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THE CASE AGAINST COLLECTIVE LIABILITY

J. SHAHAR DILLBARY

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THE CASE AGAINST COLLECTIVE LIABILITY

J. SHAHAR DILLBARY*

Abstract: Collective liability—defined as the imposition of liability on a group that may include innocent actors—is commonplace. From ancient to modern times, legislators, regulators, and courts have imposed such liability when they believe that the culprit is a member of the group. Examples of collective liability abound: from surgical teams held jointly liable for a misplaced sponge to entire families evicted from their homes for the drug-related activity of a single person under the “One Strike Rule.” Courts recognize, of course, that collective liability punishes the innocent, but they view it as a necessary evil to smoke out and punish an unknown wrongdoer in a known group.

Despite the ubiquity of collective liability regimes, they remain under-theorized and under-studied. Proponents of collective liability justify its imposition on two grounds. First, claims of deterrence suggest that the threat of collective liability incentivizes innocent actors to monitor each other and take preventative measures. The second claim is that once a harm occurs, potential liability will encourage innocent actors to share information that would identify the wrongdoer.

Drawing on economic theory and empirical evidence, this Article sheds light on the dark side of collective liability. It concludes that, disconcertingly, collective liability regimes may lead to contrary results and perverse outcomes. Through clear examples, this Article reveals that collective liability can (1) erode actors’ incentives to monitor and take preventative measures, (2) incentivize those knowledgeable about the culprit’s identity to keep quiet, lie, or even plot with others to lie, and (3) help service providers (e.g., physicians) engage in forms of

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NOTE: Because some platforms do not reproduce images, we have archived all graphics herein at <https://www.bc.edu/content/dam/bc1/schools/law/pdf/law-review-content/BCLR/62-2/Dillbary-Graphics.pdf> [<https://perma.cc/CM4Y-PQ4X>].

harmful practices not heretofore known. Fortunately, in certain situations, some of the faults of collective liability are remediable. This Article provides a practical proposal that would minimize strategic behaviors, reduce the detrimental effects of collective liability, and bypass the identification problem altogether. This proposal offers a new path in medical malpractice, civil rights violations, assault, larceny, and a variety of other cases that are subject to group liability.

INTRODUCTION

In 2019, a Brazilian judge faced a reverse Solomonic dilemma.¹ A young girl brought a suit against two men, identical twins, arguing that one of them was her father (the Twin Case).² DNA tests corroborated the young girl's claim but could not determine which one was the father.³ Other evidence was equally unhelpful.⁴ The twins denied any relationship with the mother and blamed each other.⁵ The mother could not identify the true father either because the twins had previously impersonated one another and used each other's names in order to mislead and swap partners.⁶ By the end of the trial, it was clear that

¹ T.J.G.O., Ap. Civ. No. XXXXXXXXXXXXX (redacted), Cachoeira Alta, Relator: Des. Filipe Luis Peruca, 21.03.2019, <https://www.tjgo.jus.br/images/docs/CCS/duplapaternidade.pdf> [<https://perma.cc/32HZ-6ZMU>]; see also Lilian Cury, *Dupla Paternidade Biológica: Juiz Determina Que Gêmeos Idênticos Paguem Pensão à Criança*, TRIBUNAL DE JUSTIÇA DO ESTADO DE GOIÁS (Apr. 1, 2019), <https://www.tjgo.jus.br/index.php/institucional/centro-de-comunicacao-social/17-tribunal/6716-dupla-paternidade-biologica-juiz-determina-que-gemeos-identicos-paguem-pensao-a-crianca> [<https://perma.cc/ZFS4-U6H6>]; Telephone Interview with the Honorable Filipe Luis Peruca, Dist. Judge at the Cachoeira Alta Ct., in the ctr. state of Goiás (Sept. 13, 2019). The Biblical story (known as the Judgment of King Solomon) involves two women, each claiming to be the true mother of a newly born baby boy. 1 *Kings* 3:16–28. It was clear that one of the women was lying, but it was impossible to determine which one. The two women lived alone in the same house when they had their babies, so there were no witnesses, and their testimonies were equally credible. In addition, the babies were of the same age (they were born within a three-day period). The identities of the women's partners were also unknown (the women are described as “harlots”), thus ruling out the ability to rely on resemblance to the fathers. To force the truth out of the contestants, King Solomon ordered the division of the child between them. One woman was content. The other agreed to waive her claim to the baby, thereby identifying herself as the mother. For a critical view of the Solomonic solution, see Ian Ayres & Eric Tally, *Solomonic Bargaining: Dividing a Legal Entitlement to Facilitate Coasean Trade*, 104 *YALE L.J.* 1027, 1029 n.6 (1995); Jacob Glazer & Ching-To Albert Ma, *Efficient Allocation of a “Prize” — King Solomon's Dilemma*, 1 *GAMES & ECON. BEHAV.* 222, 223–24 (1989); Motty Perry & Philip J. Reny, *A General Solution to King Solomon's Dilemma*, 26 *GAMES & ECON. BEHAV.* 279, 279–80 (1999); Cheng-Zhong Qin & Chun-Lei Yang, *Make a Guess: A Robust Mechanism for King Solomon's Dilemma*, 39 *ECON. THEORY* 259, 259–60 (2009) (reviewing the economic literature analyzing the Solomonic dilemma).

² T.J.G.O., Ap. Civ. No. XXXXXXXXXXXXX (redacted).

³ *Id.*

⁴ *Id.*

⁵ *Id.*

⁶ Charlie Parker, *Identical Twins Both Ordered to Pay Child Support After Inconclusive Paternity Test*, *N.Y. POST* (Apr. 4, 2019), <https://nypost.com/2019/04/04/identical-twins-both-ordered-to-pay-child-support-after-inconclusive-paternity-test> [<https://perma.cc/P5CN-VAYW>] (reporting that the

one of the defendants was lying and the other telling the truth, but it was impossible to determine who was the girl's father.⁷ The twins thought that, with each one of them having an equal probability of being the true father, the case would be dismissed.⁸ They were wrong.⁹ In a decision that sent shock waves worldwide,¹⁰ the judge ordered that the names of *both* twins appear on the birth certificate and that each fully pays child support.¹¹

The Twin Case is not an exception in our legal landscape. Collective liability regimes—those that impose liability on a group that clearly includes innocent actors—are everywhere.¹² They are used by legislators, commonly employed by regulators, and permeate our judicial system. An example of a group liability regime that impacts millions—many of whom are poor people of color—is President Bill Clinton's "One-Strike-and-You're-Out" Rule (the One Strike Rule).¹³ As Ms. Pearlle Rucker learned, the rule allows public housing

judge found that the twins used each other's names, "either to attract as many women as possible or to hide betrayal in their relationship." (quoting T.J.G.O., Ap. Civ. No. XXXXXXXXXXXX (redacted), Cachoeira Alta, Relator: Des. Filipe Luis Peruca, 21.03.2019).

⁷ T.J.G.O., Ap. Civ. No. XXXXXXXXXXXX (redacted).

