

# Classwide Recoveries

Joshua P. Davis\*

## ABSTRACT

*Classwide recoveries can have important advantages over individual recoveries. They can, for example, allow plaintiffs to pursue litigation when individual actions would be uneconomical, and they can make possible a statistical approach that is often not feasible in ordinary litigation. This Article makes these points and then explores subtler issues. In doing so, it focuses on situations in which classwide recoveries can offer a way to tailor a defendant's overall liability to the precise harm it caused. The circumstances in which this benefit accrues are important: when some but not all members of a group suffered injury, and when identifying those members of the group that were harmed is impossible or impractical. This issue has great significance. A recent controversy in class certification jurisprudence is whether plaintiffs must show harm to all or virtually all members of a proposed class to satisfy Federal Rule of Civil Procedure 23. This Article suggests a novel and counterintuitive thesis: class treatment and classwide recoveries can be particularly valuable precisely when some courts have questioned the propriety of class certification. To be more precise, classwide recoveries can impose just the right amount of liability on a defendant when plaintiffs can show the total harm the defendant has caused but cannot identify which class members suffered resulting injuries. Ironically, some courts have expressed reluctance to certify classes in just these circumstances.*

*"For the rational study of the law the black-letter man may be the man of the present, but the man of the future is the man of statistics and the master of economics."\*\**

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\* Associate Dean for Faculty Scholarship, Professor of Law, and Director of the Center for Law and Ethics, University of San Francisco School of Law. I am grateful for insightful comments from Elizabeth Cabraser, Eric Cramer, Mort Davis, Connie de la Vega, Howie Erichson, David Franklyn, Deborah Hussey Freeland, Myriam Gilles, Tristin Green, Pat Hanlon, Geoff Hazard, Deborah Hensler, Bill Hing, Sam Issacharoff, Rob Kulick, Thom Main, Rick Marcus, Josh Rosenberg, Steve Shatz, Charlie Silver, Hal Singer, and Tom Willging. Royce Barber, Jamie Bodiford, Veronica Francis, and Nick Larson provided excellent research assistance. All errors remain my own.

\*\* Oliver Wendell Holmes, Jr., *The Path of the Law*, 10 HARV. L. REV. 457, 469 (1897).

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## INTRODUCTION

Classwide recoveries can hold various advantages over individual recoveries. Perhaps the best known advantage of the class action is the ability to allow plaintiffs with small claims to band together, pursuing litigation that otherwise would not be feasible.<sup>1</sup>

Less frequently recognized is the opportunity aggregate litigation affords to use statistics to improve judicial decisionmaking. Courts in individual litigation tend to rely on the speculation of witnesses about the facts—and on the speculation of jurors about the veracity and accuracy of witness testimony. Aggregate litigation, in contrast, affects a large enough group that the parties can readily move beyond anecdotes to a statistical inquiry.

This Article explores yet another potential advantage of aggregate litigation—that class certification can be especially valuable precisely when *not all class members suffered harm*. This is so because class certification can enable a court to award a recovery based on the injury to the class as a whole rather than having to calculate recovery on an individual basis.

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<sup>1</sup> See, e.g., *Butler v. Sears, Roebuck & Co.*, 702 F.3d 359, 362 (7th Cir. 2012), *cert. granted, vacated, and remanded*, 133 S. Ct. 2768 (2013), *reinstated*, 727 F.3d 796 (7th Cir. 2013).

This last advantage is important and could lead to a somewhat counterintuitive approach to class certification doctrine. Indeed, a crucial issue—often *the* crucial issue—in class certification today is how a court should respond if some portion of a proposed class did not suffer harm from the conduct at issue. Some courts have reaffirmed the longstanding view that certification may nevertheless be appropriate.<sup>2</sup> Recently, others have implied that plaintiffs must show injury to all—or virtually all—class members to carry their burden for certification.<sup>3</sup> This Article suggests reasons to doubt the wisdom of imposing an “all or virtually all” requirement at class certification.

Part I provides background for the analysis. Part I.A defines classwide recoveries as that term is used in this Article. Part I.B explains a potential doctrinal impediment to classwide recoveries in some cases: some courts have implied that class certification requires plaintiffs to offer evidence that can show a defendant caused harm to all or virtually all members of a class. Part I.C notes that allowing classwide recoveries would render the “all or virtually all” requirement inappropriate, at least in some cases. Part I.D situates classwide recoveries within a theoretical framework, noting their relationship to an entity or public law model and an aggregation or private law model.

Part II explores various potential benefits of classwide recoveries. Part II.A explains why classwide recoveries make sound procedural sense. Indeed, that practical reality may explain judicial use of classwide recoveries more than any theoretical consideration. Assessing the overall injury a defendant’s conduct caused can be more expedi-

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<sup>2</sup> See, e.g., *Pella Corp. v. Saltzman*, 606 F.3d 391, 394 (7th Cir. 2010); *DG ex rel. Stricklin v. Devaughn*, 594 F.3d 1188, 1198 (10th Cir. 2010); *Kohen v. Pac. Inv. Mgmt. Co. (PIMCO)*, 571 F.3d 672, 677 (7th Cir. 2009) (“What is true is that a class will often include persons who have not been injured by the defendant’s conduct; indeed this is almost inevitable because at the outset of the case many of the members of the class may be unknown, or if they are known still the facts bearing on their claims may be unknown. Such a possibility or indeed inevitability does not preclude class certification . . . .” (citations omitted)); *Cordes & Co. Fin. Servs., Inc. v. A.G. Edwards & Sons, Inc.*, 502 F.3d 91, 106–07 (2d Cir. 2007); *In re Urethane Antitrust Litig.*, 251 F.R.D. 629, 638 (D. Kan. 2008); *Meijer, Inc. v. Warner Chilcott Holdings Co. III*, 246 F.R.D. 293, 310 (D.D.C. 2007); *In re Rubber Chems. Antitrust Litig.*, 232 F.R.D. 346, 353 (N.D. Cal. 2005); *J.B.D.L. Corp. v. Wyeth-Ayerst Labs., Inc.*, 225 F.R.D. 208, 219 (S.D. Ohio 2003); *In re Cardizem CD Antitrust Litig.*, 200 F.R.D. 297, 321 (E.D. Mich. 2001).

<sup>3</sup> This issue can arise under the predominance requirement of Federal Rule of Civil Procedure 23(b)(3), under the requirement of manageability under Federal Rule of Civil Procedure 23(b)(3)(D), and in consumer cases regarding ascertainability. See, e.g., *In re Hydrogen Peroxide Antitrust Litig.*, 552 F.3d 305, 325–26 (3d Cir. 2008); *In re New Motor Vehicles Canadian Exp. Antitrust Litig.*, 522 F.3d 6, 28 (1st Cir. 2008); *In re Light Cigarettes Mktg. Sales Practices Litig.*, 271 F.R.D. 402, 416–17 (D. Me. 2010); *infra* Part I.B.

tious and more accurate when courts deal with harm to a large number of individuals on a classwide basis rather than individual litigation.

Parts II.B and C explore some subtler benefits of classwide recoveries, particularly when a court would have difficulty determining which class members have meritorious claims. Part II.B explains why classwide recoveries can produce lower error costs than individual recoveries. As a predicate for this analysis, it is important to distinguish between two kinds of potential error: first, imposing the wrong amount of liability on defendants; and second, awarding the wrong amount of compensation to plaintiffs.<sup>4</sup>

As to liability, classwide recoveries can allow courts to require defendants to pay precisely the amount of harm that they cause. This serves a number of valuable policy goals, most notably achieving optimal deterrence. Individual recoveries, in contrast, can lead to defendants paying more or less than the damages they cause and, as a result, to excessive or insufficient deterrence.

The analysis is somewhat more complicated, however, regarding compensation. Some subtlety is required in assessing whether classwide recoveries provide closer to optimal compensation for plaintiffs than do individual recoveries. A court may be able to allocate the classwide recovery to members of the plaintiff class in proportion to the injury each suffered, perhaps by conducting informal mini-hearings or empowering a special master to undertake factual inquiries. In the cases of interest, however, the court will not be able to determine which class members suffered the relevant form of injury. Under those circumstances, a court may have to take recourse to some kind of formula, possibly even relying on a simple pro rata distribution. If so, a classwide recovery would produce *higher* error costs than individual recoveries if those costs are measured as the absolute difference between the actual outcome and the right outcome for each plaintiff. Classwide recoveries, however, will result in *lower* error costs if they are measured as the *square* of that difference.<sup>5</sup>

Despite these conflicting results regarding compensation, three considerations suggest that classwide recoveries are attractive. First,

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<sup>4</sup> This Article assumes throughout that the substantive law is efficient. It assumes, in other words, that imposing any liability greater or lesser than a proper application of the law to the facts would be, respectively, excessive or insufficient.

<sup>5</sup> As discussed below, a common approach to measuring error costs is to measure the square of the difference between the right result and the actual result (that is, multiply that difference by itself) rather than simply to measure the absolute difference. One benefit of this approach is that it always produces a positive number so that errors in opposite directions do not cancel out.

measuring error costs by squaring the difference between the actual recovery and the right recovery is appropriate for those class members who are averse to risk. Squaring the difference helps to capture that, for risk-averse litigants, large errors are disproportionately harmful. For class members with large claims, risk aversion is likely the norm. Second, where members of a potential class have small claims, allowing a classwide recovery is often necessary to permit class certification and achieve any compensation whatsoever. If plaintiffs are unable to pursue legal redress without a class, denial of certification effectively means defendants win regardless of the merits,<sup>6</sup> a *de facto* rule that produces high error costs. Whether class members' claims are large or small, classwide recoveries are thus likely to produce lower error costs in terms of compensation than individual recoveries. Finally, classwide recoveries yield lower *total* error costs—considering both liability and compensation—than do individual recoveries.

Part II.C addresses another subtle benefit of classwide recoveries. When courts calculate recovery on a classwide basis as opposed to an individual basis, the possible outcomes in litigation transform—to borrow terms from mathematics—from a discontinuous to a continuous function. To be more precise, under an individualized approach, small changes in the findings of fact regarding the odds that particular plaintiffs suffered harm can produce a large, discrete change in the remedy awarded. In contrast, under a classwide approach, those same small changes in factual findings have only an incremental effect on recovery. Continuous functions in terms of the outcomes at trial can have significant benefits over discontinuous functions—such as treating similar cases similarly, allowing for predictability, encouraging sensible litigation expenditures, and facilitating settlements.

These various benefits support certifying classes and allowing classwide recoveries despite plaintiffs' failure to show injury to all class members—indeed, *particularly* when not all class members suffered the relevant form of harm.

The above analysis assumes, for the most part, that the parties will litigate through trial. Part II.D then addresses some issues that arise if that assumption is relaxed. In particular, it offers some preliminary thoughts about the effects of settlement and uncertainty on the analysis above.

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<sup>6</sup> See, e.g., *McLaughlin v. Am. Tobacco Co.*, 522 F.3d 215, 219–20, 234 (2d Cir. 2008) (denying class certification and acknowledging that doing so would likely be fatal to plaintiffs' claims).

Part III turns to two potential criticisms of classwide recoveries.<sup>7</sup> The first is theoretical. It can be understood to derive from academic criticism of a parallel doctrine, market-share liability.<sup>8</sup> Market-share liability is implicated when courts can identify numerous victims of a legal violation but cannot determine which member of a group of potential defendants caused harm to each victim.<sup>9</sup> Courts face a parallel problem—or, perhaps, the better term is a “mirror image” problem—when they can identify a defendant that violated the law but not which members of a group of potential plaintiffs suffered resulting injury. Critics of market-share liability have argued that it is inappropriate to hold a defendant liable for harm that it probably did not cause.<sup>10</sup> Part III.A explains that no similar problem besets classwide recoveries. Unlike market-share liability, classwide recoveries would hold a defendant liable only for the harm that it probably caused.

A second potential criticism of classwide recoveries is more practical. It is that they could cause defendants to pay too much—that they could allow class certification to put undue pressure on defendants to settle even meritless lawsuits or cause a court to impose excessive liability.<sup>11</sup> Neither version of this criticism is persuasive. First, there is little evidentiary or theoretical support for the notion that class certification regularly causes defendants to pay more than they should in settling litigation.<sup>12</sup> Second, the inclusion of uninjured members in a class should not affect a defendant’s total liability, if it is calculated appropriately.

Part IV concludes that there are strong policy reasons to award classwide recoveries, even—indeed, especially—when classes include uninjured members.

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<sup>7</sup> This Article does not address potential objections to classwide recoveries based on standing, due process, and the Rules Enabling Act, 28 U.S.C. §§ 2071–2077 (2012). For a discussion of those issues, see Joshua P. Davis, Eric L. Cramer & Caitlin V. May, *The Puzzle of Class Actions with Uninjured Members*, 82 GEO. WASH. L. REV. 858 (2014).

<sup>8</sup> See, e.g., Benjamin C. Zipursky, *Evidence, Unfairness, and Market-Share Liability: A Comment on Geistfeld*, 156 U. PA. L. REV. PENNUMBRA 126 (2007).

<sup>9</sup> *Sindell v. Abbott Labs.*, 607 P.2d 924, 928 (Cal. 1980).

<sup>10</sup> See Zipursky, *supra* note 8, at 134–35.

<sup>11</sup> This concern has motivated recent changes in the law, most notably the Supreme Court’s adjustment to the pleading standard in *Bell Atlantic Corp. v. Twombly*, 550 U.S. 544 (2007), but also various federal appellate court decisions imposing a heightened standard at class certification. *Wal-Mart Stores, Inc. v. Dukes*, 131 S. Ct. 2541, 2551 (2011); *In re Hydrogen Peroxide Antitrust Litig.*, 552 F.3d 305, 309–10 (3d Cir. 2008); *In re New Motor Vehicles Canadian Exp. Antitrust Litig.*, 522 F.3d 6, 26 (1st Cir. 2008).

<sup>12</sup> For a careful critique rejecting the argument about legal blackmail, see Charles Silver, “*We’re Scared to Death*”: *Class Certification and Blackmail*, 78 N.Y.U. L. REV. 1357, 1388–90 (2003).

## I. CLASSWIDE RECOVERIES AND CLASS CERTIFICATION

### A. *Classwide Recoveries*

A court awards a classwide recovery in a class action when it calculates an aggregate award to the class as a whole rather than a separate award to each individual class member.<sup>13</sup> Allocation of the overall recovery to members of the class occurs only after a class trial.<sup>14</sup> The allocation process can assume various forms, including individual hearings before a judge, a magistrate, or a special master, or approval of a formula or similar method submitted by class counsel. Calculating recovery on a classwide basis—as opposed to an individual basis—can make a great deal of difference.

Consider an example. Imagine litigation in which 100 women sue an employer claiming that they suffered discrimination because they were denied promotions that were instead awarded to less qualified men. In total, the employer deprived the 100 women of 60 positions. Assume that the women can all establish that they were better qualified than all of the men who were promoted. Determining which 60 women would have been promoted but for the discrimination, however, is quite difficult. The promotion criteria are too subjective, and the women have credentials that are too similar. Further assume that each woman who would have been promoted is entitled to recover \$10,000 in back wages. The outcome in this case might be dramatically different depending on whether the court adopts an individualized or classwide approach to recovery.

Using an individualized approach, each of the 100 women may be able to show that she more likely than not suffered \$10,000 in harm as a result of discrimination. After all, each woman had a 60% chance of being promoted but for the discrimination, which should satisfy the preponderance of the evidence standard.<sup>15</sup> The cumulative effect of aggregating these individual claims would be to impose liability on the employer of \$1 million—\$10,000 each to the 100 women.

In contrast, employing a classwide measure of recovery, the court might limit liability to the \$600,000 in total damages that the class as a whole suffered from sex discrimination. After all, in total, only 60 women—not 100 women—were each deprived of \$10,000 in lost wages. That \$600,000 could then be allocated among the members of

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<sup>13</sup> Davis, Cramer & May, *supra* note 7, at 861.

