction. Kessler and McClellan

- *Tort reform and traffic accidents*: scholars have found that, when liability for traffic accidents decreases, more traffic accidents follow.<sup>70</sup>

As I said, these studies are not uncontroverted, and I tried to cite opposing studies in the above footnotes.<sup>71</sup> But the important point is that the lion's share of studies *supports* the theory of general deterrence.

## CONCLUSION

The primary justification for the class action lawsuit in the United States today is the deterrent effect it has on corporate misbehavior. In recent years, however, some critics have begun to

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found that malpractice tort reforms did not reduce mortality or medical complications. "Do Doctors Practice Defensive Medicine?", *supra*, note 68, 353. And Frakes and Anupam B. Jena find that malpractice tort reforms do not affect birth outcomes. "Does Medical Malpractice Law Improve Health Care Quality", (2016) 143 *Journal of Public Economics* 142-158.

70. Paul H. Rubin and Joanna M. Shepherd find that collateral source reforms increase vehicle accident deaths. "Tort Reform and Accidental Deaths", (2007) 50:2 *Journal of Law and Economics* 221. Michelle J. White finds that drivers take less care in comparative fault systems than in contributory negligence systems. "An Empirical Test of the Comparative and Contributory Negligence Rules in Accident Law", (1989) 20:3 *RAND Journal of Economics* 325-29. Michael L. Smith found that "[t]ests in the early studies produced mixed results, but later studies typically find that adoption of no-fault rules to replace common law tort liability leads to an increase in automobile accident fatality rates." "Deterrence and Origin of Legal System: Evidence from 1950-1999", (2005) 7 *American Law and Economic Review* 352. But see Rubin and Shephard's finding that other tort reforms than collateral source reforms decreased vehicle accident deaths. "Tort Reform and Accidental Deaths", 221. See also W. Jonathan Cardi *et al.*'s outline of conflicting studies on whether no-fault automobile accident compensation systems reduce or increase fatalities. "Does Tort Law Deter Individuals?: A Behavioral Science Study", (2012) 9 *Journal of Empirical Studies* 573-574, n. 31.
71. See also Robert A. Kagan's overview of the topic in *Adversarial Legalism: the American Way of Law*, Cambridge, MA, Harvard University Press, 2001, pp. 141-144. Some studies do not examine real-world data, but, rather, simulations, where survey takers are asked hypothetical questions about how they would respond to potential liability in certain situations. These studies have found mixed evidence of deterrence. See, for example, Cardi *et al.*'s finding that potential tort liability did not affect decisions to engage in potentially tortious behavior even though the threat of criminal sanctions did. "Does Tort Law Deter Individuals?: A Behavioral Science Study", *supra*, note 70, 567. Theodore Eisenberg and Christoph Engel found that damages liability deterred in public good experiments. "Assuring Civil Damages Adequately Deter: A Public Good Experiment", (April, 2014) 11 *Journal of Empirical Legal Studies* 301.

question even this justification. Some critics question the theory of general deterrence and others have said the theory lacks empirical evidence. But, as I have explained, the theory of deterrence is still sound. Moreover, there is in fact empirical evidence to support it, both for class actions as well as other lawsuits. As a result, I believe scholars and policymakers can still safely rely on deterrence as reason to retain class actions.