⁸ *Id.*

⁹ *Id.*

¹⁰ See, e.g., *Brésil: Des Jumeaux ne Reconnassent pas un Enfant, les Deux Paieront la Pension*, LE PARISIEN (Apr. 2, 2019), <https://www.leparisien.fr/faits-divers/bresil-des-jumeaux-ne-reconnassent-pas-un-enfant-les-deux-paieront-la-pension-02-04-2019-8045139.php> [<https://perma.cc/G2MD-TFWM>]; Ernesto Londoño & Lis Moriconi, *Who's the Daddy? Neither Twin Would Say. But They Both Will Pay.*, N.Y. TIMES (Apr. 3, 2019), <https://www.nytimes.com/2019/04/03/world/americas/brazil-paternity-dna.html> [<https://perma.cc/K3UC-7KRX>]; *Twin Brothers Will Both Have to Pay Child Support After Sex Trick*, N.Z. HERALD (Apr. 5, 2019) <https://www.nzherald.co.nz/world/twin-brothers-will-both-have-to-pay-child-support-after-sex-trick/LWTL5HG567TPFYMF5K2W6B54> [<https://perma.cc/JSL8-6XJZ>].

¹¹ U.S. courts facing a similar dilemma were able to determine the identity of the father using non-genetic "soft" evidence, such as the mothers' testimonies. See, e.g., Ill. Dep't of Pub. Aid *ex rel. Masinelli v. Whitworth*, 652 N.E.2d 458, 460–61 (Ill. App. Ct. 1995); Missouri *ex rel. Dep't of Soc. Servs. v. Miller*, 218 S.W.3d 2, 6–7 (Mo. Ct. App. 2007).

¹² Thomas J. Miceli & Kathleen Segerson, *Punishing the Innocent Along with the Guilty: The Economics of Individual Versus Group Punishment*, 36 J. LEGAL STUD. 81, 81 (2007) ("[T]here are many enforcement contexts in which the identity of the offender is uncertain but he or she is known to be a member of a well-defined group."); Hal R. Varian, *Monitoring Agents with Other Agents*, 146 J. INSTITUTIONAL & THEORETICAL ECON. 153, 153 (1990) ("[I]t is common to find incentive mechanisms that involve agents monitoring each other.")

¹³ See 42 U.S.C. § 1437d(l)(6) (requiring local public housing authorities to include in their leases a provision that allows for the eviction of tenants under such conditions). The rule was codified as part of the Anti-Drug Abuse Act of 1988. Dep't of Hous. & Urb. Dev. v. Rucker, 535 U.S. 125, 127 (2002); OFF. OF PUB. & INDIAN HOUS., U.S. DEP'T OF HOUS. & URB. DEV., NOTICE PIH 96-16 (HA), "ONE STRIKE AND YOU'RE OUT" SCREENING AND EVICTION GUIDELINES FOR PUBLIC HOUSING AUTHORITIES (HAS) (Apr. 12, 1996), <https://www.hud.gov/sites/documents/96-16pihn.doc> [<https://perma.cc/K5FR-8DFE>]; see also HUD Announces "One Strike" Rules for Public Housing Tenants, NAT'L DRUG STRATEGY NETWORK (May 1996), <https://www.ndsn.org/may96/onestrik.html> [<https://perma.cc/F968-PXY7>] (reporting on the new eviction guidelines permitting eviction on the grounds of drug use or other criminal activity).

authorities to evict an entire family if *one* of the household members or their guests engage in any drug activity on or near the premises.¹⁴ In Ms. Rucker's case, the eviction proceedings started after her daughter was caught with cocaine three blocks from her apartment.¹⁵ The fact that the daughter was mentally disabled or that the other occupants—Ms. Rucker, her grandchildren, and great-granddaughter—were innocent was of no consequence.¹⁶ Ms. Rucker challenged the decision. She argued that the rule did not allow the eviction of innocent tenants, and, if it did, that the rule was unfair and unconstitutional.¹⁷ The United States Supreme Court disagreed. In a unanimous decision, it held that a public housing authority can evict an entire group of tenants even if they “did not know, could not foresee, or could not control” the culprit's behavior.¹⁸

Collective liability regimes have been subject to much debate. Although in the past moral and racial considerations dominated the discussion,¹⁹ in recent years, two economic justifications have emerged in support of applying collective liability. The first, exemplified by the motivation behind the One Strike Rule, is deterrence.²⁰ The claim is that the threat of collective liability incentivizes innocent actors to monitor each other and take preventative measures.²¹ The second justification, exemplified by the Twin Case, is that once a harm occurs, liability will encourage innocent actors to share information that would identify the wrongdoer.²²

¹⁴ *Rucker*, 535 U.S. at 127–28. The three other respondents included two elders whose grandchildren were caught smoking marijuana in the complex parking lot and a tenant whose caregiver and two others were caught smoking cocaine. *Id.* On its face, *Rucker* may seem like an individual liability case as Ms. Rucker was the only named tenant on the lease. In effect, however, the rule imposed collective liability by subjecting each household member to the same sanction. See *infra* note 240.

¹⁵ *Rucker*, 535 U.S. at 128.

¹⁶ *Id.* at 131–32.

¹⁷ *Id.* at 129.

¹⁸ *Id.* at 129, 136 (quoting 56 Fed. Reg. 51,560, 51,567 (1991)).

¹⁹ Daryl J. Levinson, *Collective Sanctions*, 56 STAN. L. REV. 345, 347 (2003).

²⁰ See ARIEL PORAT & ALEX STEIN, TORT LIABILITY UNDER UNCERTAINTY 151 (2001) (discussing both *ex post* and *ex ante* rationales for collective liability); Mark F. Grady, *Res Ipsa Loquitur and Compliance Error*, 142 U. PA. L. REV. 887, 913 (1994) (referring to the deterrence rationale as the “most obvious economic interpretation” for the doctrine); Levinson, *supra* note 19, at 349 (arguing that collective liability allows the regulator to delegate deterrence role to a target group); Miceli & Segerson, *supra* note 12, at 87 (“The threat of group punishment in such a setting may therefore be an effective way to encourage monitoring of precaution before the fact (thus promoting deterrence) and revelation of information after the fact (thus saving on detection costs).”); see also discussion *infra* Subpart II.A (revisiting the deterrence rationale for collective liability).

²¹ This was the Supreme Court's rationale in *Rucker*. 535 U.S. at 134, 136 (explaining that the “no fault” eviction “maximizes deterrence and eases enforcement difficulties”).

²² See Levinson, *supra* note 19, at 368 (asserting that a collective liability regime “harness[es] the defendants' private information about each other's behavior”); Saul Levmore, *Gomorrah to Ybarra and More: Overextraction and the Puzzle of Immoderate Group Liability*, 81 VA. L. REV. 1561, 1561–62 (1995) (explaining that incentivizing witnesses to identify the careless actor serves as a modern

The prior literature on collective liability often uses a 1944 California Supreme Court case, *Ybarra v. Spangard*, to epitomize the two rationales.²³ In *Ybarra*, the victim underwent an appendectomy and woke up with an unrelated arm and shoulder injury.²⁴ The accident itself bespoke of negligence, but the victim, who was under full anesthesia, could not identify the injurer, and members of the surgical team refused to volunteer any information.²⁵ To avoid injustice to the plaintiff, the court fashioned a new theory now known as “collective res ipsa loquitur.”²⁶ Under this theory, each member of the medical team is presumed to be “negligent” unless such member provides exculpatory evidence.²⁷ Law and economics scholars laud *Ybarra*.²⁸ They explain that the theory (a) deters wrongdoing by encouraging actors to monitor each other and, (b) if an accident occurs, the doctrine encourages the faultless to provide information pointing to the injurer.²⁹

Drawing on economic theory and empirical evidence, this Article sheds light on the dark side of collective liability. It concludes that, disconcertingly, collective liability regimes may lead to contrary results and perverse outcomes. Upending common belief, the Article reveals that collective liability can incentivize actors to suppress information that would identify the responsible parties. Communal liability can also reduce actors’ incentives to monitor each other and erode their incentives to take care. Moreover, the Article reveals that collective liability allows service providers to engage in forms of defensive and offensive practices that have gone unnoticed.

justification for collective liability); see also discussion *infra* Subpart II.C (examining collective liability’s role in extracting information from innocent witnesses).