<sup>14</sup> *Id.*

<sup>15</sup> I assume here that the only issue in dispute is which women were harmed by the discriminatory practice. I also put aside the issue of whether courts are willing to rely on purely statistical evidence in assessing liability.

the class in some reasonable manner, perhaps by distributing the funds on a pro rata basis so that each class member receives \$6,000.<sup>16</sup>

A similar issue has arisen in the antitrust context. Not many antitrust class actions reach trial, but the jury instructions in those that have—or those that have come close enough for the court to adopt jury instructions—are revealing. They ask the jury only to determine the damages of the class as a whole, not to determine the damages of individual class members.<sup>17</sup> Classwide recoveries may well be the norm in how courts conduct antitrust class trials.<sup>18</sup>

As is likely apparent from the above discussion, the choice between an individualized approach and a classwide approach to recovery has profound consequences. Before exploring them systematically, however, it is worth noting a reciprocal relationship between class certification doctrine and classwide recoveries: class certification doctrine could limit the possibilities for classwide recoveries, and classwide recoveries could enhance the prospects for class certification.

*B. Class Certification as Potentially Limiting the Possibilities for Classwide Recoveries: “All or Virtually All”?*

As the above example suggests, classwide recoveries can play an important role when courts know the total harm a defendant caused but have difficulty identifying which members of a group suffered the relevant form of injury. Class certification doctrine as it has developed in some courts holds the potential to prevent aggregate litigation in just these sorts of cases.

This is so because an emerging issue in class certification decisions—in some cases the most significant issue—is whether plaintiffs must show a defendant’s conduct harmed all or virtually all members of a proposed class to satisfy Federal Rule of Civil Procedure 23.<sup>19</sup>

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<sup>16</sup> As a doctrinal matter, the Supreme Court’s decision in *Wal-Mart Stores, Inc. v. Dukes*, 131 S. Ct. 2541 (2011), has cast doubt on whether a court may proceed in this manner. *See id.* at 2560–61 (suggesting the need for individualized inquiry in some employment discrimination actions, at least in some circumstances). For an analysis of this issue, see generally Davis, Cramer & May, *supra* note 7.

<sup>17</sup> Joshua P. Davis & Eric L. Cramer, *Of Vulnerable Monopolists: Questionable Innovation in the Standard for Class Certification in Antitrust Cases*, 41 RUTGERS L.J. 355, 393–96 & nn.120–28 (2009) [hereinafter Davis & Cramer, *Vulnerable Monopolists*].

<sup>18</sup> *See id.*

<sup>19</sup> *In re Hydrogen Peroxide Antitrust Litig.*, 552 F.3d 305, 325–26 (3d Cir. 2008) (noting crucial issue at class certification is common impact); *In re New Motor Vehicles Canadian Exp. Antitrust Litig.*, 522 F.3d 6, 28 (1st Cir. 2008); Joshua P. Davis & Eric L. Cramer, *Antitrust, Class Certification, and the Politics of Procedure*, 17 GEO. MASON L. REV. 969, 970–71 (2010) [herein-

How this issue arises depends on context, including the substantive law on which plaintiffs rely for their claims.

In antitrust, courts generally address this issue under the rubric of common impact. The relevant judicial reasoning proceeds through the following steps: harm to all or virtually all class members is necessary for common impact, common impact is necessary for predominance, and predominance is necessary to certify a class under Federal Rule of Civil Procedure 23(b)(3).<sup>20</sup>

To elaborate a bit, one of the elements of an antitrust claim is that the conduct at issue caused the relevant form of harm (sometimes called impact, fact of damage, or antitrust injury) to a plaintiff.<sup>21</sup> Whether plaintiffs in a proposed class action can attempt to show the relevant harm to the class as a whole through common evidence has come to be known as the issue of “common impact.”<sup>22</sup> Some courts have indicated that common impact is a requisite for common issues to predominate in an antitrust case. This approach is manifest in some recent cases where courts have suggested that plaintiffs must offer evidence capable of showing harm to all or virtually all members of a proposed class to establish common impact and, thereby, predominance.<sup>23</sup> To be sure, for various reasons, this development in doctrine is suspect.<sup>24</sup> But what matters for present purposes is that some courts

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after Davis & Cramer, *Politics of Procedure*]; Davis & Cramer, *Vulnerable Monopolists*, *supra* note 17, at 362.

<sup>20</sup> *In re Hydrogen Peroxide*, 552 F.3d at 325–26; *New Motor Vehicles*, 522 F.3d at 28.

<sup>21</sup> Davis & Cramer, *Vulnerable Monopolists*, *supra* note 17, at 362–63.

<sup>22</sup> Davis & Cramer, *Politics of Procedure*, *supra* note 19, at 970.

<sup>23</sup> *In re Hydrogen Peroxide*, 552 F.3d at 325–26; *New Motor Vehicles*, 522 F.3d at 28.

<sup>24</sup> First, in past decisions—including binding precedents in some federal circuits—courts have certified classes even if plaintiffs could not show that all of the members of the proposed class were harmed. Compare *In re Linerboard Antitrust Litig.*, 305 F.3d 145, 152 (3d Cir. 2002) (holding predominance does not require proof of harm to all class members), with *In re Hydrogen Peroxide*, 552 F.3d at 325–26 (implying proof of harm to all or virtually all class members is necessary to satisfy predominance). Second, courts have recognized that common issues can predominate in a case as a whole even if they do not predominate regarding impact or fact of damage. *Cordes & Co. Fin. Servs., Inc. v. A.G. Edwards & Sons, Inc.*, 502 F.3d 91, 108–09 (2d Cir. 2007); see also *Amgen Inc. v. Conn. Ret. Plans & Trust Funds*, 133 S. Ct. 1184, 1196 (2013) (“Rule 23(b)(3), however, does not require a plaintiff seeking class certification to prove that each elemen[t] of [her] claim [is] susceptible to classwide proof. What the rule does require is that common questions predominate over any questions affecting only individual [class] members.” (alterations in original) (internal quotation marks and citations omitted)). Third, some of the very courts that have implied the “all or nearly all” requirement have recognized the class certification standard should focus on trial, *In re Hydrogen Peroxide*, 552 F.3d at 311–12, yet antitrust trials rarely address common impact at all, and if they do, they address only whether there is widespread harm to the class, not whether “all or virtually all” class members suffered injury. Davis & Cramer, *Vulnerable Monopolists*, *supra* note 17, at 392–96. For these various reasons, the courts that have rejected the “all or nearly all” requirement may well have firmer

have used the issue of common impact to imply that plaintiffs must be able to show harm to all or virtually all members of a class for certification in antitrust cases.

The same pattern can play out in Racketeer Influenced and Corrupt Organizations Act (“RICO”),<sup>25</sup> fraud, and consumer cases. Sometimes in these cases, as in antitrust cases, the relevant legal consideration is predominance.<sup>26</sup> If recovery would require proof specific to individual claims—such as whether each class member relied on an alleged misrepresentation—courts may rule that common issues do not predominate over individual issues, rendering certification under Federal Rule of Civil Procedure 23(b)(3) inappropriate.<sup>27</sup> Courts taking this approach may impose, in effect, a required showing of harm to all or virtually all class members. Yet another form the issue can take is ascertainability, a requirement recognized by some federal courts.<sup>28</sup> According to the reasoning of some courts, if plaintiffs in consumer cases cannot show who was harmed by the practice at issue—for example, if members of a class are not identifiable from a defendant’s records and are unlikely to have retained proof of a relevant purchase—the class is not ascertainable and class certification is inappropriate.<sup>29</sup> Concern about ascertainability can thus lead courts to require evidence at class certification of harm to all or virtually all class members.

To be sure, not all courts have accepted the “all or virtually all” requirement. Indeed, a growing number of courts have explicitly rejected it. As Judge Posner explained in his influential decision in *Kohen v. Pacific Investment Management Co.* (“PIMCO”)<sup>30</sup>:

[A] class will often include persons who have not been injured by the defendant’s conduct; indeed this is almost inevitable because at the outset of the case many of the members

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grounding in class certification doctrine. See *Wal-Mart Stores, Inc. v. Dukes*, 131 S. Ct. 2541, 2551–52 (2011); *Pella Corp. v. Saltzman*, 606 F.3d 391, 394 (7th Cir. 2010); *DG ex rel. Stricklin v. Devaughn*, 594 F.3d 1188, 1198 (10th Cir. 2010); *Mims v. Stewart Title Guar. Co.*, 590 F.3d 298, 308 (5th Cir. 2009); *Kohen v. Pac. Inv. Mgmt. Co. (PIMCO)*, 571 F.3d 672, 677 (7th Cir. 2009).

<sup>25</sup> Racketeer Influenced and Corrupt Organizations (RICO) Act, 18 U.S.C. §§ 1961–1968 (2012).

<sup>26</sup> See, e.g., *McLaughlin v. Am. Tobacco Co.*, 522 F.3d 215, 222 (2d Cir. 2008).

<sup>27</sup> *Id.* at 227–28, 234.

<sup>28</sup> The requirement of ascertainability can in turn derive from various other class certification requirements, such as manageability or predominance. See generally Myriam Gilles, *Class Dismissed: Contemporary Judicial Hostility to Small-Claims Consumer Class Actions*, 59 DEPAUL L. REV. 305 (2010).

<sup>29</sup> *Id.*

<sup>30</sup> *Kohen v. Pac. Inv. Mgmt. Co. (PIMCO)*, 571 F.3d 672 (7th Cir. 2009).

of the class may be unknown, or if they are known still the facts bearing on their claims may be unknown. Such a possibility or indeed inevitability does not preclude class certification, despite statements in some cases that it must be reasonably clear at the outset that all class members were injured by the defendant's conduct.<sup>31</sup>

According to Posner, it is sufficient for class certification if plaintiffs can show harm that is widespread among class members—that is, that the class does not include “a great many persons who have suffered no injury at the hands of the defendant.”<sup>32</sup> Still, in jurisdictions that do adopt the “all or virtually all” requirement, it may greatly restrict the potential for awarding classwide recoveries.

### C. *The Effect of Classwide Recoveries on Class Certification*

On the other hand, allowing classwide recoveries might facilitate class certification, permitting it where plaintiffs would not be able to satisfy the “all or virtually all” requirement. Classwide recoveries obviate the need for individualized inquiries regarding harm that could otherwise frustrate efforts to litigate and try a case on a class basis. Allowing plaintiffs to recover on a class basis would not, however, mean that class certification is always appropriate. It would change only the showing plaintiffs must make.<sup>33</sup>

Without classwide recoveries, plaintiffs must either make an appropriate showing<sup>34</sup> that they will be able to prove harm to individual

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<sup>31</sup> *Id.* at 677 (citations omitted); *see also* *Messner v. Northshore Univ. HealthSystem*, 669 F.3d 802, 823 (7th Cir. 2012); *Pella Corp. v. Saltzman*, 606 F.3d 391, 394 (7th Cir. 2010); *In re Flonase Antitrust Litig.*, 284 F.R.D. 207, 227 (E.D. Pa. 2012) (“I agree with the analysis in [*PIMCO*] and with other courts that ‘have routinely observed that the inability to show injury as to a few does not defeat class certification where the plaintiffs can show widespread injury to the class.’” (quoting *In re Cardizem CD Antitrust Litig.*, 200 F.R.D. 297, 320–21 (E.D. Mich. 2001))).

<sup>32</sup> *PIMCO*, 571 F.3d at 677.

<sup>33</sup> The class certification standard—even in an age of aggregate proof—is not, as others have suggested, circular. *Cf.* Richard A. Nagareda, *Class Certification in the Age of Aggregate Proof*, 84 N.Y.U. L. REV. 97, 126 (2009) (“Certification based simply on assertions in the complaint or an admissible expert submission exhibits a troubling circularity. The legitimacy of aggregation as a procedural matter would stem from the shaping of proof that presupposes the very aggregate unit whose propriety the court is to assess.”). Courts must decide whether they will allow classwide recoveries, and, if they do, that will affect plaintiffs’ burden at class certification. As discussed below, however, either way plaintiffs have a requisite showing they must make for class certification to be appropriate.

<sup>34</sup> The somewhat vague phrase “make an appropriate showing” is deliberate. The burden on plaintiffs at class certification has never been pellucid, but recent federal court decisions have made it murkier yet. There seems to be a consensus that plaintiffs need not carry the same burden at class certification that they would have to carry to prevail at trial. *Amgen Inc. v.*

class members through common evidence—rendering the issue common—or that any individual issues relating to harm do not render class certification inappropriate.<sup>35</sup>

With the availability of classwide recoveries, the analysis is quite different. Plaintiffs merely need to make an appropriate showing that they will be able to calculate the aggregate harm to the class.<sup>36</sup> If they can achieve that, the court will be able to impose a judgment against the defendant and in favor of the class as a whole. Issues pertaining to the allocation of any recovery the class obtains could become an administrative matter, not one that bears on the certification decision. The “all or nearly all” requirement would then have no significant relationship to whether the court should certify a class.

To understand the possibilities—and limits—of calculating classwide recoveries, and their potential effect on class certification, it is helpful to review some recent judicial decisions in which these issues arose. The discussion below addresses litigation involving employment discrimination claims, antitrust claims, and fraud claims.

### 1. *Employment Discrimination*

Employment discrimination litigation offers an illustration of the potential effect on class certification of allowing classwide recoveries. The representative plaintiffs may be able to show with a high level of certainty using aggregate statistics that the class as a whole suffered adverse treatment by an employer on an impermissible basis. They may also be able to show the total harm the discriminatory conduct caused the class. It may be impossible or impractical, however, to identify which employees suffered injury. Under these circumstances, a classwide recovery would facilitate certification.

This analysis can explain the Ninth Circuit’s decision, sitting en banc, in *Dukes v. Wal-Mart Stores, Inc.*<sup>37</sup> Plaintiffs brought an action

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Conn. Ret. Plans & Trust Funds, 133 S. Ct. 1184, 1195 (2013) (“Merits questions may be considered [in addressing class certification] to the extent—but only to the extent—that they are relevant to determining whether the Rule 23 prerequisites for class certification are satisfied.”). Yet some courts have framed the class certification standard in a way that makes it difficult to distinguish the two. Resolution of this issue is unnecessary, however, for present purposes. For further discussion of the issue, see Davis, Cramer & May, *supra* note 7. See also Davis & Cramer, *Vulnerable Monopolists*, *supra* note 17.

<sup>35</sup> Cordes & Co. Fin. Servs., Inc. v. A.G. Edwards & Sons, Inc., 502 F.3d 91, 107–08 (2d Cir. 2007).

<sup>36</sup> See Davis, Cramer & May, *supra* note 7, at 861.

<sup>37</sup> See *Dukes v. Wal-Mart Stores, Inc.*, 603 F.3d 571 (9th Cir. 2010), *rev’d*, 131 S. Ct. 2541 (2011).

against Wal-Mart under Title VII of the Civil Rights Act of 1964<sup>38</sup> for sex discrimination.<sup>39</sup> In seeking class certification, plaintiffs offered, among other sources of evidence, a statistical analysis purporting to show that Wal-Mart had a bias against women in compensation and promotion.<sup>40</sup> The Ninth Circuit addressed Wal-Mart's argument that it had the legal right to challenge whether any particular member of the class numbering over a million would have received the same treatment even if Wal-Mart had not acted in a discriminatory manner in general.<sup>41</sup> Conducting over a million mini-trials on this issue could render a class action unmanageable and, as a result, class certification inappropriate.<sup>42</sup>

The trial court had held that individualized inquiries were unnecessary because it could instead assess the overall harm to the class.<sup>43</sup> Then, in a later stage in which Wal-Mart would have no interest,<sup>44</sup> it could allocate the overall recovery among class members. Relying on the Ninth Circuit's opinion in *Domingo v. New England Fish Co.*,<sup>45</sup> the trial court held that a lump sum award to the class as a whole is appropriate when the employment practices at issue make it difficult to determine precisely which of the claimants would have received more pay or been given a better job absent discrimination, but when it is clear that many would have.<sup>46</sup>

The Ninth Circuit reserved judgment about how precisely the trial should proceed, but it seemed to agree that a classwide approach could be proper.<sup>47</sup> In particular, it discussed with approval an earlier case, *Hilao v. Estate of Marcos*,<sup>48</sup> in which experts provided an assessment of the amount the class should recover based on selecting a subset of the overall claims, using statistics to gauge the merits of the claims in that subset, and drawing statistical inferences about the likely rate of success of the claims of the class as a whole.<sup>49</sup> In *Hilao*,

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<sup>38</sup> 42 U.S.C. §§ 2000e–2000e-17 (2006).