²³ See, e.g., Levinson, *supra* note 19, at 379; Levmore, *supra* note 22, at 1562; see also *Ybarra v. Spangard*, 154 P.2d 687, 688 (Cal. 1944).

²⁴ *Ybarra*, 154 P.2d at 688.

²⁵ *Id.* at 689–90.

²⁶ See DAN B. DOBBS, THE LAW OF TORTS § 158, at 381 (2000) (explaining the circumstances under which courts apply collective res ipsa); see, e.g., *Myrlak v. Port Auth.*, 723 A.2d 45, 53 (N.J. 1999) (defining “collective res ipsa loquitur” as the application of “the doctrine of res ipsa loquitur . . . in cases involving multiple defendants and multiple theories of liability such as negligence”); see also discussion *infra* Part I (describing the elements of res ipsa loquitur (res ipsa)).

²⁷ *Ybarra*, 154 P.2d at 691; see *infra* note 43 (discussing the effects of the doctrine).

²⁸ See, e.g., PORAT & STEIN, *supra* note 20, at 155–56 (referring to *Ybarra* as the “Injured Shoulder Case” and lauding its deterrence and information-harnessing features); Levmore, *supra* note 22, at 1561–64 (arguing that collective liability “is surprisingly similar to the famous case of *Ybarra v. Spangard*,” and dubbing it “shrewd, judge-made law”); Miceli & Segerson, *supra* note 12, at 87 (arguing that the rule in *Ybarra* is “an effective way to encourage monitoring of precaution” and “thus promot[e] deterrence”); see also *infra* notes 77–87 and accompanying text.

²⁹ See discussion *infra* Subparts II.A, II.C (reviewing the prior scholarship on collective res ipsa).

The remainder of the Article is organized as follows. Part I begins with examining the cost of holding innocent actors liable (i.e., false positives).³⁰ It does so by tracking the evolution of *res ipsa loquitur* (*res ipsa*) from an individual liability regime to a collective liability scheme. Close scrutiny shows that in each step of the doctrine's development, the concern of holding innocent actors liable has been considerably understated. Part I also reveals that *res ipsa* is a form of stacked (or pyramidal) inferences—inferences drawn from other inferences. Such inferences are so speculative that many jurisdictions prohibit them, and others use them with caution. Yet, although *res ipsa* is a clear form of stacked inferences, it has been accepted by virtually all jurisdictions despite the concern that liability may be imposed on an innocent party. As Part I explains, when *res ipsa* is used as a collective liability mechanism, the risk of false positives nears certainty.

Part II examines the lauded benefits of collective liability doctrines like *res ipsa*. Subpart II.A focuses on the cross-monitoring rationale. It shows that, in some cases, group responsibility can dilute the parties' incentives to monitor and take care and can lead to more accidents. In other cases, collective liability may result in over-investment in monitoring. It can even incentivize actors to use monitoring as a means to ensure no one takes care. Finally, Subpart II.A shows that in some cases, like *Ybarra*, the law makes it impossible for the parties to contract around collective liability regimes even when doing so would be socially desirable.

Subpart II.B shows that collective liability allows service providers, such as physicians, to engage in new forms of defensive and offensive practices.³¹ It reveals, for example, that tort law incentivizes surgical teams to unnecessarily inflate the number of team members and even aggravate the victim's injuries. Physicians may do so to reduce their expected liability or increase their profits at a high cost to their patients. The findings are in line with recent empirical studies.³² Subpart II.B adds to this growing body of scholarship by identifying the mechanisms that allow such perverse behaviors to take place unnoticed and offers means for curbing them.

³⁰ See, e.g., Miceli & Segerson, *supra* note 12, at 82 (“The chief drawback [in collective liability regimes] is the cost associated with wrongful punishment of the innocent.”).

³¹ Defensive practices are defined as unnecessary measures service providers take to shield themselves from liability. An example is when a physician takes excessive care. Service providers engage in offensive practices when they persuade a customer to engage in an activity that is detrimental to the customer but is more profitable to the provider. An example is when a physician persuades a patient to undergo an unnecessary procedure that is not in the patient's interest to increase the physician's compensation. See *infra* notes 112–115 and accompanying text (discussing defensive and offensive practices).

³² See *infra* notes 112–115 and accompanying text.

Subpart II.C addresses the information-extraction rationale often mentioned as the most important justification for holding innocent actors liable.³³ It reveals that this rationale, which courts and scholars alike have adopted, may have also been exaggerated. In many cases, the defendants are not, and cannot be, *ex ante* in a position to provide information that would identify the true injurer or exculpate themselves. Even more disturbing, Subpart II.C shows that tort law can incentivize defendants to lie or collude with others to suppress information that would identify the responsible parties.

Part III discusses the informational role of negligence judgments. Such judgments have a public good feature: they provide vital information to third parties. For example, a judgment against a service provider informs consumers that the defendant's practices fall below the acceptable standard of care. The judgment also alerts other providers that they must follow the newly announced standard or expect a higher cost of operation (in the form of liability). The signals provided by the negligence judgment also allow better providers to distinguish themselves and avoid a "lemon" market.³⁴ Part III further shows that collective liability not only mutes the voice of a negligence verdict, it may also help disseminate false information.

Part IV reconsiders the application of collective liability regimes. Subpart IV.A reveals two insights that may explain why some collective liability regimes were successful, whereas others failed. After providing a new theoretical basis, Subpart IV.B offers two solutions that could minimize strategic behaviors, reduce the detrimental effects of collective liability, and bypass the identification problem altogether.

I. FROM INDIVIDUAL TO COLLECTIVE LIABILITY

One collective liability regime that has been consistently cited with much approval by law and economics enthusiasts is *res ipsa*.³⁵ The doctrine applies when the accident is a mystery, but the circumstances bespeak of negligence.³⁶

³³ See, e.g., Levinson, *supra* note 19, at 379 (noting that "[p]erhaps the most obvious reason for imposing liability on a group is that the outside sanctioner cannot cost-effectively narrow down the identity of the wrongdoer any further" and suggesting that "[c]ollective sanctions can harness a group's superior information to increase the probability that an individual wrongdoer will be sanctioned").

³⁴ See George A. Akerlof, *The Market for "Lemons": Quality Uncertainty and the Market Mechanism*, 84 Q.J. ECON. 488, 499–500 (1970) (discussing the use of institutional signals to decrease uncertainty for the buyer as to the quality of goods and services sold).

³⁵ See *infra* notes 76–87, 164–167 and accompanying text (discussing prior literature in the field of law and economics on *res ipsa*).

³⁶ *Stodder v. Coca-Cola Bottling Plants, Inc.*, 48 A.2d 622, 624 (Me. 1946) (explaining that *res ipsa* applies when "there has been an unexplained accident, and the instrument that caused the injury was under the management or control of the defendant, and in the ordinary course of events the acci-

Examples include an injury from a falling object,³⁷ a tire flying off a moving car's wayward wheel,³⁸ or an exploding bottle.³⁹ In these situations, the plaintiff cannot show who caused the accident and whether it was caused by carelessness, and courts do not require the impossible. Instead, *res ipsa* relieves the plaintiff of the need to substantiate her case with specificity.⁴⁰ The doctrine only requires the plaintiff to prove two general elements: (a) that the type of accident does not usually occur unless someone was careless, and (b) that the defendant had exclusive control over the injuring instrumentality.⁴¹ The first element—the type of accident—gives rise to an inference that the accident was caused by *someone's carelessness*.⁴² The second element—the defendant's exclusive control—gives rise to the inference that the *defendant caused* the harm. From these inferences, a jury may draw a third and final inference: the defendant was the “someone” who carelessly caused the harm.⁴³ Figure 1 below illustrates the inferential chain.

dent would not have happened if the defendant had used due care”); DOBBS, *supra* note 26, § 154, at 370–71 (discussing the general rules of *res ipsa*).

³⁷ *Byrne v. Boadle* (1863) 159 Eng. Rep. 299, 299.

³⁸ *McDougald v. Perry*, 716 So. 2d 783, 784 (Fla. 1998).

³⁹ *Escola v. Coca Cola Bottling Co.*, 150 P.2d 436, 437–38 (Cal. 1944).

⁴⁰ DOBBS, *supra* note 26, § 154, at 370.

⁴¹ *Newell v. Westinghouse Elec. Corp.*, 36 F.3d 576, 579 (7th Cir. 1994). Another oft-mentioned condition is that the accident “must not have been due to any voluntary action or contribution on the part of the plaintiff.” *Mejia v. N.Y. City Transit Auth.*, 737 N.Y.S.2d 350, 353 (App. Div. 2002); DOBBS, *supra* note 26, § 159, at 384.

⁴² DOBBS, *supra* note 26, § 154, at 370–71.

⁴³ The effect of applying *res ipsa* varies across states. See W. PAGE KEETON ET AL., PROSSER AND KEETON ON TORTS § 40, at 257 (5th ed. 1984) (noting that “[t]here is more agreement as to [when *res ipsa* applies] than as to its procedural effect”). In its weakest form, *res ipsa* simply gives rise to a permissible inference: allowing the factfinder to infer that the defendant behaved carelessly. *Id.* § 40, at 257–58. This form of *res ipsa* merely allows the plaintiff to survive a motion for summary judgment or a motion for directed verdict and make her case before the jury. *Id.* In some states, the doctrine gives rise to a presumption affecting the burden of producing evidence. *Id.* In these jurisdictions, when *res ipsa* applies, the factfinder must presume that the defendant behaved carelessly unless the defendant offers evidence to the contrary. *Id.* § 40, at 258–59. If the defendant meets the burden of production, the plaintiff must still persuade the factfinder that the defendant behaved carelessly. *Id.* In other jurisdictions, *res ipsa* shifts the burden of production *and* persuasion. *Id.* In that case, the defendant must convince the factfinder that it is more likely than not that the defendant did not behave carelessly or cause the victim's harm, and if the defendant cannot do so, the defendant must lose. *Id.* Finally, in at least one state, New Jersey, when the doctrine (dubbed the “*Anderson* holding”) applies, the jury must hold at least one defendant liable. *Anderson v. Somberg*, 338 A.2d 1, 4 (N.J. 1975); see *infra* notes 67–73 and accompanying text (discussing the *Anderson v. Somberg* case).

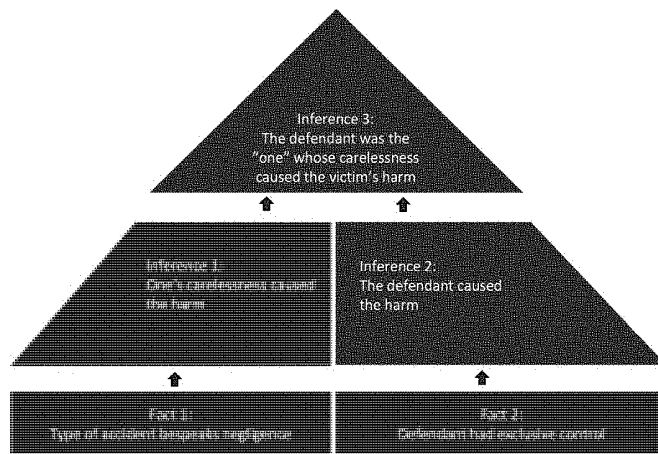


Figure 1: The Res Ipsa Pyramid of Stacked Inferences

Consider cases like *Byrne v. Boadle*,⁴⁴ where a barrel that fell from the defendant's shop hit the plaintiff, and *Pillars v. R.J. Reynolds Tobacco Co.*,⁴⁵ where the plaintiff was poisoned after chewing tobacco containing a decaying human toe. In these cases, the factfinder first inferred that (1) the type of accident did not usually occur unless someone was careless (barrels do not fly through the air, and human toes are not present in tobacco cans); and (2) the defendant (the merchant in *Byrne* and the tobacco manufacturer in *Pillars*) caused the victim's harm because the defendant exclusively controlled the instrumentalities that injured the victim.⁴⁶ From these two inferences, the factfinder drew a third—that the defendant was the “one” who carelessly caused the harm.⁴⁷

As *Byrne*, *Pillars*, and Figure 1 above illustrate, res ipsa is a clear form of stacked inferences—that is, inferences drawn from other inferences. Jurisdic-

⁴⁴ *Byrne v. Boadle* (1863) 159 Eng. Rep. 299, 299.

⁴⁵ *Pillars v. R.J. Reynolds Tobacco Co.*, 78 So. 365, 365–66 (Miss. 1918). *Pillars v. R.J. Reynolds Tobacco Co.* did not rely explicitly on the doctrine of res ipsa, but subsequent courts construed it as a res ipsa case. See, e.g., *Newell*, 36 F.3d at 579 (citing *Pillars* for the proposition that res ipsa “relieves a plaintiff” from proving her case with specificity because some “accidents are so unusual that the party shown to be in exclusive control of the injuring object ought to be held responsible unless that party can offer a reasonable explanation”).

⁴⁶ *Pillars*, 78 So. at 366; *Byrne*, 159 Eng. Rep. at 299–300. The doctrine permits both inferences to be drawn from the same set of circumstances. See *Ripley v. Lanzer*, 215 P.3d 1020, 1030 (Wash. Ct. App. 2009) (explaining that the inference of carelessness and causation against a surgeon can “be established by the same circumstantial evidence . . . [of] leaving a scalpel blade in [the patient]’s knee”).

⁴⁷ *Pillars*, 78 So. at 366; *Byrne*, 159 Eng. Rep. at 299–301.

tions vary in their attitudes toward deriving inferences from inferences.⁴⁸ Many prohibit the practice while others allow it in certain circumstances.⁴⁹ All agree, however, that inference-stacking comes with a serious risk that the final conclusion—the last link in the inferential chain—will be tenuous, unfounded, and devoid of any probative value.⁵⁰ The concern is that “the chain of inferences [will spin] out into the region of barest conjecture.”⁵¹

Courts and scholars often miss or ignore the pyramidal nature of *res ipsa*. The result is a puzzle. Why are pyramided inferences prohibited in most jurisdictions and applied with much caution in others, whereas *res ipsa*—which is itself a form of stacked inferences—has been adopted by virtually all jurisdictions?⁵² The answer may be found in the development of the doctrine. *Res ipsa* did not start as a collective liability theory.⁵³ In its early days, *res ipsa* applied in cases where a *single* agent caused the victim’s harm.⁵⁴ In these cases, the risk that an innocent person would be held liable was low. *Byrne* and *Pillars* are good examples. With only one suspected party—the flour merchant in *Byrne* and the manufacturer in *Pillars*—the inference that it was the defendant’s carelessness that caused the harm could be justified.