<sup>39</sup> *Dukes*, 603 F.3d at 577.

<sup>40</sup> *Id.* at 600.

<sup>41</sup> *Id.* at 578–79.

<sup>42</sup> *Id.* at 624–27 (discussing relationship between calculating class recovery and trial manageability).

<sup>43</sup> *Dukes v. Wal-Mart Stores, Inc.*, 222 F.R.D. 137, 179 n.49 (N.D. Cal. 2004).

<sup>44</sup> *See id.*

<sup>45</sup> *Domingo v. New Eng. Fish Co.*, 727 F.2d 1429 (9th Cir. 1984).

<sup>46</sup> *Dukes*, 222 F.R.D. at 176.

<sup>47</sup> *Dukes*, 603 F.3d at 628.

<sup>48</sup> *Hilao v. Estate of Marcos*, 103 F.3d 767 (9th Cir. 1996).

<sup>49</sup> *Dukes*, 603 F.3d at 625–27.

the jury then evaluated the experts' analysis and drew its own conclusions about the appropriate classwide recovery.<sup>50</sup>

One way to understand the Ninth Circuit's *Dukes* decision is as an endorsement of a classwide—rather than an individualized—approach to recovery. Such an endorsement could make sense of the court's willingness not to look into the merits of each claimant, but rather to use a method that would enable the court to assess the overall harm done to the class.<sup>51</sup>

Still, the possibility of a classwide recovery did not ensure the propriety of class certification. Plaintiffs still had to make a showing that they could satisfy the elements of an employment discrimination claim using predominately common evidence. Indeed, the Ninth Circuit judges on appeal disagreed about whether plaintiffs had provided sufficient evidence in this regard.<sup>52</sup> The majority held that plaintiffs had submitted sufficient statistical and anecdotal evidence of a company-wide policy of discrimination for class certification purposes.<sup>53</sup> The dissent disagreed, claiming, inter alia, that the evidence pertained only to particular stores or parts of the country.<sup>54</sup> The Supreme Court ultimately agreed with the dissent, reversing class certification.<sup>55</sup> Regardless, the key point for present purposes is that class certification is not automatic even when courts allow classwide recoveries. Permitting that form of relief merely alters the showing that plaintiffs must make.<sup>56</sup>

## 2. *Antitrust*

The issue of classwide recovery affects antitrust cases. Numerous courts have instructed juries, for example, to award damages to the class as a whole—or to plaintiffs or to the plaintiff class—rather than

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<sup>50</sup> *Hilao*, 103 F.3d at 784.

<sup>51</sup> The Ninth Circuit acknowledged that the trial court had endorsed a classwide approach to recovery. *Dukes*, 603 F.3d at 624 n.49 (noting the trial court proposed calculating the “lump sums” reflecting the total losses of the class from failure to promote and to provide equal pay based on sex discrimination). The Ninth Circuit did not, however, rule on whether that approach would be proper. *Id.* at 628.

<sup>52</sup> *Id.* at 628–29 (Ikuta, J., dissenting).

<sup>53</sup> *Id.* at 628 (majority opinion).

<sup>54</sup> *Id.* at 635 (Ikuta, J., dissenting).

<sup>55</sup> *Wal-Mart Stores, Inc. v. Dukes*, 131 S. Ct. 2541, 2556–57 (2011).

<sup>56</sup> To be sure, the Supreme Court, in reversing the Ninth Circuit's certification of the class, expressed doubt about a classwide approach to recovery. *Id.* at 2560–61. For a discussion of the significance of the Court's reasoning in *Wal-Mart* for classwide recoveries, see Davis, Cramer & May, *supra* note 7, at 887–88.

to individual class members.<sup>57</sup> Those courts have reserved for a later proceeding the allocation of the total award among class members.

The Third Circuit failed to recognize the significance of this practice in *In re Hydrogen Peroxide Antitrust Litigation*.<sup>58</sup> The trial court had certified a class of purchasers of hydrogen peroxide and related chemicals.<sup>59</sup> On appeal, the defendants raised only one issue: whether common issues predominated over individual issues as required by Federal Rule of Civil Procedure 23(b)(3).<sup>60</sup> As is typical of the class certification decision in direct purchaser antitrust litigation, predominance hinged on whether plaintiffs could show fact of damage—or “antitrust impact”—through predominantly common evidence.<sup>61</sup>

The trial court had accepted the opinion of the plaintiffs’ expert that, given the structure of the market and of pricing, a conspiracy to raise prices would inflate the amount that all purchasers paid.<sup>62</sup> In contrast, the defendants’ expert disagreed with the conclusion that “the Plaintiffs will be able to show, through common proof, that all or virtually all of the members of the proposed class suffered economic injury caused by the alleged conspiracy.”<sup>63</sup> The defense expert contended, *inter alia*, that different forms of hydrogen peroxide have different supply and demand curves, that prices for hydrogen peroxide declined for significant periods during the alleged conspiracy, and that the prices paid by different purchasers did not “move together”—prices to some increased while prices to others stayed the same or decreased.<sup>64</sup>

In reversing the class certification decision, the Third Circuit criticized the trial court for conducting an insufficiently searching inquiry into the conflicting expert analyses. Although the standard the Third Circuit articulated for class certification was murky, it made clear its view that, at class certification, a trial court should not accept an expert’s analysis uncritically—at least not in the face of a conflicting expert opinion.<sup>65</sup>

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<sup>57</sup> Davis & Cramer, *Vulnerable Monopolists*, *supra* note 17, at 394–96 & n.124.

<sup>58</sup> *In re Hydrogen Peroxide Antitrust Litig.*, 552 F.3d 305, 311 (3d Cir. 2008).

<sup>59</sup> *Id.* at 307–08.

<sup>60</sup> *Id.* at 310.

<sup>61</sup> *Id.* at 311–12.

<sup>62</sup> *Id.* at 312–13.

<sup>63</sup> *Id.* at 313 (internal quotation marks omitted).

<sup>64</sup> *Id.* at 313–14.

<sup>65</sup> *Id.* at 323–25.

The Third Circuit's reasoning is particularly pertinent because of the way it framed the issue for the trial court on remand.<sup>66</sup> The appellate panel directed the trial court to determine whether the alleged conspiracy "impact[ed] the entire class."<sup>67</sup> The Third Circuit seemed to require plaintiffs to show that some very substantial portion of the class—perhaps all or virtually all—suffered injury as a prerequisite to establishing predominance under Federal Rule of Civil Procedure 23(b)(3).<sup>68</sup>

The Third Circuit failed, however, to relate this potential requirement to how a class action trial would proceed. This failure is odd given that the *Hydrogen Peroxide* court identified trial as the polestar for the certification decision.<sup>69</sup> If trial would involve an assessment of damages on a classwide basis, the inquiry into whether an antitrust violation harmed all or virtually all class members would not be relevant. The pertinent issue for trial would be whether plaintiffs could show the harm to the class as a whole.

To be sure, the plaintiffs' ability to satisfy this standard in *Hydrogen Peroxide* was not clear. In this regard, consider the court's discussion of variations in price during the alleged price fixing.<sup>70</sup> The Third Circuit noted there was evidence that the prices to some buyers increased while the prices to others stayed the same or decreased.<sup>71</sup> At least three states of affairs are consistent with this description. First, perhaps those buyers and only those buyers who experienced a price increase during the life of the alleged conspiracy suffered antitrust injury. If so, a class comprising that group would seem proper for certification, even under the standard articulated by the Third Circuit.

A second possibility is that the variations in price suggest that causation would be difficult to determine for any given entity that

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<sup>66</sup> *Id.* at 325. How searching an inquiry is appropriate at the class certification stage is an issue beyond the scope of this Article. Eric Cramer and I have argued that the heightened standard the Third Circuit imposed does not make procedural sense. Davis & Cramer, *Politics of Procedure*, *supra* note 19, at 981–82; Davis & Cramer, *Vulnerable Monopolists*, *supra* note 17, at 374–81.

<sup>67</sup> *In re Hydrogen Peroxide*, 552 F.3d at 325. Whether the Third Circuit really meant the entire class—as opposed to, for example, the overwhelming majority of the class—is unclear, as that issue was not before the court.

<sup>68</sup> *Id.* This standard has been criticized elsewhere, *inter alia*, as conflating predominance regarding a single element of a claim—in this case impact or fact of damage—with predominance regarding the case as a whole. See Davis & Cramer, *Politics of Procedure*, *supra* note 19, at 1006–08.

<sup>69</sup> Davis & Cramer, *Politics of Procedure*, *supra* note 19, at 989.

<sup>70</sup> *In re Hydrogen Peroxide*, 552 F.3d at 314.

<sup>71</sup> *Id.*

bought hydrogen peroxide. The price-fixing conspiracy might have influenced the prices the conspirators charged in some cases, but other dynamics in individual negotiations may have led to prices for particular customers that were the same as they would have been even absent the conspiracy.<sup>72</sup> Simply because a purchaser paid more, or less, than before the onset of the conspiracy might not mean that the purchaser did or did not pay inflated prices as a result of the conspiracy. Carving out a class of only those buyers that suffered antitrust injury would not be easy to accomplish. Nevertheless, a statistical analysis might enable plaintiffs to calculate the total harm caused by the price-fixing conspiracy. Aggregate data might be available to assess all of the relevant variables influencing the prices that sellers of hydrogen peroxide as a group charged. Using this data, an expert might well be able to determine with a high degree of confidence the *overall effect* of the conspiracy on the amounts class members paid, even if the expert might not be able to conclude with a similar degree of confidence that any given buyer paid more than it would have but for the conspiracy.

A third state of affairs is also possible. The market for hydrogen peroxide might be so fractured, the supply and demand curves so variable, and the pricing so idiosyncratic, that an expert could not offer an adequate analysis of the impact of the conspiracy either on any individual class member or on the class as a whole.

Allowing a classwide recovery would have a significantly different effect depending on which scenario occurs. Its impact would be limited in the first and third scenarios: in the first scenario, class certification would seem to be possible in any case, at least for a narrowly defined class; in the third scenario, a classwide recovery would not solve the difficulties of calculating damages. In the second scenario, however, a class might be certifiable if the court were willing to award a classwide recovery, but not otherwise.<sup>73</sup>

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<sup>72</sup> The First Circuit's comments in *New Motor Vehicles* should be noted:

Plaintiffs seem to rely on an inference that any upward pressure on national pricing would necessarily raise the prices actually paid by individual consumers. There is intuitive appeal to this theory, but intuitive appeal is not enough. Even if it is fair to assume that hard bargainers will usually pay prices closer to the dealer invoice price and poor negotiators will usually pay prices closer to the MSRP, a minimal increase in national pricing would not necessarily mean that *all* consumers would pay more.

*In re New Motor Vehicles Canadian Export Litig.*, 522 F.3d 6, 29 (1st Cir. 2008).

<sup>73</sup> Of course, the plaintiffs would have to satisfy the other criteria for class certification, including the numerosity, commonality, typicality, and adequacy requirements of Federal Rule of Civil Procedure 23(a).

### 3. *Fraud*

The light cigarettes litigation provides another example of the potential effect of classwide recoveries on class certification. Cigarette manufacturers had allegedly misled the public about the health benefits of smoking “light” rather than “full flavored” cigarettes<sup>74</sup>—apparently, there are not any.<sup>75</sup> In litigation brought by the federal government, a court concluded that there was “overwhelming” evidence that the industry used deceptive trade descriptors to induce smokers to purchase light cigarettes.<sup>76</sup> Additionally, private plaintiffs sued under RICO,<sup>77</sup> alleging that they were victims of fraud.<sup>78</sup> The trial court certified a class.<sup>79</sup>

The Second Circuit appeared to acknowledge that denial of class certification would in effect allow the companies to avoid paying compensation for any harm they caused,<sup>80</sup> but it nevertheless reversed the trial court.<sup>81</sup> Among its reasons for doing so was that the substantive legal claims at issue would not admit of a classwide inquiry into the harm from the defendants’ conduct.<sup>82</sup> According to the Second Circuit, each class member, for example, would have to show that she personally relied on the deception to be able to recover damages.<sup>83</sup> For this reason, according to the court, common issues would not predominate over individual issues, and class certification was therefore inappropriate.<sup>84</sup>

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<sup>74</sup> *McLaughlin v. Am. Tobacco Co.*, 522 F.3d 215, 220 (2d Cir. 2008).

<sup>75</sup> *See id.* at 221.

<sup>76</sup> *United States v. Phillip Morris USA, Inc.*, 449 F. Supp. 2d 1, 430–31, 852 (D.D.C. 2006).

<sup>77</sup> 18 U.S.C. § 1964(c) (2012).

<sup>78</sup> *McLaughlin*, 522 F.3d at 219.

<sup>79</sup> *Id.* at 221.

<sup>80</sup> *See id.* at 219 (“While redressing injuries caused by the cigarette industry is one of the most troubling . . . problems facing our Nation today, not every wrong can have a legal remedy, at least not without causing collateral damage to the fabric of our laws.” (internal quotation marks and citations omitted)).

<sup>81</sup> *Id.* at 221.

<sup>82</sup> *See id.* at 222.

<sup>83</sup> *Id.* at 222–26.

<sup>84</sup> *Id.* at 227. The Supreme Court has since held that plaintiffs need not establish individual reliance in at least some RICO cases. *Bridge v. Phx. Bond & Indem. Co.*, 553 U.S. 639, 641–42 (2008). *McLaughlin* may therefore no longer be good law. *See, e.g., Spencer v. Hartford Fin. Servs. Grp., Inc.*, 256 F.R.D. 284, 297 (D. Conn. 2009) (certifying a class and holding that *McLaughlin* is no longer good law on the issue of whether a plaintiff alleging a RICO violation must prove individual reliance after *Bridges*). On the other hand, difficulties with using common evidence to prove causation in RICO cases may nevertheless impede class certification, at least in some cases. *See UFCW Local 1776 v. Eli Lilly & Co.*, 620 F.3d 121, 133–36 (2d Cir. 2010).

In reaching this conclusion, the Second Circuit suggested in various contexts—including in discussing reliance, causation, and injury—that a classwide approach to determining the harm from defendants' fraud would necessarily require speculation.<sup>85</sup> Plaintiffs proposed to show, for example, that the deception increased demand, resulting in a correlative increase in the price of light cigarettes.<sup>86</sup> In addition to rejecting this measure of damages, the court indicated that such a showing would not work because various other factors might account for the price, such as rates of cigarette consumption, income levels of smokers, population, taxes, advertising expenditures, production costs, and consumers' knowledge of health risks.<sup>87</sup>

The Second Circuit's analysis in this regard can be understood in at least two ways. First, the court may have merely recognized correctly that a classwide approach to recovery would not be viable—that, for example, the data simply was not available to allow a statistician to determine the effect of the deception on the aggregate demand for light cigarettes, and therefore on price. If so, a classwide analysis of damages would not be possible, and so it would not enable the trial court to certify a class.

Under a second reading of the court's analysis, however, a classwide approach to recovery might work. Take, for example, the measure of harm the Second Circuit seemed to approve: the increase in the number of sales of packs of cigarettes—whether light or full-flavored—occasioned by the deception.<sup>88</sup> According to the Second Circuit, individualized information would be necessary to determine liability to individual plaintiffs.<sup>89</sup> Some plaintiffs would have bought light cigarettes even with full disclosure of their actual health effects, so they experienced no harm. Others would have replaced light cigarettes with regular cigarettes and did not suffer any out-of-pocket loss. The court reasoned that only purchasers who would have bought fewer cigarettes of any kind without the fraud suffered the right kind of reliance and injury to recover.<sup>90</sup> It concluded that an individualized inquiry would be necessary to determine whether each class member was harmed.<sup>91</sup>

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<sup>85</sup> *McLaughlin*, 522 F.3d at 225–29.

<sup>86</sup> *Id.*

<sup>87</sup> *Id.* at 230.

<sup>88</sup> *Id.* at 228.