Over time, however, courts extended *res ipsa* to cases involving multiple causes and agents, thereby turning it into a collective liability theory. Courts did so by holding that the second element of *res ipsa* (exclusive control) was satisfied, even when it was clear that it was not. The result was a speculative inferential chain that likely imposed liability on faultless parties. In the name of fairness to the victim, courts were willing to impose collective liability even

⁴⁸ See W.E. Shipley, Annotation, *Modern Status of the Rules Against Basing an Inference upon an Inference or a Presumption upon a Presumption*, 5 A.L.R. 3d 105 (1966) (summarizing the approach of different jurisdictions to the rule against stacked inferences).

⁴⁹ *Id.* at 104–05.

⁵⁰ *Id.*

⁵¹ *Hall v. Ferro-Concrete Constr. Co.*, 50 N.E.2d 556, 557 (Ohio Ct. App. 1943).

⁵² The only exception is South Carolina. See *Watson v. Ford Motor Co.*, 699 S.E.2d 169, 179 (S.C. 2010) (“South Carolina does not follow the doctrine of *res ipsa loquitur*.”). The question is even more puzzling given what seems to be a general trend to erode the probative role of inferences. See Andrew S. Pollis, *The Death of Inference*, 55 B.C. L. REV. 435, 437 (2014) (arguing that “the judiciary has systematically undermined the powerful tool of inference drawing”).

⁵³ Other areas of the law experienced the opposite trend: a move from collective to individual liability. See Avner Greif, *Institutions and Impersonal Exchange: From Communal to Individual Responsibility*, 158 J. INSTITUTIONAL & THEORETICAL ECON. 168 (2002) (using game theory to explain the transition from the community responsibility system in late medieval times to individual liability); Francesco Parisi & Giuseppe Dari-Mattiacci, *The Rise and Fall of Communal Liability in Ancient Law*, 24 INT’L REV. L. & ECON. 489, 504 (2004) (explaining that “the rise and fall of communal liability was potentially driven by changes in the structure of society”).

⁵⁴ See, e.g., *Pillars v. R.J. Reynolds Tobacco Co.*, 78 So. 365, 365 (Miss. 1918) (stating that “R. J. Reynolds Tobacco Company was the *sole* manufacturer of the tobacco” (emphasis added)); *Byrne v. Boadle* (1863) 159 Eng. Rep. 299, 299–301 (holding only the Liverpool flour merchant responsible for negligence).

at the cost of sacrificing innocent defendants. *Domany v. Otis* is illustrative.⁵⁵ In *Domany*, the plaintiff was injured when an escalator at a department store stopped abruptly.⁵⁶ The plaintiff sued the store, whose employees operated the escalator, and the service company that maintained and inspected it.⁵⁷ As in the Twin Case, each defendant tried to shift liability to the other by arguing that the other had exclusive control over the escalator.⁵⁸ And, as in the Twin Case, the court rejected that attempt and held both defendants liable.⁵⁹ The *Domany* court explained that the second inference (exclusive control) was satisfied either because both defendants had “joint” control over the instrumentality or because the service company controlled the escalator, and the store had a non-delegable duty.⁶⁰

Whereas some courts, like *Domany*, use fictions such as “joint control” where none exist, others explicitly use *res ipsa* to impose collective liability on innocent actors. *Ybarra v. Spangard*⁶¹ and *Anderson v. Somberg*⁶² are illustrative. Both cases involved a surgery with a team of doctors and nurses where a patient suffered an injury that was unrelated to the medical procedure. In both cases, the plaintiff, being under full anesthesia, could not prove his case against any of the defendants.⁶³ Relying on notions of justice and motivated by a desire to elicit information from the medical team, the *Ybarra* court relaxed the control requirement.⁶⁴ It held that the plaintiff did not need to identify the instrumentality that caused the harm or even prove that the instrumentality was in the exclusive control of the defendants.⁶⁵ Rather, the court held that “all those defendants who had any control over his body or the instrumentalities”—both the innocent actors and the culprit—were presumed to be negligent unless they provided exculpatory evidence.⁶⁶

The *Anderson* holding is even more extreme. In *Anderson*, the tip of a forceps-like instrument broke off during surgery and became lodged in the

⁵⁵ *Domany v. Otis Elevator Co.*, 369 F.2d 604, 613–14 (6th Cir. 1966).

⁵⁶ *Id.* at 607.

⁵⁷ *Id.* at 614.

⁵⁸ *Id.* at 613; *see also supra* notes 1–11 and accompanying text (discussing the facts in the Twin Case).

⁵⁹ *Domany*, 369 F.2d at 613–14; *see also supra* notes 1–11 and accompanying text (examining the outcome in the Twin Case).

⁶⁰ *Domany*, 369 F.2d at 613–14.

⁶¹ *Ybarra v. Spangard*, 154 P.2d 687, 690–91 (Cal. 1944).

⁶² *Anderson v. Somberg*, 338 A.2d 1, 4 (N.J. 1975).

⁶³ *See Ybarra*, 154 P.2d at 688; *Anderson*, 338 A.2d at 3.

⁶⁴ *Ybarra*, 154 P.2d at 690–91.

⁶⁵ *Id.*

⁶⁶ *Id.* at 691 (emphasis added).

plaintiff's spinal canal.⁶⁷ The evidence identified a number of possible causes, including (1) the mishandling of the instrument, (2) other surgeons who used the instrument in previous procedures, (3) the hospital, or (4) a defect that the manufacturer or the distributor caused.⁶⁸ In a plurality opinion, the Supreme Court of New Jersey held that the jury must return a verdict against one or more of the defendants.⁶⁹ Collective *res ipsa*, the court explained, would help identify the injurer and avoid "a miscarriage of justice."⁷⁰

The *Ybarra* and *Anderson* courts used *res ipsa* to create a pool of potentially liable defendants.⁷¹ In both, it was very likely that some members of the medical team did not commit any wrongdoing and may not have been privy to any information that would help them identify the tortfeasor.⁷² But as the remainder of this Article shows, even if actors can point to the culprit and have exculpatory evidence, it is not clear that they would provide it. In some cases, suppressing or even colluding with others to suppress information may be a winning strategy.⁷³ Moreover, collective liability may erode the incentive to

⁶⁷ *Anderson*, 338 A.2d at 3. The *Anderson* holding, although not identified as such, is a form of *res ipsa*. See *Myrlak v. Port Auth.*, 723 A.2d 45, 53 (N.J. 1999) ("The *Anderson*-type cases utilize collective *res ipsa loquitur* in that both the burden of coming forward with evidence and the burden of persuasion are shifted to the defendants."); DOBBS, *supra* note 26, § 249, at 652 n.10.

⁶⁸ See *Anderson*, 338 A.2d at 3–4. The instrument was previously used twenty times by different surgeons, each of whom could have caused the defect. *Id.* at 3.

⁶⁹ *Id.* at 4.

⁷⁰ *Id.*

⁷¹ *Anderson*, however, takes things further for at least three reasons. First, *Anderson* makes it almost impossible for innocent defendants to exculpate themselves. While *Ybarra* merely shifted the burden of production to the defendants, *Anderson* shifted the burden of production and of persuasion. Compare *id.* at 5 (holding that defendants "must prove their nonculpability, or else risk liability for the injuries suffered"), with *Ybarra*, 154 P.2d at 691 (holding "merely . . . that where a plaintiff receives unusual injuries while unconscious and in the course of medical treatment, all those defendants who had any control over his body or the instrumentalities which might have caused the injuries may properly be called upon to meet the inference of negligence by giving an explanation of their conduct"). As a result, a defendant can no longer simply offer an explanatory account but must instead *prove* that she was not negligent. Second, the *Anderson* holding was based on the assumption that the injurer was among the defendants, and accordingly, group liability would result in an identification process that would single out the culprit. See *Anderson*, 338 A.2d at 4. However, this assumption was based on fiction rather than facts. The instrument that broke off was used approximately twenty times by different surgeons, none of whom were named as defendants. *Id.* at 3. As a result, there was a significant risk that innocent people would be held liable for a wrong that they did not commit. *Id.* at 9–10 (Mountain, J., dissenting). Finally, to make things worse, *Anderson* requires the factfinder to hold at least one defendant liable—regardless of the actual evidence against her. See *id.* at 7 (majority opinion) (holding that "[t]he judge may grant any motion bearing in mind that the plaintiff must recover a verdict against at least one defendant" (emphasis added)).

⁷² See *infra* notes 109, 193 and accompanying text.

⁷³ It is thus not surprising that in *Ybarra*, the California Supreme Court's prediction (or hope) that the threat of liability would incentivize the parties to divulge information proved to be wrong. In a second trial, all defendants were held liable after each testified but denied seeing anything that could have caused the harm. *Ybarra v. Spangard*, 208 P.2d 445, 446–47 (Cal. Dist. Ct. App. 1949).

take care and monitor, detrimentally impact activity levels, and result in more accidents.⁷⁴

II. THE CASE AGAINST (CERTAIN) COLLECTIVE LIABILITY REGIMES

This Part presents the case against the widely accepted view that collective liability is justified. It shows that even on theoretical grounds, collective liability schemes should give policy-makers pause. As explained below, even avid proponents admit that collective liability schemes impose liability on innocent parties. What they fail to recognize is that the alleged benefits—monitoring, deterrence, and information extraction—may be much smaller than they assume.

Even worse, using stylized examples this Part shows that collective liability may lead to unintended and antithetical results to those advocated by its proponents. Subpart II.A analyzes the cross-monitoring rationale. It shows that in some cases collective liability can erode the parties' incentives to monitor each other and take care, whereas in other cases it may lead to overinvestment. Subpart II.B revisits the information-forcing rationale and reveals that collective liability can in fact do the opposite: collective liability may incentivize those with private information to suppress it, lie, collude with others to lie, or even encourage wrongdoing. Subpart II.C illustrates how collective liability can foster service providers to engage in defensive and offensive practices.

To be clear, this Article's goal is not to show that all collective liability regimes are flawed. Under certain conditions, collective liability regimes can prove effective. Rather, the goal of the stylized examples is to reveal cases where collective liability raises concerns. Moreover, the examples employed to showcase the detrimental potential of collective liability regimes are realistic. Each is modeled after real cases, parties are assumed to have heterogeneous abilities, juries and judges are not assumed to be omniscient, and asymmetric information is an accepted reality. By contrast, this Part shows that the justifications raised by proponents of collective liability theories often rely on assumptions that may have limited applicability, are inconsistent with legal realities, and fail to appreciate the parties' incentives to behave strategically. By providing a more nuanced description of the effect of collective liability regimes, the Article attempts not only to reinvigorate the debate surrounding their use, but also to lay the groundwork for future empirical work.

⁷⁴ See *infra* Subpart II.A (discussing collective liability's adverse effects on cross-monitoring).

A. Cross-Monitoring

The prior literature lauds collective liability's ability to foster cross-monitoring and views this ability as a major rationale for its application.⁷⁵ After reviewing this literature, this Article re-evaluates the cross-monitoring justification. Section 1 begins by exploring cases where collective liability may result in under-investment in monitoring. Section 2 analyzes the Monitoring Dilemma and the inefficiencies that it may generate. Section 3 investigates another source of concern—cases where the monitoring agent faces high supervision costs. Section 4 explains why, in some cases, despite low transaction costs, the parties cannot contract around the inefficiencies identified in Sections 1–4. Finally, Section 5 reveals that collective liability regimes may incentivize parties to monitor each other to ensure that no one takes care.

The literature on collective liability initially focused on preliterate societies.⁷⁶ In an influential article, Judge Richard Posner explains that these “primitive” societies rely heavily on group responsibility to achieve deterrence.⁷⁷ Thus, when an injurer fails to compensate the victim, the victim's kin group can retaliate against any of the injurer's kinsmen. This, in turn, encourages the injurer's kinsmen to weed out potential injurers, control their conduct, and turn them in.⁷⁸

Others have extolled the deterrence effect of group responsibility regimes in modern societies. Hal Varian, for example, discusses the application of communal liability to microfinancing.⁷⁹ When banks consider whether to provide small loans to low-income entrepreneurs, they must determine the applicants' creditworthiness and monitor their performance. When this is impossi-

⁷⁵ See *infra* notes 76–89 and accompanying text (describing the prior, favorable discussion of collective liability as a tool for effective cross-monitoring).

⁷⁶ See, e.g., Richard A. Posner, *A Theory of Primitive Society, with Special Reference to Law*, 23 J.L. & ECON. 1, 44 (1980) (“The principle of collective responsibility—so abhorrent to modern sensibilities—may be efficient in the conditions of primitive society.”); see also Miceli & Segerson, *supra* note 12, at 84–85; Parisi & Dari-Mattiacci, *supra* note 53, at 491–97.

⁷⁷ Posner, *supra* note 76, at 42–44; cf. Grady, *supra* note 20, at 913 (stating that “[t]he most obvious economic interpretation [for *res ipsa* in cases like *Byrne*] is that the normal proof requirements would yield too many false negatives” and explaining that “[i]f *Byrne v. Boadle*-type plaintiffs had to prove specific negligence, defendants would have too little incentive to use precaution” (citing *Byrne v. Boadle* (1863) 159 Eng. Rep. 299)).

⁷⁸ Posner, *supra* note 76, at 43–44. The collective liability is strict. The injurer's kinsmen are liable even if the accident was unavoidable, perhaps because the cost of determining fault is too high. Another possibility is insurance. Strict liability turns the injurer's kinsmen into insurers in case the injurer is unable or unwilling to compensate the victim. *Id.*

⁷⁹ Varian, *supra* note 12, at 155; see, e.g., Muhammad Yunus, *Grameen Bank*, NOBEL PEACE PRIZE, <https://www.nobelpeaceprize.org/Prize-winners/Prizewinner-documentation/Muhammad-Yunus-Grameen-Bank> [<https://perma.cc/6L8X-XV38>] (summarizing how microcredit works and introducing some background principles of microfinancing).

ble, some banks extend loans but assign the borrowers to groups where each group member serves as a co-guarantor.⁸⁰ The scheme is reminiscent of the modern One Strike Rule.⁸¹ It incentivizes “mutual monitoring” and “mutual insurance.”⁸² Focusing on product liability law, other scholars argue that *res ipsa* deters accidents, reduces the expected liability of evidentiary costs, and fosters the adoption of “new evidentiary technology,” such as tracking devices and body cameras.⁸³

Since the 1990s, the literature has treated collective *res ipsa*, and specifically *Ybarra v. Spangard*, as the canonical example of an effective deterrence regime.⁸⁴ Saul Levmore analyzes the doctrine and refers to it as “shrewd, judge-made law.”⁸⁵ Others have justified group liability in cases like *Ybarra*, where members of the group are (supposedly) in a better position to monitor and control potential wrongdoers.⁸⁶ Thomas Miceli and Kathleen Segerson describe *Ybarra* as “an effective way to encourage monitoring of precaution . . . [and thereby] promot[e] deterrence.”⁸⁷ As the Section below shows, however, the deterrence and cross-monitoring rationales may be overstated, and even faulty, in cases like *Ybarra*.