<sup>89</sup> *Id.*

<sup>90</sup> *Id.*

<sup>91</sup> *Id.*

But in this kind of case, a classwide assessment of harm might be possible. A statistician might be able to identify the variables that inform the volume of cigarette sales, both light and full-flavored. Controlling for those variables, and analyzing the impact of the disclosure of truthful information about the health effects of light cigarettes, the statistician might be able to determine the overall effect of the false information on sales of cigarettes. If so, a classwide approach to calculating harm could work.<sup>92</sup> That classwide approach to recovery might have allowed for class certification, even if plaintiffs could not show that all or virtually all class members suffered harm.

#### 4. *The Reciprocal Relationship of Certification and Classwide Recovery*

In modern procedure, class certification generally is necessary for a court to award a classwide recovery.<sup>93</sup> After all, unless all members of an affected group are party to a single legal action and bound by a single judgment, awarding a recovery to the group as a whole seems impractical.

As the above discussion indicates, often the converse is true as well. Allowing courts to award a classwide recovery can facilitate class certification. Calculation of the overall harm to the class may remove individual issues from the litigation, enabling a court to address the claims of the class members all at once. That approach, for example, might have allowed for class certification in *Hydrogen Peroxide* and the light cigarettes litigation.

This reciprocity shows how classwide recovery and class certification can complement one another. It does not, however, reveal whether either serves the public good.

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<sup>92</sup> The Second Circuit also seemed to deny class certification because it was skeptical that the fraud had any effect, a skepticism it based in part on the fact that the price of light cigarettes did not vary—it was always the same as full-flavored cigarettes—and in part on the failure of sales of light cigarettes to decrease when a report was published showing that light cigarettes are not healthier than full-flavored cigarettes. *Id.* at 229–30. This apparent lack of evidence of injury could well justify the defendants prevailing on the merits, although it is an odd issue for a court to resolve at class certification. After all, the court is supposed to determine, in relevant part, whether trial will involve common issues, not whether the plaintiff will prevail on those common issues at trial. *See, e.g.,* *Dukes v. Wal-Mart Stores, Inc.*, 603 F.3d 571, 592 (9th Cir. 2010).

<sup>93</sup> The class device is not the only method for seeking a recovery that benefits a group. Lawyers, for example, can obtain a result that benefits a large number of people or entities—not necessarily their clients—and later seek compensation from the beneficiaries. *See generally* *Trustees v. Greenough*, 105 U.S. 527 (1881). This doctrine, however, plays a modest role in modern civil procedure. Many thanks to Charlie Silver for making this point.

*D. Class as Aggregate or Entity*

In assessing classwide recoveries, it is useful to note the two ways David Shapiro has developed to conceive of class actions.<sup>94</sup> One he calls the “aggregation model.”<sup>95</sup> He explains that, according to this model, the plaintiffs in a collective action are just “a number of individuals”<sup>96</sup> or “an ‘aggregation’ of individuals,”<sup>97</sup> so that the “the individual who is part of the aggregate surrenders as little autonomy as possible.”<sup>98</sup> The second he labels the “entity model,” in which “the *entity* is the litigant and the client.”<sup>99</sup> Of course, in reality, devices for collective litigation—including the class action—are virtually always a hybrid of the two, a point that Shapiro recognizes.<sup>100</sup>

Moreover, these two models may best be understood not as offering distinct understandings of class actions but rather as marking the ends of a continuum. The aggregation model emphasizes the rights and interests of individual class members.<sup>101</sup> The entity model focuses on the rights and interests of the class as a whole, as well as the benefits to society of the class action device.<sup>102</sup>

A rigid, formal approach to the class as aggregate or entity risks privileging form over substance. The aggregation model might hold sway, for example, when individual rights and interests are paramount; the entity model might do so when the good of the class as a whole has primacy over the good of individual class members or when the class device can serve a public goal that is more important than individual recoveries.

Seen from this perspective, as Myriam Gilles has suggested, the aggregation model might be usefully associated with a private law conception of class litigation, a conception that attends in particular to the compensation of individual class members.<sup>103</sup> The entity model, in contrast, might correlate, *inter alia*, to a public law conception that

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<sup>94</sup> David L. Shapiro, *Class Actions: The Class as Party and Client*, 73 NOTRE DAME L. REV. 913, 917–18 (1998).

<sup>95</sup> *Id.* at 918.

<sup>96</sup> *Id.* at 917.

<sup>97</sup> *Id.*

<sup>98</sup> *Id.* at 918.

<sup>99</sup> *Id.* at 919. An example of the entity approach occurred when the Seventh Circuit refused to apply ordinary ethical rules in the class context, reasoning that “[i]n a class action, the client is the class.” *Rand v. Monsanto Co.*, 926 F.2d 596, 600 (7th Cir. 1991).

<sup>100</sup> Shapiro, *supra* note 94, at 919.

<sup>101</sup> *See id.* at 918.

<sup>102</sup> *See id.* at 923–34.

<sup>103</sup> *See* Gilles, *supra* note 28, at 308–10.

prioritizes the societal benefits of class litigation, including its ability to deter conduct that violates the law.<sup>104</sup>

What is striking about classwide recoveries, however, is that they hold the potential for benefits that reflect both private law and public law values, as well as those that transverse—or perhaps transcend—the two. Part II explores these benefits.

## II. ASSESSING CLASSWIDE RECOVERIES

Classwide recoveries can have various advantages over individual recoveries. Part II.A addresses some of the more straightforward advantages—the efficiency of adjudicating on behalf of a large group all at once and the accuracy permitted by statistical rather than anecdotal inquiry. Parts II.B and C then address subtler advantages, exploring, respectively, error costs and the differences between continuous and discontinuous outcomes in litigation.

### A. *Procedural Benefits from Classwide Recoveries*

Awarding classwide recoveries rather than individual recoveries can simplify and streamline litigation while enhancing accuracy. This is true for litigation in general, as well as with regard to the adjudication of class certification in particular.

#### 1. *Efficient and Accurate Litigation*

Calculating the classwide recovery of a group should involve substantially less expense in terms of time, money, and other resources than calculating an individual recovery for all of the group's members. The adversarial proceedings need merely assess the liability of a defendant to the class as a whole. A court can then use a less formal and less expensive process to allocate compensation to class members.

##### a. *Individualized Inquiries Are Costly*

In a case involving a class of plaintiffs, any individualized assessment of evidence would likely prove extraordinarily expensive, assuming it would be feasible at all. Consider the light cigarettes example. Assuming that each plaintiff has the wherewithal to pursue a claim—and that doing so makes sufficient economic sense—individual litigation would require massive resources. A jury would have to hear testimony from each buyer. Discovery would delve into each plaintiff's habits and values. An overall assessment of the sale of light ciga-

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<sup>104</sup> See *id.* at 309.

rettes—both before and after disclosure of the key information—would be much more efficient. By contrast, individual trials would involve all of the expense of a class trial in addition to the costs of an inquiry into the circumstances of a particular plaintiff. After all, it would be difficult to determine the likelihood that any given smoker relied on a manufacturer’s deception without knowing how often smokers in general tend to rely on the kinds of fraudulent assertions at issue.

*b. Individualized Inquiries Are Often Inaccurate*

Further, an assessment of individual circumstances often will be inaccurate. This point, too, applies to the light cigarettes cases. Assessing whether a particular buyer would have bought the cigarettes if she had had full information would be extraordinarily difficult. The buyer herself can only guess at the impact the misleading statements had on her, and that assumes good faith. She may dissemble, and a jury may accept that she is telling the truth—or vice versa. Cumulative individual assessments of reliance are apt to produce less useful results than a statistical effort to determine the extent to which false information increased overall consumption of a product.<sup>105</sup>

Recent empirical research, largely in the context of criminal adjudication, has shown how inaccurate witnesses are in identifying actors relevant to litigation<sup>106</sup> and more generally in recalling events,<sup>107</sup> and how poorly fact finders fare in distinguishing true from false testimony—as well as their exaggerated confidence in their ability to draw this distinction.<sup>108</sup> Although the criminal and civil contexts are importantly different, the powerful evidence of inaccuracy in criminal adjudication should give rise to serious doubts about the accuracy of individual civil adjudication.

*c. Individualized Inquiries Often Will Not Enhance a Classwide Analysis*

Indeed, once a court calculates the overall harm caused by illegal conduct, assessing evidence of individual harm may have little value. Consider an antitrust case in which plaintiffs establish that defendants

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<sup>105</sup> In other words, the sum of a collection of individualized inquiries could easily result in far greater—or lesser—liability than any plausible aggregate analysis.

<sup>106</sup> See, e.g., DAN SIMON, IN DOUBT: THE PSYCHOLOGY OF THE CRIMINAL JUSTICE PROCESS 50–89 (2012).

<sup>107</sup> See *id.* at 90–119.

<sup>108</sup> See *id.* at 125–27, 180–83.

conspired to raise prices above competitive levels. Assume the plaintiffs are able to show with a compelling statistical analysis that the overall effect of the conspiracy was to increase prices by \$100 million. A dispute exists, however, as to which class members paid more as a result of the conspiracy. Assuming it is impossible or impractical to determine with confidence which members of the class paid an overcharge, one outcome of litigation could be an allocation of the money so that each member of the class receives compensation based on its volume of purchases.

Now imagine that the defendants wish to contest each individual's entitlement to recover. The defendants want the opportunity to demonstrate that a particular buyer would not have paid lower prices even in the absence of an illegal conspiracy. If the defendants were to make that showing successfully, a simplistic view might suggest that that plaintiff should forfeit her recovery and, more importantly from the defendants' perspective, the defendants' total liability should decrease by the amount of the overcharge ascribed to the plaintiff at issue. But that is not so. After all, the aggregate analysis produced an *average* loss, fully recognizing that not all members of the class were necessarily harmed. The recovery that the individual plaintiff loses, then, should be allocated to other class members.

More generally, once a court determines the overall effect of an illegal course of conduct, the effort to defeat the claim of any particular individual should result in an *increase* in the recovery of *other* individuals, not in a *decrease* in a defendant's overall liability. As a result, from the defendant's perspective, the effort to disprove the claims of individual class members hardly seems worthwhile.<sup>109</sup> Failure to recognize this phenomenon could result in a judgment at odds with itself. The court might calculate the total damages on a classwide basis and then, inappropriately, reduce the total damages if an individual plaintiff fails to prove its case. Recognition of this phenomenon could allow for less expensive litigation without sacrificing accuracy.

#### *d. Summary*

In sum, there are various procedural benefits to awarding class-wide recoveries when it would be relatively easy to identify the group potentially harmed by illegal conduct and to calculate the total harm

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<sup>109</sup> Judge Posner appears to have overlooked this point in worrying that the inclusion of uninjured members in a class may increase defendants' liability. *Kohen v. Pac. Inv. Mgmt. Co. (PIMCO)*, 571 F.3d 672, 677–78 (7th Cir. 2009). As discussed in Part III.B.2 of this Article, a proper analysis of aggregate liability would prevent this possibility.

the group suffered, even when—indeed, *especially* when—it would be difficult and expensive to determine which individuals within that group suffered harm. Under these circumstances, a plaintiff class could prove the damages it suffered as a whole. Including an analysis of individual circumstances in this effort would not likely be worthwhile—it would be expensive, it may well be inaccurate, and it often will not have any effect on a defendant’s total liability.

Courts would often do better to enter a classwide judgment based on the total harm a defendant caused. The defendant then would have no further interest in the case. The court could allocate the recovery to individual class members in a practical manner, applying a less formal and less costly process than ordinary litigation and perhaps lowering the burden of proof as appropriate. Using a formal process only in setting the amount of a defendant’s total liability can help to ensure that litigation is as efficient as possible.

## 2. *Simpler Determinations of Class Certification*

Allowing classwide recoveries could also provide a more specific procedural benefit: making litigation of class certification less burdensome for courts and parties. Plaintiffs could merely show widespread harm to the class and propose a method of calculating a classwide recovery rather than establishing harm to all or virtually all class members.<sup>110</sup> In those situations, individual class members’ injuries would be irrelevant at trial and, therefore, at class certification. Doing so would greatly decrease the complexity of the class certification decision, and similarly decrease the time and money courts and parties dedicate to the issue.

Simplifying the class certification decision would be no minor procedural improvement. Litigating class certification has always been expensive, often costing the parties many hundreds of thousands or even millions of dollars in hard costs (such as expert witness fees) and attorney time. The recent ratcheting up of the class certification standard has placed a greater burden on courts to hold hearings, scrutinize evidence, and rule on factual issues.<sup>111</sup> The result is an ever

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<sup>110</sup> To be clear, plaintiffs would still have to satisfy the other requirements under Federal Rule of Civil Procedure 23, such as the numerosity, typicality, commonality, and adequacy requirements of Rule 23(a). All that would change is the requirement some courts now impose that plaintiffs show harm to all or virtually all class members.

<sup>111</sup> Paul A. Howell, Jr., Waldemar J. Pflepsen, Jr. & Aileen D. Warren, *A Survey of the Developing Standards for Class Certification*, in CONFERENCE ON INSURANCE AND FINANCIAL SERVICES INDUSTRY LITIGATION 145, 163 (A.L.I.-A.B.A. Course of Study, July 9–10, 2009), available at Westlaw SR007 ALI-ABA 145.

more expensive and time-consuming process. Eliminating some of the most costly and controversial issues—such as whether all or virtually all members of a class suffered harm—could greatly alleviate the burden on the court and the parties.

### B. *Error Costs*

Another potential benefit of classwide recoveries is lower error costs. This section undertakes an analysis of the relative error costs of individualized and classwide recoveries. In doing so, it separates out two perspectives. The first is whether the defendant pays the right amount. The policy generally associated with imposing proper liability on a defendant is deterrence (although other policies may be implicated as well). The second perspective is whether each plaintiff receives the right recovery, a perspective associated with compensation.

In individual recoveries, these two amounts are often the same—the law generally requires a defendant to pay for the harm it caused and entitles a plaintiff to receive compensation for the injury it suffered.<sup>112</sup> But classwide recoveries break this symmetry. A defendant may pay the right amount for the total harm it imposed on the plaintiff class as a group, but that amount may be allocated in a way that provides some class members insufficient and others excessive compensation.

Part II.B.1 makes an important observation—that in appropriate cases classwide recoveries result in lower error costs regarding defendants' liability than individual recoveries do. Part II.B.2 explores the somewhat more complicated effects of the two approaches on error costs in calculating plaintiffs' compensation. It leads to two conclusions in particular that support classwide recoveries: first, they produce relatively low error costs for risk-averse plaintiffs, which will include many plaintiffs with large claims; and second, they produce relatively low error costs for plaintiffs who cannot afford to pursue individual litigation, which will hold true for many plaintiffs with small claims. Part II.B.3 explains that, considering *both* liability and compensation, classwide recoveries produce lower total error costs than individual recoveries do. Part II.B.4 concludes that, on the whole, attention to error costs supports awarding classwide recoveries in appropriate cases.

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<sup>112</sup> RESTATEMENT (SECOND) OF TORTS § 901 (1979).

### 1. *Liability of Defendants: Deterrence*

Proper calculation of a defendant's liability can serve various policy goals, including deterrence. Depending on one's philosophical perspective, deterrence can be one of the most important—or even *the* most important—goal of the law. The influential law and economics movement, for example, sees law as designed not to achieve justice retrospectively, but to create incentives prospectively.<sup>113</sup> According to this view, it is crucial to consider whether a rule will discourage socially harmful conduct and encourage socially beneficial conduct.<sup>114</sup> Even from other points of view—whether of the practicing judge or the pragmatic scholar—incentives tend to figure prominently today in formulating legal doctrine.

The standard view under an approach concerned with incentives is that liability should reflect the actual harm a defendant's conduct causes. That way the defendant will internalize the social harm from its conduct, and not just the social benefits as reflected in its profits. In theory, a defendant will act in an economically rational manner, so that it expects to gain more than it will lose.<sup>115</sup> If a defendant pays less than the harm it causes, it may engage in behavior that does more harm than good; if a defendant pays more than that harm, it may forego conduct that would benefit society as a whole.

Focusing on deterrence provides a strong justification for using the entity model in crafting class relief.<sup>116</sup> When a defendant has harmed only some members of a large group, and it is not possible to determine which members the defendant harmed, classwide recoveries can allow for just the right amount of liability to optimize deterrence. Appendix A provides a formal proof of this point.