⁸⁰ This model is still used today. See *Credit Lending Models*, GRAMEEN BANK, www.grameen.com/credit-lending-models [<https://perma.cc/7YNK-DPMQ>]. The “Grameen Model” is described as follows:

Groups of five prospective borrowers are formed; in the first stage, only two of them are eligible for, and receive, a loan. The group is observed for a month to see if the members are conforming to the rules of the bank. Only if the first two borrowers repay the principal plus interest over a period of fifty weeks do other members of the group become eligible themselves for a loan. Because of these restrictions, there is substantial group pressure to keep individual records clear. In this sense, collective responsibility of the group serves as collateral on the loan.

Id. In 2006, the Grameen Bank and its founder, Muhammad Yunus, were awarded the Nobel Peace Prize for their work combatting poverty through micro-financing. *Muhammad Yunus, Grameen Bank*, *supra* note 79.

⁸¹ See *supra* notes 13–22 and accompany text (discussing the application of the One Strike Rule and its legislative intent).

⁸² Varian, *supra* note 12, at 155.

⁸³ Alice Guerra et al., *Presumption of Negligence and the Robustness of Liability Incentives* 5 (Feb. 11, 2019), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3334448 [<https://perma.cc/WYB5-HWFP>] (citing Alice Guerra et al., *Presumption of Negligence and the Efficient Adoption of Evidence Technology* 5 (Working Paper, 2019)).

⁸⁴ 154 P.2d 687, 688 (Cal. 1944).

⁸⁵ Levmore, *supra* note 22, at 1563. Levmore offers an even more “radical rule” that would also deter injurers from engaging in wrongdoing. *Id.* Under Levmore’s proposed “overextraction rule,” the defendants would be required to pay more than the victim’s injury. *Id.* at 1575–78. This, he explains, may deter the wrongdoing in the first place as it will disgorge the benefits from the wrongful behavior. *Id.* at 1579–80.

⁸⁶ PORAT & STEIN, *supra* note 20, at 158–59; Levinson, *supra* note 19, at 348–49, 379.

⁸⁷ Miceli & Segerson, *supra* note 12, at 87.

1. Underinvestment in (Care and) Monitoring

One thing that the prior literature failed to appreciate is that collective liability can lead to under-deterrence. As the number of actors subject to group liability increases, the *individual* incentive of each actor to take care and monitor the other may decrease. To illustrate, consider first an alternative care situation, like Example A1 below, where the injury can be avoided by any one of the parties.

Example A1: A patient may suffer an expected damage of $D=\$30$ (e.g., due to a forgotten sponge, administration of the wrong drug, or infliction of a mysterious burn or trauma).⁸⁸ The surgeon can avoid the harm if she exercises care at a cost of \$20. The harm can also be averted if any member of the medical team monitors (e.g., by counting the sponges inserted and removed, reviewing the patient's medical chart, or testing the equipment and ensuring it is used properly) and alerts the surgeon of any mistake at a cost of \$20.⁸⁹

Consider a medical team consisting of a surgeon and a nurse. Efficiency requires that the surgeon exercises care or that the nurse engages in monitoring ($20 < 30$). This could be achieved easily if the law imposed liability on one of the parties, for example, the surgeon. However, if liability is imposed collectively on multiple parties—as the law in most jurisdictions requires—the result could be that none would take care or monitor. To see why, consider the nurse's options.⁹⁰ If the nurse monitors the surgeon, the nurse can expect to

⁸⁸ For cases applying *res ipsa* in similar situations, see, for example, *Schaffner v. Cumberland Cnty. Hosp. Sys., Inc.*, 336 S.E.2d 116, 117 (N.C. Ct. App. 1985) (a burn inflicted during a surgical procedure by a malfunctioning cauterizing device); *Rosales-Rosario v. Brookdale Univ. Hosp. & Med. Ctr.*, 767 N.Y.S.2d 122, 123 (App. Div. 2003) (a heavily sedated plaintiff “sustained a burn on the inner portion of her knee while hospitalized to give birth”). In *Dalley v. Utah Valley Regional Medical Center*, an unconscious patient suffered a burn on her leg during a C-section. 791 P.2d 193, 195 (Utah 1990). It was clear that one of the team members inflicted the injury, but it was impossible to determine who or what caused the harm. The court applied *res ipsa* against the entire group explaining that its “purpose . . . is to compel those who were awake, aware, and in control of all possible injuring instrumentalities to explain the occurrence.” *Id.* at 199. As Example A1 shows, group liability may have the opposite effect.

⁸⁹ It is very likely that the surgeon's cost of monitoring while performing surgery is substantially higher than that of a nurse. Example A2 below explores such a case.

⁹⁰ The examples in this Section assume that the parties cannot contract around collective liability rules. The assumption may seem unrealistic, improbable, and naïve, especially in the medical context. After all, a surgical team is comprised of a small group of individuals, positioned in close proximity, who must closely work and communicate with each other. On its face, there is no reason to believe that such actors cannot contract with each other. Similarly, the hospital's cost of unilaterally instituting procedures that would assign responsibility to one party is also unlikely to be prohibitive. Still, there are good reasons to believe that bargains may not be easily achieved. First, bargaining over a service (monitoring) can prove a complicated task. Such bargaining may also be infeasible. Healthcare

incur a cost of \$20. By contrast, if the nurse does not engage in monitoring, the nurse can expect one of two outcomes. First, if the surgeon takes care and thus averts the harm, the nurse can expect to pay nothing. If the surgeon fails to take care, both will be collectively liable for the entire harm, and consequently, each can expect to pay \$15 (half the \$30 damage). The result is a dominant strategy. No matter what the surgeon does, the nurse's best strategy is to forgo monitoring. For the same reason, the surgeon would not take care either ($0, 15 < 20$).

Here, collective liability erodes the parties' incentives to the point that taking care and monitoring are not in the parties' best interests. The result is underdeterrence and more accidents. The incentive to take care and cross-monitor decreases even further as the number of parties subject to collective liability increases. For example, with a medical team of one surgeon and four nurses, no one would be interested in taking care or engaging in monitoring even if the cost of doing so is only \$7 ($30/5 < 7$).

2. Overinvestment and the Monitoring Dilemma

In Example A1, collective liability eroded the parties' incentives to avoid the accident and resulted in suboptimal care and monitoring levels. In other cases, collective liability may lead to the opposite result. It may incentivize the actors to overinvest in monitoring. Example A2, which is modeled after *Deuel v. Surgical Clinic*, is illustrative.⁹¹

Example A2: There is a 10% chance the victim will suffer a \$300 damage during a procedure (i.e., the expected harm is $D = \$30$). The surgeon can reduce the chance of an injury to 2% if she takes care at a cost of \$5. The remaining risk of harm (e.g., due to a forgotten sponge) cannot be avoided by the surgeon who must focus on the complex surgical procedure. But it can be completely eliminated if any member of the medical team (e.g., a nurse) monitors the surgeon at a cost of \$1.