The following examples illustrate a phenomenon that lurks behind complicated damages calculations in various settings. In address-

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<sup>113</sup> For a seminal work that makes this point, see R. H. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1, 1–6 (1960).

<sup>114</sup> *Id.*

<sup>115</sup> Of course, various policy considerations can lead courts to award more or less than the actual damages resulting from a rights violation. Federal antitrust law illustrates this point. By statute, actual damages in antitrust actions are automatically trebled because, inter alia, sometimes illegal conduct may not be detected, and so single damages would be expected to be insufficient for optimal deterrence. 15 U.S.C. § 15(a) (2012). On the other hand, various categories of damages are not available in antitrust cases, such as prejudgment interest and the harm from allocative inefficiency. See Robert H. Lande, *Are Antitrust "Treble" Damages Really Single Damages?*, 54 OHIO ST. L.J. 115, 130 (1993). The following analysis takes these policy decisions as a given and assumes that the current legal measure of damages for each cause of action promotes efficiency.

<sup>116</sup> See David Shapiro, *supra* note 94, at 919.

ing class actions, courts make decisions—often implicitly—about whether they will calculate recoveries on an individual or classwide basis. These decisions affect the amount of liability. When the universe of those potentially harmed by alleged wrongdoing can be identified, and the total harm to the group can be calculated, but the individuals who suffered harm cannot be distinguished within the group from those who did not, a classwide approach to recovery can do better at calibrating liability than can an individualized approach. These points can inform analysis of employment discrimination, anti-trust, and fraud litigation, among other areas of the law.

*a. Employment Discrimination*

Employment discrimination litigation provides a case in point. A class of plaintiffs may be able to show with a high level of certainty using aggregate statistics that they suffered adverse treatment by an employer based on their membership in a protected group. It may, however, be difficult or impossible to identify with confidence which employees suffered injury.

Under these circumstances, an individualized approach could result in excessive or insufficient liability. Recall the prior example in which 60% of a class of 100 women would have been promoted but for sex discrimination. Under an individualized approach, each woman might be entitled to the \$10,000 she would have received if she had been promoted.<sup>117</sup> After all, it is more likely than not that each would have advanced to a better job. The employer would then be liable for \$1 million. But we know with certainty that not all of the women should be entitled to recover that sum. Only 60 could have been promoted.

Alternatively, imagine that only 40 of the 100 women lost a promotion because of sex discrimination. Under an individualized approach, none of the women would be able to satisfy the preponderance of evidence standard. Any particular woman would probably not have been promoted even if there had been no discrimination. The employer would face no liability despite compelling evidence that it violated the legal rights of 40 women.

An individualized approach to recovery, then, can give rise to excessive or inadequate liability. A classwide approach, in contrast, could calibrate liability at just the right amount. If 60% of a class of 100 women failed to receive a promotion because of sex discrimina-

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<sup>117</sup> See *supra* Part I.A.

tion, the employer could be forced to pay the wages lost by that percentage of the class for a total liability of \$600,000—precisely the harm the legal violation caused. If 40% of the class failed to receive a promotion, awarding \$400,000 would have the same effect. For purposes of liability and deterrence—that is, from the perspective of the employer—the court could award just the right amount.<sup>118</sup>

*b. Antitrust*

Antitrust provides another example. Imagine that a conspiracy among competitors increased the price of airplanes by altering the list price. The list price generally served as a point of departure for individual negotiations. 100 individual buyers each purchased one airplane, paying on average \$100 million per airplane.<sup>119</sup> The court is persuaded by a statistical analysis establishing with a high degree of confidence that some large percentage of the class—say 80% of the buyers—paid more than they would have but for the conspiracy—on average by 10%. The remaining 20% of buyers appear to have paid the same price as they would have without the conspiracy.

Further assume that it is difficult or impossible to determine which buyers paid too much and which did not. This is so because the prices that individual buyers paid do not correlate perfectly over time. Some rose while others stayed the same or fell. As a result, the effect of the list price on any given negotiation is unclear. A statistician may be much more confident in characterizing the overall effect of the conspiracy on price, and the percentage of the class adversely affected, than in concluding that all class members were harmed or in identifying which specific class members paid an overcharge.

In this hypothetical, under an individualized approach to recovery, each class member might be able to show by a preponderance of evidence that it paid too much. Having established the fact of damage, a relaxed standard applies in deciding the quantum of damages.<sup>120</sup> A possible result is that the court would award each class member about \$10 million in damages based on the estimated 10% overcharge.

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<sup>118</sup> To be sure, allocating that liability among members of the class could prove tricky. The court—perhaps through a special master—could undertake a pragmatic, informal inquiry into the circumstances of class members to determine how much, if anything, each woman would recover; or the award could simply be distributed in some formulaic manner, perhaps even on a pro rata basis. These efforts might provide only rough justice from the perspective of compensation. See *infra* Part II.B.2.

<sup>119</sup> Matters become a bit more complicated if some purchasers bought multiple airplanes, but the fundamental point holds true.

<sup>120</sup> See, e.g., *Bigelow v. RKO Radio Pictures, Inc.*, 327 U.S. 251, 266 (1946).

The class recovery would total \$1 billion.<sup>121</sup> The statistical analysis indicates, however, that this amount is excessive.<sup>122</sup> In reality, the total harm caused by the defendants is \$800 million—an average overcharge of 10% on 80% of the sales.

Conversely, if the percentage of class members who overpaid were to dip too low, none would recover. Plaintiffs would obtain no damages even if, for example, the court could conclude with great confidence that the defendants conspired and by doing so imposed a 10% overcharge on, say, 30% of the class, resulting in total damages of \$300 million.

A good argument can be made that current antitrust law often allows for classwide recoveries and does not require individualized proof of damages.<sup>123</sup> The reality is that in various antitrust class actions, courts have approved jury instructions asking whether a defendant or group of defendants harmed the class a whole, and, assuming liability to the class, how much total damage the conduct caused to the class.<sup>124</sup> The potential for classwide recoveries to optimize liability provides a sounds basis for this approach.

*c. Fraud*

To be sure, a classwide recovery would not be appropriate in all cases. In particular, in some situations multiple individual inquiries are necessary to assess cumulative liability. An example might include when individual reliance is an element of a claim for fraud. When the overall impact of the defendant's conduct cannot be determined using a classwide approach—when there are, for example, insufficient data available to determine the overall effect of the misrepresentation—then individual litigation may be necessary.

On the other hand, if an aggregate approach *is* possible, it would likely be preferable to assessing reliance case by case. An individualized inquiry into damages could produce higher error costs regarding

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<sup>121</sup> This amount would then be trebled under federal antitrust law. 15 U.S.C. § 15(a) (2012).

<sup>122</sup> Alternatively, an economist—or the court—might assess the average overcharge by looking to the class as a whole, not just to those class members who paid an overcharge. If so, the court is in effect calculating overcharge damages on a classwide basis, just as this Article recommends. Indeed, courts generally appear to proceed in this way—avoiding excessive damages in effect by calculating classwide damages in a manner that makes impact on individual class members beside the point. *See generally* Davis & Cramer, *Vulnerable Monopolists*, *supra* note 17, at 392–96.

<sup>123</sup> *See generally id.*

<sup>124</sup> *Id.* at 394–96.

liability than a classwide approach. Recall, for example, the measure of harm the Second Circuit seemed to approve in *McLaughlin v. American Tobacco Co.*,<sup>125</sup> the light cigarettes case: the increase in the number of sales of packs of cigarettes—whether light or full-flavored—occasioned by the deception.<sup>126</sup> This is just the kind of case in which a classwide recovery could potentially do better than an individualized approach at minimizing error costs.

In individual litigation, each plaintiff might be able to rely in part on background probabilities to prove individual reliance. If smokers in general would be more likely than not to buy extra cigarettes because of the fraud, the industry might be held liable to all buyers for the average amount of additional cigarettes each one would have been expected to purchase, even if significant numbers of smokers did not buy additional cigarettes as a result of defendants' conduct.<sup>127</sup> The industry's overall liability could then be excessive. Alternatively, if smokers in general would not buy more cigarettes because of the fraud, none of them might be able to recover, even if the fraud increased the total sales of cigarettes by a significant—and calculable—amount. The industry would have found a way to commit fraud without incurring liability. A classwide recovery, in contrast, can take into account the larger pattern, guarding against excessive or insufficient liability. It optimizes liability and deterrence by looking at the effect of the fraud on sales of cigarettes in general.

## 2. Awards to Plaintiffs: Compensation

Classwide recoveries can optimize liability in a way that individualized recoveries do not. Matters are more complicated, however, regarding compensation.

A classwide approach can potentially be consistent with adjusting compensation to individual circumstances. A court may be able to conduct individual hearings—or informal inquiries, perhaps with the

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<sup>125</sup> *McLaughlin v. Am. Tobacco Co.*, 522 F.3d 215 (2d Cir. 2008).

<sup>126</sup> *Id.* at 228.

<sup>127</sup> To be precise, the reasoning would proceed in two steps. First, if most plaintiffs would buy more cigarettes as a result of the fraud, then each plaintiff might be able to show that the fraud more likely than not caused *her* to buy extra cigarettes. Second, she could then recover based on the average number of extra cigarettes purchased by each buyer who was *affected by the fraud*. This last point bears emphasis. Because each plaintiff probably was one of the buyers who relied on the fraud, in calculating damages what would be relevant is the average amount of additional cigarettes purchased by each buyer *who bought additional cigarettes*. The analysis of the average would ignore those buyers who did not buy extra cigarettes. After all, each plaintiff has met her burden of proof that she is not one of those buyers.

assistance of a special master—to identify which class members were harmed and by how much.

The analysis is more interesting, for present purposes, when allocating recoveries to class members in proportion to their injuries is not possible or practical. The court will then have to distribute compensation in a way that achieves only rough justice. To take a simple example, a court entirely unable to distinguish among class members might divide a recovery on a purely pro rata basis. Under this approach, whether classwide recoveries or individual recoveries produce higher error costs in terms of compensation depends on how those error costs are measured.<sup>128</sup>

One way to measure error costs would be to take the absolute difference between the actual compensation each plaintiff *does* receive and the compensation each plaintiff *should* receive. As discussed in Part II.B.2.a, measured in this way, classwide recoveries produce higher error costs than individual recoveries do.<sup>129</sup> On the other hand, a common practice is to measure error costs as the *square* of the difference between the actual and proper compensation to each plaintiff. Under that approach, as addressed in Part II.B.2.b, classwide recoveries produce lower error costs than individual recoveries do.<sup>130</sup>

Despite these conflicting results, two practical considerations suggest that classwide recoveries might do a better job than individual recoveries at awarding appropriate compensation. First, litigants with large claims may tend to be averse to risk. As a result, the better measure of error costs for them may be the square of the difference between the actual and right awards in litigation. Doing so weighs large errors—which risk-averse litigants experience as disproportionately harmful—more heavily than small errors.

A second practical consideration is that classwide recoveries may be necessary for class certification, and class certification may be necessary for plaintiffs with small claims to pursue litigation at all. As analyzed in Part II.B.2.c, for these claims, plaintiffs' inability to obtain any recovery—as the Second Circuit acknowledged would likely occur

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<sup>128</sup> As noted above, for various policy reasons the law does not always award the actual harm a plaintiff suffers. Plaintiffs in federal antitrust cases, for example, may receive treble their damages, and they cannot recover for certain categories of harm. *See supra* note 115. This Article assumes that the legal standard for compensation is efficient for purposes of the following analysis.

<sup>129</sup> Appendix B provides a proof for this claim.

<sup>130</sup> Appendix C sets forth a proof of this proposition.

in the light cigarettes case<sup>131</sup>—tends to produce high error costs. A rule that plaintiffs simply lose, regardless of the merits, can produce inaccurate results.

*a. Actual vs. Right Result*

Classwide recoveries produce higher error costs than do individual recoveries if measured as the absolute value of the difference between the actual result and right result at trial.<sup>132</sup> An example illustrates this point.

Imagine, as discussed above, that an employer has discriminated against various women out of a group of 100 interested in a promotion. All of the women are similarly situated. The only contested issue is which of the women suffered harm as a result of a violation of Title VII. Each plaintiff that suffered the relevant form of injury is entitled to a judgment of \$10,000. All of the others should recover nothing.

*i. Individual Approach*

Applying the ordinary preponderance of the evidence standard, all of the women should prevail if more than half of them suffered injury. After all, it is more likely than not true that any given woman suffered discrimination.<sup>133</sup> On the other hand, if fewer than half suffered injury, the odds that any given woman did are less than 50%, and all of the women should lose.

Assume that 60 women suffered discrimination. All 100 would be expected to win, even though 40 of them should lose. The error costs will then be 40 x \$10,000 for a total of \$400,000.

Alternatively, if only 40 of the women suffered discrimination, all of them will lose in litigation. The 40 who should have won will each be improperly deprived of \$10,000—resulting in error costs of \$400,000.

*ii. Classwide Approach*

With a classwide recovery, the group of women will obtain precisely the right total recovery in the aggregate. If 60 suffered discrimination, that amount will be \$600,000; if 40, \$400,000. If this recovery is

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<sup>131</sup> *McLaughlin*, 522 F.3d at 231–33.

<sup>132</sup> The algebraic proof in Appendix B establishes this proposition.

<sup>133</sup> The analysis would be more complicated if other factors informed whether any given woman suffered discrimination, but the underlying logic should not be affected by that complexity.

allocated on a pro rata basis, each woman will receive \$6,000 or \$4,000, respectively.

Some plaintiffs will receive too little and some too much. To take the first example—where 60 women suffered discrimination—60 women will receive \$4,000 less than the full recovery to which they are entitled, and 40 women will receive \$6,000 even though they should recover nothing. The total error would then be  $60 \times \$4,000 + 40 \times \$6,000$ , for a total of \$480,000.

Alternatively, if 40 women suffered discrimination, and each receives \$4,000, 40 women would receive \$6,000 too little, and 60 women would receive \$4,000 too much—for total error costs of  $40 \times \$6,000 + 60 \times \$4,000$ , or \$480,000 total.

### *iii. Comparing Error Costs*

In both examples, an individual approach would produce lower error costs than a classwide approach would if error costs are measured as the difference between the actual result and the right result at trial. The total error costs would be, respectively, \$400,000 and \$480,000. As the algebraic proof in Appendix B shows, individual recoveries generally fare better than classwide recoveries when using this measure of error costs.

### *b. Squaring the Difference*

Simply calculating the difference between the actual and right result in litigation is not, however, the only way to gauge error costs. Scholars often treat large errors as worse than small errors—an approach that makes sense for litigants who are averse to risk.<sup>134</sup> Allocating a classwide recovery on a pro rata basis to all class members will not do as good a job as individual recoveries at approximating just the right result (no class member may obtain precisely the right recovery), but a pro rata approach tends to decrease the size of the error in any given case, that is, the largest errors will be smaller than they would be with individualized recoveries. If large errors are more concerning than smaller errors—as is likely to be the case for plaintiffs

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<sup>134</sup> See Joshua Davis, *Expected Value Arbitration*, 57 OKLA. L. REV. 47, 88–89 & n.159 (2004) (citing Michael Abramowicz, *A Compromise Approach to Compromise Verdicts*, 89 CALIF. L. REV. 231, 247 (2001); Saul Levmore, *Probabilistic Recoveries, Restitution, and Recurring Wrongs*, 19 J. LEGAL STUD. 691, 704–05 (1990); Neil Orloff & Jerry Stedinger, *A Framework for Evaluating the Preponderance-of-the-Evidence Standard*, 131 U. PA. L. REV. 1159, 1165–68 (1983)).

with large claims—classwide recoveries have an advantage over individual recoveries.

This point can be made more precisely. If error costs are defined as the square of the difference between the actual result and the right result in litigation, then individual recoveries produce higher error costs than classwide recoveries do.<sup>135</sup> The example from above proves useful. Recall that 100 women were passed over for a promotion in favor of less qualified men.

*i. Individual Approach*

Under an individualized approach, if 60 women suffered discrimination, then each woman will receive \$10,000. For 60 of the women, that is just the right result. Forty of the women, however, should receive nothing. Squaring the difference between the actual result and the right result, the error costs would be  $40 \times 10,000^2$ —or  $4 \times 10^9$ .

Alternatively, if 40 women suffered discrimination, then no women will recover. That is appropriate for 60 of the women, but 40 women should receive \$10,000. Squaring the difference between the actual result and the right result, the error costs would again be  $40 \times 10,000^2$ —or  $4 \times 10^9$ .

*ii. Classwide Approach*

With a classwide recovery, the same adjustment must be made, squaring the amount of the error in each case. If 60 of the women suffered discrimination, every class member will receive \$6,000. The 60 women who should win will receive \$4,000 too little, and the 40 who should lose will receive \$6,000 too much. The resulting error costs are:  $60 \times 4,000^2 + 40 \times 6,000^2 = 2.4 \times 10^9$ .

*iii. Comparing Error Costs*

Using the square, the error costs under an individual approach are  $4 \times 10^9$ , and under a classwide approach they are  $2.4 \times 10^9$ . Indeed, in general, the error costs are greater under an individualized approach—as Appendix C proves.

*c. Denial of Class Certification as a Death Knell*

This abstract analysis should be tempered to reflect the practical reality that in some cases allowing a classwide recovery is necessary for class certification, and class certification is necessary for many

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<sup>135</sup> Appendix C provides a proof of this claim.

class members to have any chance at relief. Often individual litigation simply is not economically viable. A woman seeking \$10,000 in damages as a result of employment discrimination, for example, would be hard pressed to obtain legal representation. In these instances, a refusal to allow a classwide recovery—and the resulting denial of class certification—means an automatic win for a defendant. That rule can produce high error costs.

More specifically, any time more than half of the class suffered injury, a rule that the defendant wins would produce higher error costs than taking a classwide approach to recovery. As shown in Appendix D, that is true whether error costs are measured as the difference between the actual result and the right result of litigation or as the square of that difference.<sup>136</sup>

As to the difference between the actual result and the right result, once again the employment discrimination example demonstrates the point. In the example, 60 women suffered injury from the employer's conduct. All of the women will receive \$6,000, even though 60 should receive \$10,000 and 40 should receive nothing. The error costs that a classwide approach would produce are:  $60 \times \$4,000 + 40 \times \$6,000$ , or \$480,000. A rule that the employer wins would mean no woman would recover anything, depriving 60 women of \$10,000 to which they are entitled, resulting in total error costs of \$600,000. A classwide recovery would thus produce significantly lower error costs than would awarding no recovery at all. Squaring the difference between the actual result and the right result would just exaggerate this disparity.

This analysis suggests an interesting possibility. Assuming it is appropriate for courts to use the certification decision as a screening device regarding the merits, they could apply a variation of the preponderance of the evidence standard in assessing how widespread the injury must be to certify a class. If most members of a class suffered the relevant form of injury, the proof in Appendix D establishes that a classwide recovery will produce lower error costs in regard to compensation than will denying class certification.

The same is not true, however, if less than half the class suffered injury. Then, awarding the class nothing will produce lower error costs—as measured by the square of the difference between the actual compensation given and the right amount of compensation due—than a classwide recovery will.<sup>137</sup> An appropriate rule could then be that a

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<sup>136</sup> Appendix D provides an algebraic proof for these claims.

<sup>137</sup> Under these circumstances, the analysis is the same as applying an ordinary preponderance of the evidence standard, as addressed in Appendix B. Recall, however, that if error costs

court should deny class certification if plaintiffs cannot show a *majority* of the class suffered injury. A showing that all or virtually all class members suffered injury, however, should not be required. To be clear, though, this last point ignores that classwide recoveries would still produce lower total error costs—including both liability and compensation—than individualized recoveries, as discussed in the next section.

### 3. Total Error Costs

One way to determine whether classwide or individual recoveries are preferable is to consider overall error costs, regarding both liability and compensation. Although these two kinds of errors may in some sense be incommensurable, we might make the simplifying assumption that an error cost of \$1 regarding liability is equivalent to an error cost of \$1 regarding compensation. As shown in Appendix E, the classwide approach produces lower total error costs, whether those costs are measured as the difference between the actual and the right result of litigation or as the square of that difference.<sup>138</sup>

The employment discrimination example once again proves useful. If 60 women suffered injury, the analysis above demonstrates the total error costs. A classwide recovery would produce no error costs from the perspective of deterrence and \$480,000 in error costs from the perspective of compensation. An individualized approach would produce \$400,000 in error costs from each perspective for total error costs of \$800,000. The analysis is symmetric, so that the same results follow if 40 women out of the 100 were robbed of a promotion by sex discrimination.

### 4. Summary of Analysis of Error Costs

When a defendant injures some members of a group of plaintiffs, but it is impossible or impractical to identify which ones, classwide recoveries perform quite well as assessed by error costs. They produce lower error costs than individual recoveries in terms of *liability*. On the other hand, they produce higher error costs than individual recoveries in terms of *compensation* if those costs are measured as the difference between the actual and right result at trial. But they have other advantages. Classwide recoveries produce relatively low error costs if they are measured by the *square* of the difference between the

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are measured as the *square* of the difference between the actual and right result at trial, classwide recoveries produce lower error costs. See Appendix C.

<sup>138</sup> Appendix E provides an algebraic proof of this proposition.

actual and right result, a measure that is likely appropriate for risk-averse litigants, which will tend to include those with large claims. Classwide recoveries also produce relatively low error costs if one considers the reality that a denial of class certification will often prove fatal to all of the plaintiffs' claims, which will generally hold true for plaintiffs with small claims. Finally, classwide recoveries produce lower *total* error costs, including both deterrence and compensation (however measured), than do individualized recoveries. All told, an analysis of error costs supports using classwide recoveries in appropriate cases.<sup>139</sup>

### C. *The Benefits of Continuous over Discontinuous Functions*

Another striking attribute of classwide recoveries—as opposed to individualized recoveries—is that a continuous function describes the result of litigation. That result will depend on a court's assessment of the probability that plaintiffs are correct regarding each element of the claims at issue. Under an individualized approach, a small change in the court's assessment of the odds of causation can result in a large, discrete shift in the amount a court awards. Under a classwide approach, in contrast, that small change will correspond to a small incremental adjustment in the award. In other words, as the percentage of a class that is harmed varies, liability can increase by a discrete jump under an individualized approach as opposed to a smooth, incremental increase under a classwide approach.<sup>140</sup>

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<sup>139</sup> One final point regarding error costs is intriguing. An argument could be made that excessive compensation is not an error cost. After all, no one appears to be harmed by excessive compensation. Rather, it provides an undeserved benefit.

To be sure, excessive compensation could give rise to undesirable incentives. Buyers might purchase goods or services subject to an antitrust violation to obtain a recovery, people might decide to work for a sexist employer with the hope of bringing a Title VII claim, or smokers might buy light cigarettes that they know are not good for them just to recover in fraud. These scenarios, however, seem implausible.

Of course, the excessive recovery has to come from somewhere—from a defendant paying too much or another plaintiff receiving too little. We took those harms into account, however, in the above analysis. We need not also treat excessive recovery as an additional error cost. Indeed, according to this line of reasoning, taking both into account could be a version of double-counting. For related reasons, economists generally focus on deterrence, not compensation, in assessing legal standards.

Modifying the analysis, however, to consider only insufficient compensation—and not excessive compensation—as an error cost is beyond the scope of this Article. Still, many thanks to Josh Rosenberg for raising the issue.

<sup>140</sup> If we assume each class member is similarly situated, and a pro rata allocation of the class recovery, this point applies both from the perspective of the defendant's liability and from the perspective of the recovery of each individual class member.

Figure 1 depicts the outcomes with individual recoveries.

FIGURE 1. INDIVIDUAL RECOVERY

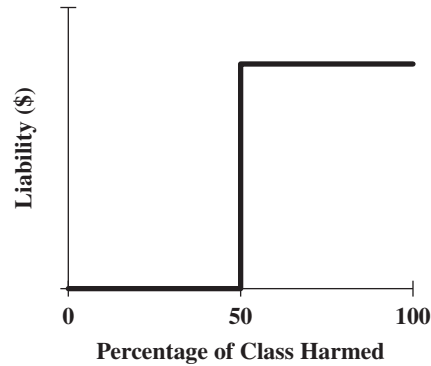
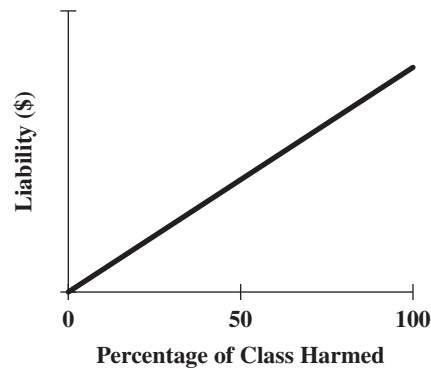


Figure 2 depicts the outcomes with a classwide recovery.

FIGURE 2. CLASSWIDE RECOVERY



The employment discrimination hypothetical provides a simplified but instructive example. Assume that an employer failed to promote some portion of 100 female employees on illegal grounds, depriving each of the women of \$10,000. Assuming the court knows all the facts with complete certainty, the outcome in the case will change dramatically depending on whether the employer discriminated against 51 or 50 women. If 51, under an individualized approach each plaintiff can prove causation by a preponderance of the evidence and will recover in full. If only 50, no plaintiff can carry her burden of proof and none will recover. In other words, under an individualized approach, a very small change in the facts corresponds to a very large and discrete change in the result—from a total recovery of \$1 million to a recovery of nothing. In contrast, under a classwide approach to damages the consequences are incremental: the employer

is liable for a total of \$510,000 if it discriminated against 51 women and \$500,000 if it discriminated against 50 women. Using a measure of recovery that produces continuous as opposed to discontinuous outcomes can have profound effects.

### 1. *Intrinsic: Treating Similar Cases Similarly*

The example involving employment discrimination suggests an intrinsic reason that discontinuous functions are troubling. The difference between discrimination against 51 or 50 women seems relatively minor. Yet the impact that difference can have on litigation is great. Parties who are similarly situated—the employer or employees in each circumstance—experience markedly different treatment under the law.

That sort of unequal treatment seems wrong. The principle of treating similarly situated litigants in a similar manner is central to our legal system. It not only animates procedural doctrines such as the *Erie* doctrine—in which courts have held that parties should not be subject to dramatically different legal standards merely because of the happenstance of whether they are in federal or state court<sup>141</sup>—but it is also fundamental to how we structure our legal system—helping to explain, for example, why we use *stare decisis* in an effort to treat similar cases alike.<sup>142</sup>

### 2. *Instrumental: Predictability*

Another effect of a discontinuous function is that it renders the results in a case unpredictable. People do not like unpredictability—or its close cousin, uncertainty. They tend to be risk-averse, particularly in litigation. That is a significant reason why such a high percentage of cases settle.<sup>143</sup> Continuous functions tend to produce more predictable and certain results.

### 3. *Instrumental: More Sensible Litigation Expenditures*

Discontinuous functions give rise to other problems. One of them involves expenditures on litigation. Key facts are often uncertain in litigation. Which side will prevail in a factual dispute often

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<sup>141</sup> See *Erie R.R. Co. v. Tompkins*, 304 U.S. 64, 74–75 (1938).

<sup>142</sup> See RONALD DWORKIN, *LAW'S EMPIRE* 165–66, 219–24 (1986).

<sup>143</sup> See, e.g., W. Kip Viscusi, *Product Liability Litigation with Risk Aversion*, 17 J. LEGAL STUD. 101, 119–21 (1988); see also Chris Guthrie, *Better Settle Than Sorry: The Regret Aversion Theory of Litigation Behavior*, 1999 U. ILL. L. REV. 43, 81.

depends on the skill and efforts of its attorneys and experts—and, therefore, on the amount of money a party spends on litigation.

By changing the outcomes at trial from discontinuous to continuous, classwide recoveries can promote reasonable investments in litigation. The benefit of this change is most obvious when the evidence on a key issue hovers just at the cusp between liability and no liability. In those circumstances, a continuous function can avoid what could otherwise be excessive litigation costs. The point is somewhat subtler when an evidentiary issue lies clearly on one side or the other of that cusp. It may actually be, though, that a continuous function would encourage investment in litigation that could provide valuable clarity regarding a dispute.

As to the first point—that continuous functions can help avoid excessive expenditures on litigation—consider the antitrust example involving price fixing in the market for airplanes. Assume it is unclear whether just over or just under 50% of the buyers paid more for their airplanes because of the conspiracy. Further, assume that there is no way to tell which buyers paid too much. Finally, assume that causation is the only issue the parties contest.<sup>144</sup> Under an individualized approach to recovery, small changes in the likelihood of causation would have a dramatic effect on the course of the litigation. Those small changes would dictate whether each plaintiff recovers \$10 million—for an aggregate liability of \$1 billion—or whether each plaintiff recovers nothing. As a result, the amount of time and money the parties will pour into prevailing on causation could be extraordinary.

In contrast, under a classwide approach to damages, relatively little would turn on any marginal shift in the percentage of plaintiffs who suffered injury. If 49% suffered injury, the classwide recovery would be \$490 million. If 51% did, the classwide recovery would be \$510 million. The total difference to the parties would be \$20 million, not \$1 billion. The incentive to make a marginal investment in litigation to influence the court would be correspondingly smaller.

On the other hand, in some cases, a classwide approach to recovery could encourage a greater investment in litigation than an individualized approach. Consider, for example, if in the same case the dispute were about whether 24% or 26% of the plaintiffs paid inflated prices. Under an individualized approach, this issue would be irrelevant. All that would matter is whether the plaintiffs could satisfy the

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<sup>144</sup> If the parties were to contest other issues, that would complicate the analysis, but it would not alter the fundamental point.

preponderance of the evidence standard. Under a classwide approach, in contrast, the parties would have some incentive to invest in this issue; it would have an incremental effect on their recovery. If the goal is to minimize litigation expenditures, this possibility detracts from the benefits of a classwide approach.<sup>145</sup> A moderate investment in litigation, however, can be desirable. Assuming it should matter what percentage of plaintiffs a defendant harmed—an issue that seems significant—an effort by the parties to explore this issue could lend valuable clarity to the legal proceedings.

These observations about likely expenditures on litigation retain importance even though most cases settle. After all, parties often litigate for a protracted period of time—and can spend a great deal of money and effort on motions to dismiss, motions for class certification, and motions for summary judgment, as well as on discovery—before they agree to resolve a legal dispute. The possible outcomes of trial should inform how much the parties spend before settlement, just as it should inform the terms on which they settle.<sup>146</sup>

#### 4. *Instrumental: Increased Likelihood of Settlement*

The shift from discontinuous to continuous results from trial also could affect the likelihood of the parties settling under a classwide approach to recovery, as compared to an individualized approach.<sup>147</sup> One of the main reasons parties do not settle is differing predictions

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<sup>145</sup> Nevertheless, the expenditures under a classwide approach would likely not be as great as might occur under an individualized approach when the odds of plaintiffs and defendants prevailing on an element are nearly even. The reason is that a shift in the probabilities on such an issue under a classwide recovery approach would generally have only an incremental impact on damages. Under an individualized approach, in contrast, a great shift in liability could occur from only a small change in the odds that a defendant is liable.

Still, whether individualized or classwide recoveries will produce lower litigation costs is in part an empirical issue: how often is the likelihood of the plaintiff being right on any given element close to the preponderance of the evidence standard, and how often is that likelihood clearly on one or the other side of that standard? In this regard, keep in mind that whether courts calculate recoveries on an individualized or classwide basis will affect which cases settle and, as a result, the likely expenditures in those cases that involve protracted litigation. Along these lines, note that, as discussed in Part II.C.4 of this Article, the cases that are the least likely to settle under an individualized approach to recovery are the ones that will likely generate the highest expenditures—cases in which the parties disagree about the odds of prevailing in a way that spans the cusp between plaintiffs recovering nothing and plaintiffs recovering fully.

<sup>146</sup> See Robert H. Mnookin & Lewis Kornhauser, *Bargaining in the Shadow of the Law: The Case of Divorce*, 88 YALE L.J. 950, 972, 979–80 (1979).

<sup>147</sup> See Robert G. Bone & David S. Evans, *Class Certification and the Substantive Merits*, 51 DUKE L.J. 1251, 1297–98 (2002) (considering settlement in assessing class certification standards).

about the likely outcome at trial.<sup>148</sup> If two parties assign significantly different expected values to litigation, the benefits of settlement—including saving time and money and avoiding risk—may not be sufficient to bridge the gap between them. Each side may anticipate doing better on average through litigation than the best settlement offer the other side is willing to make. Discontinuous functions can exaggerate the effect of differing predictions.

For example, if the plaintiffs in the airplane price-fixing case believe with great confidence that they can show at least 60% of the buyers were injured, and the defendants believe with similar confidence that they can show at most 40% of the buyers were injured, the difference in the expected value they each assign to the case under an individualized approach to recovery could approach the full potential recovery of \$1 billion. If the plaintiffs are right, their total recovery will be \$1 billion. If the defendants are right, they will have no liability. The limited possibility each side recognizes that it may be wrong may shrink this gap a bit, but the gap is likely to remain large. Settlement may prove impossible unless and until judicial rulings modify the parties' predictions.

Under a classwide approach to damages, in contrast, the expected value of the plaintiffs might be about \$600 million, and the expected value of the defendants might be about \$400 million. The disparity would be \$200 million, not \$1 billion. Further, as the parties acquire more information, it may well narrow. In this way, classwide damages can increase the likelihood of settlement.<sup>149</sup>

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<sup>148</sup> See Joshua P. Davis, *Toward a Jurisprudence of Trial and Settlement: Allocating Attorney's Fees by Amending Federal Rule of Civil Procedure 68*, 48 ALA. L. REV. 65, 131 n.135 (1996).

<sup>149</sup> A similar point applies regarding the likelihood of settlement as it does to litigation expenditures: in some circumstances classwide recoveries could decrease—rather than increase—the likelihood of settlement. See *supra* Part II.C.3. The reason is that if the parties agree, for example, that the percentage of the class injured lies on one side or the other of the cusp between outcomes, an individualized approach to damages could cause the expected value they assign to be closer than under a classwide approach.

But this effect is likely to be less pronounced than the one discussed in the text. The reason is that the disparity in the predictions regarding the outcome under a classwide recovery—with its incremental effect on damages—and an individualized recovery where the parties agree on the result is not likely to be that great. In contrast, the disparity could be very significant between a classwide approach and an individualized approach where the parties' disagreement would cause a discontinuous shift in a defendant's liability.

Theoretical modeling by itself, however, is unlikely to resolve this issue. An empirical question is crucial: how often in litigation will parties disagree about whether plaintiffs can satisfy the preponderance of evidence standard and how often will they agree on that issue but disagree about how far on one side or the other of that standard the probabilities lie?

*D. Notes on Settlement and Uncertainty*

Two final considerations that are important in assessing classwide recoveries are the effects of settlement and uncertainty. Settlement tends to convert discontinuous functions into continuous functions. It may cause a recovery to vary in proportion to the odds of the plaintiff prevailing, rather than producing discrete, all-or-nothing results.<sup>150</sup> This point has particular force where there is uncertainty in litigation, so that it is hard to know, for example, whether plaintiffs will have just enough evidence to prevail or not quite enough. Moreover, uncertainty means that different plaintiffs' cases may produce varying results at trial, even if the plaintiffs are similarly situated.<sup>151</sup>

Uncertainty and settlement could have an impact on the difference between the measures of recoveries with individualized and classwide litigation, particularly where the evidence hovers reasonably near the burden of persuasion. Because of uncertainty, the defendant may agree to settle with any given individual for an amount that approximates the partial recovery available under a classwide approach.<sup>152</sup> Further, rather than all plaintiffs with similar claims winning, or all of them losing, some of each may occur.<sup>153</sup> That may convert the outcome for the defendant to something close to a continuous function (although it would not necessarily do the same for each individual plaintiff).

Similarly, settlement and uncertainty can together soften the stepwise function that otherwise occurs with individualized recoveries, mitigating some of the most concerning consequences of an individualized approach and the discontinuous outcomes it produces. For example, as a result of uncertainty, investment in litigation may have only a marginal effect on expected value—and therefore on the amount of any settlement—rather than producing a discrete shift in outcome. The defendant may perceive any investment in litigation as having an incremental impact on the settlement value of any particular case or on the number of cases it will win or lose.

A complete analysis of this issue is beyond the scope of this Article, as is any effort to provide a mathematical model that takes into

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<sup>150</sup> See generally Davis, *supra* note 134 (discussing the relative effects of a continuum of results versus an all-or-nothing result).

<sup>151</sup> Many thanks to Howie Erichson and Sam Issacharoff for emphasizing these points. For an insightful discussion of uncertainty (or, to be more precise, different kinds of uncertainty) and settlement, see Howard M. Erichson, *Uncertainty and the Advantage of Collective Settlement*, 60 DEPAUL L. REV. 627 (2011).

<sup>152</sup> See Abramowicz, *supra* note 134, at 240.

<sup>153</sup> See Bone & Evans, *supra* note 147, at 1298.

account settlement and uncertainty. A few points, however, are worth making, even if they are only preliminary.

First, in cases that fall beyond a critical distance from the burden of proof, the results under a classwide approach and an individualized approach will be starkly different. For example, in a case involving the preponderance of the evidence standard, if many plaintiffs can clearly show—or clearly cannot show—they are more likely than not correct, a cumulative approach will yield distinct outcomes from a classwide approach. The uncertainty about which party would win in each individual case will decrease rapidly, and, as a result, the expected value of individual and classwide recoveries will diverge similarly rapidly.<sup>154</sup> Markedly different settlements in classwide and individual litigation should result. For example, if an employer discriminates against 75 of 100 women—or 25 of 100 women—all of the women should have a very high chance of winning or losing, respectively, in individual litigation. In the former case, the expected value of recovery for each woman should approximate her full damages; and in the latter case, it should approach nothing at all. Under a classwide approach, in contrast, each plaintiff would expect to recover in proportion to the percentage of the group of women who suffered discrimination.

Second, many cases of protracted litigation involve disparate predictions about the odds in litigation. That can explain why parties do not settle.<sup>155</sup> Those disparate predictions can cause the outcomes to appear discontinuous to the litigants. In other words, what matters is not uncertainty about the outcome in litigation that converts a discontinuous function into a continuous function—it is the *perception* of uncertainty. Unrealistic optimism on the part of one or both parties, combined with discontinuous results in individual litigation, thus may undermine settlement efforts.

Third, litigants will not know for much of the litigation whether they are going to settle—and, as practicing lawyers say, they must litigate as if they are going to trial. The potential adverse consequences of individualized litigation may occur—including, for example, excessive investment in litigation—even if the vast majority of cases ultimately reach a negotiated resolution.

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<sup>154</sup> Abramowicz, *supra* note 134, at 243.

<sup>155</sup> See Mnookin & Kornhauser, *supra* note 146, at 975 (“To the extent that one or both of the parties typically overestimate their chances of winning, more cases will be litigated than in a world in which the outcome is uncertain but the odds are known.”).

### III. RESPONDING TO POSSIBLE OBJECTIONS

Classwide recoveries, then, have various attractive qualities. They are also subject to potential criticism. This Article will address two of these criticisms: first, the theoretical concern that classwide recoveries ease the plaintiffs' burden regarding causation; and, second, the practical concern that they may place undue pressure on defendants to settle meritless cases.<sup>156</sup> Each of these points warrants careful consideration. The gist of a response to each one, however, can be summarized briefly. First, a classwide recovery will hold a defendant liable only for harm that it probably caused. Second, neither evidence nor theory supports the claim that class actions or classwide recoveries tend to cause defendants to pay an excessive amount in settlement or after trial.

#### A. *Comparing and Contrasting Market-Share Liability*

Allowing classwide recoveries in cases where a court may have difficulty identifying which plaintiffs were harmed has important similarities to market-share liability.<sup>157</sup> Both involve difficulties identifying parties to a causal relationship.

In market-share liability, the identity of the *wrongdoer* is unclear. We may know that a plaintiff consumed a drug and suffered an injury as a result, but we cannot determine which manufacturer produced the drug. Market-share liability addresses this issue by allowing a plaintiff to recover from each manufacturer of a drug in proportion to that manufacturer's market share.

Regarding the classwide recoveries discussed in this Article, the identity of the *injured plaintiffs* is difficult to determine. We may know, for example, that a particular corporation violated the antitrust laws and the total resulting harm from that violation, but we are unsure which purchasers of the good or service at issue paid inflated prices. Classwide recoveries resolve this problem by allowing the class as a whole to recover for the total harm a defendant has caused.

In light of the underlying similarity between classwide recoveries and market-share liability—the identity of a party to the causal relationship is unknown—it is unsurprising that academic analysis of one can cast light on the other. Mark Geistfeld, for example, in defending

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<sup>156</sup> A companion article in this Symposium addresses potential doctrinal concerns regarding classwide recoveries based on standing, due process, and the Rules Enabling Act, 28 U.S.C. §§ 2071–2077 (2012). See generally Davis, Cramer & May, *supra* note 7.

<sup>157</sup> See *Brown v. Superior Court*, 751 P.2d 470, 486–87 (Cal. 1988); *Sindell v. Abbott Labs.*, 607 P.2d 924, 937 (Cal. 1980).

market-share liability, has argued for a general concept of “evidential grouping.”<sup>158</sup> According to Geistfeld, evidential grouping involves treating a group of defendants as unitary for evidentiary purposes in determining causation when a plaintiff can show the defendants as a group harmed her—even though the plaintiff cannot show by a preponderance of the evidence *which* of the defendants caused the harm.<sup>159</sup> Evidential grouping can explain various tort doctrines, including not just the controversial doctrine of market-share liability, but also the more settled doctrine of alternative liability.<sup>160</sup>

There is no reason to limit evidential grouping to defendants. Classwide recoveries entail evidential grouping by plaintiffs. The plaintiff class is treated as unitary for evidentiary purposes.

Viewed in this way, Geistfeld’s reasoning regarding market-share liability and related doctrines supports classwide recoveries. He argues, for example, for a tort norm designed to minimize error costs.<sup>161</sup> Reasoning from that norm, he contends that it “neither requires nor forecloses proof applied to defendants individually or as a group.”<sup>162</sup> In other words, Geistfeld recognizes that neither an individualized approach nor a group approach to adjudication is intrinsically superior. The two approaches simply provide alternative procedural means to litigate rights. Whether we should adopt one or the other depends on the relative advantages and disadvantages. This point suggests that classwide recoveries should also be assessed on the merits and not disregarded as an impermissible deviation from the norm of individual litigation.

Although there are important similarities between classwide recoveries and market-share liability, there is also at least one crucial distinction between the two. A key criticism—perhaps *the* key criticism—of market-share liability does not apply to classwide recoveries. Market-share liability can force a defendant to pay for harm it probably did not cause. A defendant who is responsible for only, say, 25% of the sales in an industry may have to pay 25% of the damages that a

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<sup>158</sup> See Mark A. Geistfeld, *The Doctrinal Unity of Alternative Liability and Market-Share Liability*, 155 U. PA. L. REV. 447, 447, 453 (2006).

<sup>159</sup> See *id.* at 460.

<sup>160</sup> See *id.* at 447, 486. Other relevant doctrines address special concurrent causation, such as when each of two fires is sufficient to cause harm or when multiple actors contribute to a toxic tort. See, e.g., *Corey v. Havener*, 65 N.E. 69 (Mass. 1902) (holding each actor is joint and severally liable if each committed a tortious act that caused harm and it is not possible to ascribe a proportion of the harm to each actor).

<sup>161</sup> See *id.* at 462.

<sup>162</sup> *Id.*

plaintiff suffered, even though it is more likely than not true that a different manufacturer produced the drug that caused the injury to any given plaintiff. That approach marks a departure from the ordinary legal standard, a departure that explains in part why the doctrine has received some critical reviews.<sup>163</sup>

Even if there is merit to the concern about relaxing the standard for proving causation when it comes to market-share liability, that concern does not apply in the same way to classwide recoveries. A court granting a classwide recovery knows by a preponderance of the evidence that it has identified the correct wrongdoer, that the defendant violated the law, and that the court has accurately calculated the amount of harm the defendant caused. All that the court may remain uncertain about is *which members* of a class suffered harm and which did not. Unlike market-share liability, the defendant is liable only for the injuries that it probably caused. Classwide recoveries thus have many of the advantages of market-share liability but not its main disadvantage.

### B. *Excessive Liability*

As we have seen, classwide recoveries can help to avoid situations where defendants must pay an amount far in excess of the harm they have caused or where a plaintiff class as a group recovers far less than the harm it has suffered. Despite this attractive quality of classwide recoveries, a potential criticism is that they may nevertheless result in excessive liability. This criticism can take two forms, the first involving settlement and the second involving a recovery awarded by a court.

#### 1. *Does Facilitating Class Litigation Promote Blackmail?*

Forcing a defendant to pay damages it did not cause has been labeled “legalized blackmail,” and allowing defendants to keep ill-gotten gains has been called “legalized theft.”<sup>164</sup> A potential criticism of classwide recoveries is that they could result in legalized blackmail.<sup>165</sup>

The reasoning behind this potential criticism is that classwide recoveries can facilitate class certification. A class trial, in turn, can expose a defendant to massive liability. That threat—even in a lawsuit with very little merit—could theoretically cause a defendant to settle

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<sup>163</sup> See, e.g., Zipursky, *supra* note 8, at 134–35.

<sup>164</sup> See Jonathan M. Landers, *Of Legalized Blackmail and Legalized Theft: Consumer Class Actions and the Substance-Procedure Dilemma*, 47 S. CAL. L. REV. 842, 843 (1974).

<sup>165</sup> Cf. Silver, *supra* note 12, at 1388–90 (rejecting the argument about legalized blackmail).

rather than risk bankruptcy, however small its odds of losing.<sup>166</sup> For various reasons, however, the concern about legalized blackmail is not very compelling.

One problem with the legalized blackmail theory is that it has a shaky empirical foundation. Evidence that defendants may settle lawsuits without merit comes largely from the contexts of securities and stockholder lawsuits.<sup>167</sup> Even in that area of the law, the evidence is thin and subject to competing interpretations.<sup>168</sup> Moreover, Congress has already placed various constraints on securities litigation, including imposing an unusually high pleading standard and staying discovery until a ruling on any motion to dismiss.<sup>169</sup> Those measures may well have addressed any problem that existed. As a result, courts and scholars have not offered an adequate empirical basis for the claim that defendants settle frivolous class action lawsuits with any regularity.<sup>170</sup>

Further, as a theoretical matter, it is unlikely that defendants often settle meritless lawsuits for significant sums. The dynamics of class litigation confirm that it is far more likely that large corporate defendants will pay too little—rather than too much—in settling class litigation.<sup>171</sup> The defendants in class actions tend to be large, wealthy corporations. They have the financial and other means to protect their interests. They are not likely to be risk-averse. They would ordinarily not be expected to settle unless they would fare better on average by doing so than by persisting in litigation.<sup>172</sup>

Further, the incentives before the *attorneys* in class litigation make excessive settlements unlikely. Plaintiffs' lawyers generally litigate on a contingent basis, paying the costs of litigation out of pocket and receiving compensation only if, and when, they prevail. They benefit from settling early, even if for a lower amount than they could

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<sup>166</sup> The Supreme Court appeared to act on this perceived risk in *Bell Atlantic Corp. v. Twombly*, 550 U.S. 544 (2007).

<sup>167</sup> See, e.g., Bone & Evans, *supra* note 147, at 1293–94 & nn.157–58 (discussing very thin empirical record, all of it involving securities and stockholder litigation).

<sup>168</sup> See, e.g., Joel Seligman, Commentary, *The Merits Do Matter: A Comment on Professor Grundfest's "Disimplying Private Rights of Action Under the Federal Securities Laws: The Commission's Authority"*, 108 HARV. L. REV. 438, 452–53 (1994).

<sup>169</sup> 15 U.S.C. § 78u-4 (2012); see also *Amgen Inc. v. Conn. Ret. Plans & Trust Funds*, 133 S. Ct. 1184, 1200 (2013).

<sup>170</sup> The Supreme Court in *Twombly*, for example, simply declared that corporations settle meritless lawsuits without citing to any empirical evidence at all. *Bell Atl. Corp. v. Twombly*, 550 U.S. 544, 559 (2007).

<sup>171</sup> See Davis & Cramer, *supra* note 17, at 372.

<sup>172</sup> For an argument along these lines in the antitrust context, see *id.* at 368–74.

obtain through protracted litigation. That gives them the greatest compensation per hour with the least risk and expense. Defense lawyers, in contrast, are paid on an hourly basis. The longer litigation persists—and the more involved it is—the better they are likely to do financially. These dynamics should tend to produce settlements that are relatively unfavorable to plaintiff classes and relatively favorable to class action defendants. Indeed, most of the criticism of class actions has been directed at the concern that plaintiffs' lawyers settle for too small—not too large—a sum.<sup>173</sup> None of this is to suggest that attorneys generally act unethically. To the extent, however, that one takes into account potential agency costs, they undermine the legalized blackmail theory.

Neither evidence nor theory supports the claim that aggregate litigation extorts settlements from defendants with any regularity. It is far more likely that without class certification defendants will get away with legalized theft—providing another reason that a classwide approach to recovery will minimize error costs.<sup>174</sup>

## 2. *Does Increasing the Size of a Class Increase Potential Liability?*

Another potential argument against classwide recoveries—and allowing classes to include uninjured members—is that doing so may increase a defendant's exposure to potential liability in court. Judge

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<sup>173</sup> See, e.g., Rhonda Wasserman, *Dueling Class Actions*, 80 B.U. L. REV. 461, 470–71 & nn.51–53 (2000). See generally John C. Coffee, Jr., *Class Wars: The Dilemma of the Mass Tort Class Action*, 95 COLUM. L. REV. 1343 (1995); Susan P. Koniak, *Feasting While the Widow Weeps: Georgine v. Amchem Products, Inc.*, 80 CORNELL L. REV. 1045 (1995); Susan P. Koniak & George M. Cohen, *Under Cloak of Settlement*, 82 VA. L. REV. 1051 (1996); Roger H. Trangsrud, *Mass Trials in Mass Tort Cases: A Dissent*, 1989 U. ILL. L. REV. 69; Brian Wolfman & Alan B. Morrison, *Representing the Unrepresented in Class Actions Seeking Monetary Relief*, 71 N.Y.U. L. REV. 439 (1996). The failure of proponents of a heightened class certification standard to adequately address these crucial settlement dynamics renders their analyses unpersuasive. See, e.g., Bone & Evans, *supra* note 147.

<sup>174</sup> This claim requires some elucidation. To suggest that plaintiffs settle for too little requires a benchmark for an appropriate settlement. A plausible benchmark for a proper reflection of the merits is the expected value of trial. See generally Joshua P. Davis, *Applying Litigation Economics to Patent Settlements: Why Reverse Payments Should Be Per Se Illegal*, 41 RUTGERS L.J. 255 (2009) (defending expected value as a measure of justice in settlement); Davis, *supra* note 134, at 85–94, 106–16 (same). Settlement for the expected value of trial produces the same error costs on average as would trial. Davis, *supra* note 134, at 87. A more specific statement of the claim in the text, then, is that without class certification, plaintiffs would likely often settle for less than the expected value of trial. A defense of that standard, however, is beyond the scope of this Article.

Posner implied this point in *PIMCO*.<sup>175</sup> Whether it has any merit depends on how damages are calculated.

No problem should arise if a court awards individual recoveries and is able to distinguish plaintiffs who were harmed from plaintiffs who were not. *PIMCO* appears to have involved that sort of situation. The conduct at issue was defendant's alleged effort to corner the market on ten-year U.S. Treasury notes, driving up prices when investors who had sold short had to close out their contracts.<sup>176</sup> The defendant noted that some class members who sold short might have done so as a hedge and might have benefited on net because they took a more substantial "long" position.<sup>177</sup> This possibility, however, would not necessarily result in excessive liability. The court would ultimately be able to determine which class members had gained and which had lost. A review of class member investments during the relevant period would reveal the relevant information. By obtaining that same information, a defendant should be able to sort out its total potential liability before going to trial or, more realistically, before agreeing to a settlement.

A different situation occurs if the plaintiff class will receive the sum of the individual recoveries of the class members. Assuming it is impossible or impractical to determine which plaintiffs suffered injury and which did not, it seems possible that a larger class could lead to greater exposure to liability. Consider again the employment discrimination hypothetical. Imagine if the class is enlarged from 100 to 110 women, out of which we know 60 women suffered discrimination. Applying the preponderance of the evidence standard, it would remain true that each should recover in full. A larger class would correlate to greater liability as long as more than half the class suffered injury.

There is, however, no similar risk if a court imposes a classwide recovery in the way this Article recommends. If the defendant employer inflicted \$10,000 of harm on exactly 60 women, it would be liable for that amount—and only that amount—in damages. The employer would have to pay \$600,000 whether the class seeking relief numbers 100 or 110, or, for that matter, 140. If only 60 positions were available to the women, only 60 women could have been improperly denied a promotion. In allocating the funds, the plaintiffs would want to prune any members who could not have suffered harm—or who

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<sup>175</sup> *Kohen v. Pac. Inv. Mgmt. Co. (PIMCO)*, 571 F.3d 672, 677–78 (7th Cir. 2009).

<sup>176</sup> *Id.* at 674–76.

<sup>177</sup> *Id.* at 676.

were very unlikely to have been harmed—for fear of unnecessarily diluting the recovery of each class member. The defendant's exposure, however, would not increase with class size.

Classwide recoveries, then, can provide a solution to the risk of excessive liability; they need not contribute to that potential problem.

#### CONCLUSION

Classwide recoveries have various advantages over individualized recoveries. They allow courts to take advantage of statistics and economics in a way that Oliver Wendell Holmes, Jr. welcomed long ago.<sup>178</sup> It is well past time for us to embrace the future he envisioned. Our courts, however, have not always been open to progress. Indeed, classwide recoveries may have the greatest value in circumstances when the judiciary has at times expressed the greatest resistance to them. Some courts have recently suggested that class certification is appropriate only if plaintiffs can show harm to all or virtually all members of a class. That requirement can be perverse. It is precisely when conduct harms some members of a group, but when it is not possible or practical to identify which ones, that class certification and a classwide recovery may offer numerous advantages over individual litigation. As a matter of policy, in those cases courts should be able to certify classes and award classwide relief.

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<sup>178</sup> See Oliver Wendell Holmes, Jr., *The Path of the Law*, 10 HARV. L. REV. 457, 469 (1897).

## APPENDIX A

The following is a comparison of the error costs of classwide and individualized approaches to recovery from the perspective of deterrence. Error costs are measured as the difference between the actual and the right result of litigation.

*Assumptions*

A large group of plaintiffs—say  $X$  of them—sue D. All of the plaintiffs are similarly situated. The only issue contested in litigation is which of the plaintiffs suffered harm as a result of D's violation of the law. Each plaintiff that suffered the relevant form of injury is entitled to a judgment of  $\$S$ . All of the others should recover nothing. Assume that  $p$  represents the percentage of the group that D injured. The likelihood that each plaintiff should prevail is therefore  $p$ .

*Individualized Approach*

Applying an ordinary preponderance of the evidence standard, all the plaintiffs will win if  $p$  is greater than 50%, but otherwise all of the plaintiffs will lose. The formula that represents the error costs under an individualized approach varies depending on whether  $p$  is greater than 50%.

If each plaintiff will win (in other words, if  $p > 0.5$ ), then the error costs depend on the percentage,  $(1 - p)$ , of the  $X$  members of the group that D will have to pay  $\$S$  even though it should have no liability to them. (There are no error costs regarding D's payments to plaintiffs who should and do prevail.) The error costs are:

$$(1 - p)XS$$

Alternatively, if each plaintiff will lose (in other words, if  $p \leq 0.5$ ), then the error costs depend on the percentage,  $p$ , of the  $X$  members of the group to whom D will pay nothing even though it should have to pay  $\$S$  to each of them. (No error costs result from the plaintiffs who should lose receiving nothing.) The error costs are:

$$pXS$$

*Classwide Approach*

Under the classwide approach, D should be liable for  $pXS$ . That is precisely what D is required to pay. There are no error costs from the perspective of deterrence.

*Comparison*

The error costs are greater under an individualized approach by  $(1 - p)XS$  if  $p > 0.5$  and by  $pXS$  if  $p \leq 0.5$ .

## APPENDIX B

The following is a comparison of the error costs of a classwide and individualized approach to recovery from the perspective of compensation. Error costs are measured as the difference between the actual result and the right result of litigation. The same assumptions apply as in Appendix A.

*Individualized Approach*

Applying an ordinary preponderance of the evidence standard, all of the plaintiffs will win if  $p$  is greater than 50%; otherwise, all of the plaintiffs will lose. The formula that represents the error costs under an individualized approach varies depending on whether  $p$  is greater than 50%.

If each plaintiff will win (in other words, if  $p > 0.5$ ), then the error costs depend on the percentage,  $(1 - p)$ , of the  $X$  members of the group who will recover  $\$S$  even though they should not receive any compensation. (There are no error costs regarding the plaintiffs who should and do prevail.) The error costs are:

$$(1 - p)XS$$

Alternatively, if each plaintiff will lose (in other words, if  $p \leq 0.5$ ), then the error costs depend on the percentage,  $p$ , of the  $X$  members of the group who will recover nothing even though they should each receive  $\$S$ . (No error costs result from the plaintiffs who should lose receiving nothing.) The error costs are:

$$pXS$$

*Classwide Approach*

With a classwide recovery, the plaintiffs as a group will receive precisely the right total recovery:  $pXS$ . Assuming that they share this recovery on a pro rata basis, each plaintiff will receive  $pS$ .

Some plaintiffs will receive too little and some too much. More precisely, those plaintiffs who should have lost,  $(1 - p)X$ , will recover more than they should have by the amount of the pro rata award,  $pS$ , and those plaintiffs who should have won,  $pX$ , will receive less than they should have by the difference between full recovery and the pro rata award,  $S - pS$ , or  $(1 - p)S$ . The following equation captures these error costs:

$$(1 - p)XpS + pX(1 - p)S = 2p(1 - p)XS$$

*Comparing Error Costs*

When  $p > 0.5$ , we know the error costs are:

Individualized approach:  $(1 - p)XS$

Classwide approach:  $2p(1 - p)XS$

Given that  $p$  is greater than 0.5, that means that  $2p$  is greater than 1, and the classwide approach will always produce higher error costs than the individualized approach from the perspective of compensation to plaintiffs.

When  $p = 0.5$ , we know the error costs are:

Individualized approach:  $pXS$

Classwide approach:  $2p(1 - p)XS$

If  $p$  is less than 0.5,  $2(1 - p)$  is greater than 1, and the classwide approach will produce higher error costs than the individualized approach from the perspective of compensation to plaintiffs.

It is worth noting that the error costs will be the same when  $p = 0.5$ , but that rare instance should have little significance.

## APPENDIX C

The following is a comparison of the error costs of a classwide and individualized approach to recovery from the perspective of compensation. Error costs are measured as the square of the difference between the actual result and the right result of litigation. The same assumptions apply as in Appendix A.

*Individualized Approach*

As discussed above, the formula for error costs under an individualized approach varies depending on whether  $p$  is greater than 50%.

If  $p > 0.5$ , the resulting error costs are measured by the formula above, although the amount of the error,  $S$ , is squared:  $(1 - p)XS^2$ .

If  $p \leq 0.5$ , then the error costs, measured by squaring the amount of the error above, are  $pXS^2$ .

*Classwide Approach*

With a classwide recovery, the same adjustment must be made, squaring the amount of the error in each case—that is, for those plaintiffs who should lose, the error costs are  $(pS)^2$ ; and for those plaintiffs who should win, the error costs are  $((1 - p)S)^2$ . The following formula expresses the error costs:

$$(1 - p)X(pS)^2 + pX((1 - p)S)^2 = p(1 - p)XS^2$$

*Comparing Error Costs*

When  $p > 0.5$ , we know the error costs are:

Individualized approach:  $(1 - p)XS^2$

Classwide approach:  $p(1 - p)XS^2$

Given that  $p$  is less than or equal to 1, the classwide approach will generally produce lower error costs than the individualized approach from the perspective of compensation to plaintiffs. (The two will be equal when  $p = 1$ , a trivial case.)

When  $p \leq 0.5$ , we know the error costs are:

Individualized approach:  $pXS^2$

Classwide approach:  $(1 - p)pXS^2$

Given that  $(1 - p)$  is less than or equal to 1, the classwide approach will generally produce lower error costs than the individualized approach. (The two will be equal when  $p = 0$ , a trivial case.)

## APPENDIX D

The following is a comparison of the error costs of a classwide approach to recovery and an automatic loss for plaintiffs from the perspective of compensation. Error costs are measured first as the difference between the actual result and the right result of litigation, and second as the square of that difference. The same assumptions apply as in Appendix A.

*The Difference Between the Actual and Right Result*

We can compare the formulas for error costs under an individualized and classwide approach when the court would rule in favor of defendants:

Individualized approach:  $pXS$

Classwide approach:  $2p(1 - p)XS$

Assuming that  $p$  is greater than 0.5,  $2(1 - p)$  is less than 1, and the classwide approach will produce lower error costs than the individualized approach from the perspective of compensation to plaintiffs.

*The Square of the Difference Between the Actual and Right Result*

Regarding the square of the difference between the actual result and the right result, the analysis above applies:

Individualized approach:  $pXS^2$

Classwide approach:  $(1 - p)pXS^2$

Assuming that  $p$  is greater than 0.5,  $(1 - p)$  is significantly less than 1, and the classwide approach will produce lower error costs than the individualized approach.

## APPENDIX E

The following is an analysis of the total error costs of classwide and individualized approaches to recovery from the perspectives of deterrence and compensation. Error costs are measured as the difference between the actual result and the right result of litigation. The same assumptions apply as in Appendix A. The analysis varies depending on whether more than half of the plaintiffs in a class suffered the relevant form of injury.

*More Than Half of the Class Suffered Injury*

If  $p > 0.5$ , then the analysis is as follows:

*Individual Recoveries*

For an individual recovery, the error costs from the perspective of deterrence is measured by the formula in Appendix A:

$$XS - pXS = (1 - p)XS.$$

Similarly, the formula in Appendix B provides the error costs regarding compensation:  $(1 - p)XS$ .

The sum of these two formulas is  $2(1 - p)XS$ .

*Classwide Recoveries*

As for classwide recoveries, as Appendix A establishes, classwide recoveries do not produce error costs from the perspective of deterrence.

Appendix B provides the formula for error costs from the perspective of compensation:  $2p(1 - p)XS$ .

The total, therefore, is  $2p(1 - p)XS$ .

*Comparison*

The total error costs from an individualized approach are  $2(1 - p)XS$ .

The total error costs from a classwide approach are  $2p(1 - p)XS$ .

As  $p$  is generally less than 1, classwide recoveries produce lower error costs. (The most  $p$  can be is 1, in which case the two approaches produce the same error costs.)

*Half of the Class or Less Suffered Injury:*

If  $p \leq 0.5$ , then the analysis is as follows:

*Individual Recoveries*

As established in Appendix A, the error costs from the perspective of deterrence are  $pXS$ .

Appendix B demonstrates that the error costs in terms of compensation are the same:  $pXS$ .

The total, then, is  $2pXS$ .

*Classwide Recoveries*

Again, classwide recoveries produce no error costs from the perspective of deterrence. In this situation, Appendix B establishes that the error costs from the perspective of compensation are  $2p(1-p)XS$ .

The total is  $2p(1-p)XS$ .

*Comparison*

The total error costs from an individualized approach are  $2pXS$ .

The total error costs from a classwide approach are  $(1-p)2pXS$ .

As  $p$  generally is greater than 0, classwide recoveries produce lower error costs. (The least  $p$  can be is 0—if no one was injured, which is not a significant situation—in which case the two approaches produce the same error costs.)

*The Square of the Difference Between the Actual and Right Result*

A classwide approach produces lower error costs than an individualized approach in terms of liability, as demonstrated by Appendix A, and in terms of compensation if error costs are measured by the square of the difference between the actual result and the right result, as demonstrated in Appendix C. The logical combination of these propositions is that a classwide approach produces lower total error costs than does an individualized approach under the squaring method.