Consider a medical team that includes a surgeon and two nurses, Nurse-1 and Nurse-2, and suppose that the parties are subject to collective liability. Efficiency requires that the surgeon takes care. By investing \$5, the surgeon can reduce the expected harm by \$24, from \$30 ($300 \times 10\%$) to \$6 ($300 \times 2\%$). Moni-

providers—physicians, anesthesiologists, and nurses—often work with different parties in different facilities. However, as this Section explains, the main hurdle for contracting around liability is the *law of res ipsa*. See *infra* notes 98–105 and accompanying text.

⁹¹ See *Deuel v. Surgical Clinic, PLLC*, No. M2009-01551-COA-R3-CV, 2010 WL 3237297, at *2 (Tenn. Ct. App. Aug. 16, 2010); *infra* notes 98–105 and accompanying text (describing the facts of *Deuel v. Surgical Clinic, PLLC*).

toring by a nurse is also cost-justified. It can eliminate the residual \$6 expected harm at a cost of \$1.

The parties' actions, however, depend on their private expected costs and payoffs. Game theory predicts that the surgeon will take care⁹² but is unable to predict the nurses' actions. The nurses may over- or under- invest in monitoring. Unlike Example A1, here the problem is not over-dilution. If the nurses fail to monitor the surgeon, the entire medical team—the surgeon and the two nurses—will be held collectively liable. Still, the cost of monitoring, \$1, will be lower than the amount each nurse can expect to pay if neither monitors the surgeon, \$2 (6/3). The problem the nurses face is that of free riding if each trusts the other to take care, or that of mistrust, in which case both may monitor (the Monitoring Dilemma).⁹³

To illustrate the nurses' Monitoring Dilemma, suppose, for now, that each member of the team acts independently.⁹⁴ Consider Nurse-1's options. Nurse-1 is better off not monitoring the surgeon if Nurse-2 monitors the surgeon (in which case Nurse-1 can free-ride on Nurse-2's efforts). However, Nurse-1 is better off monitoring if Nurse-2 does not monitor or cannot be trusted to monitor.⁹⁵ Nurse-2 faces the same dilemma. The dilemma would be easily solved if the parties could agree to assign the task of monitoring to one of them. As explained below, however, tort law does not respect such agreements.⁹⁶ Absent coordination, the result is multiple equilibria. In such a case, without a (pure) strategy, it is impossible to predict what the nurses will do. It could be that neither, one, or both nurses will end up monitoring the surgeon. The first case—where no one monitors—would result in underinvestment in monitoring. The latter—where both nurses monitor—would result in overinvestment in monitoring.

⁹² The surgeon has a dominant strategy to take care. If the surgeon does not take care, the surgeon can expect to either pay \$30 if held solely liable for the harm; or \$10 (30/3) if the entire team is held collectively liable (due to *res ipsa*). By contrast, at a cost of \$5, the surgeon can reduce her expected liability to \$2 (1/3 x 6) if neither nurse engages in monitoring, or to \$0 otherwise. *See discussion infra* Part II.A.4 (explaining that most jurisdictions will hold the surgeon liable for the nurses' failure to monitor).

⁹³ For example, in the case of counting sponges, one nurse cannot be sure that the other nurse is actually counting or that this other nurse is not distracted while counting.

⁹⁴ In the vast majority of jurisdictions, the hospital and the healthcare providers cannot contract around collective liability rules. *See discussion infra* Part II.A.4 (discussing court decisions prohibiting healthcare providers from contracting around collective liability rules).

⁹⁵ If Nurse-2 does not properly monitor the surgeon, the entire medical team—the surgeon and two nurses—will be held liable for the entire \$6 harm. Accordingly, each can expect to pay \$2 (6/3). Thus, if Nurse-2 does not monitor, Nurse-1 is better off monitoring at a cost of \$1 (1 < 2).

⁹⁶ *See infra* Part II.A.4.

3. The Low-Cost Monitor

Another source of inefficiency can occur if the less efficient party engages in monitoring. To illustrate this point, note first that in Example A2, the nurses are equally efficient in monitoring. Each can reduce the residual risk of harm at a monitoring cost of \$1. In reality, it is likely that actors' monitoring costs vary. In that case, when the cost of monitoring is heterogeneous, the social cost associated with the Monitoring Dilemma can increase, and substantially so. For example, suppose that the monitoring costs for Nurse-1 and Nurse-2 are \$1 and \$1.5 respectively. Efficiency requires that the cheapest cost avoider, Nurse-1, engage in monitoring ($1 < 1.5$). However, due to distrust, it could be that Nurse-2 would end up monitoring the surgeon or, even worse, both nurses will. In the latter case, the monitoring cost will reach \$2.5 ($1 + 1.5$), an increase of 150% compared to the socially desirable level of monitoring.

4. (No) Monitoring by Assignment

The concerns discussed above—that cross-monitoring will result in over- or under- investment in care—result from collective liability's dilutive effect. When liability is imposed on many, the incentives to monitor could be overly eroded or result in an excessive level of monitoring. These maladies can be easily cured if the parties could contract around the imposition of collective liability. For example, if the parties could agree to assign to one actor (a) the task of monitoring and (b) liability for inadequate monitoring, the parties and society would be better off.

To illustrate, recall that in Example A1 either party could avoid a \$30 injury at a cost of \$20. Yet, neither will avoid the harm because collective liability promises each a loss of \$15 ($30/2$), which is lower than the cost of taking care or monitoring ($15 < 20$). However, if the parties could, they would enter into an agreement that assigns one of them the task of monitoring and splits the cost. The agreement would avoid the victim's harm ($20 < 30$) and reduce the expected loss of each actor to \$10 ($20/2$). In Example A2, an agreement to assign the monitoring task to one of the nurses would allow the parties to overcome the Monitoring Dilemma, avoid overinvestment, and impose liability on the cheapest cost avoider. Note that the same (anti-dilution) solution can be instituted unilaterally if the hospital's procedures could assign to one of the nurses (a) the monitoring task and (b) any liability for failing to properly monitor. Such procedures would reduce the hospital's expected liability, lower the cost of the medical procedure, and improve the hospital's competitive position.

Parties, however, cannot contract around collective liability rules, and (with a few rare exceptions) hospital procedures cannot delegate liability either. The biggest hurdle to the assignment solution—and one that literature on collective liability has ignored—is not high transaction costs. It is the law it-

self. Many jurisdictions make such assignment impossible.⁹⁷ These jurisdictions do not allow a surgeon to rely on the nurses' sponge count even when hospital procedures specifically require the surgeon to do so.

For example, in *Deuel*, a sponge was left in the patient's body despite a double count by the two nurses employed by the hospital.⁹⁸ At trial, the surgeon, an independent contractor, argued that due to the complicated nature of the surgical task, he had to rely on the nurses' count as was customary.⁹⁹ The nurses admitted as much. They explained that the "[hospital's] procedure required assisting nurses to count . . . sponges placed in and removed from the . . . patient's body" and "that the surgeon does not supervise the nurses' sponge count, and 'has the right to rely upon the nurses to give . . . an accurate count.'"¹⁰⁰ The nurses even conceded that they performed their monitoring task negligently.¹⁰¹ Based on these findings, the trial court held that collective *res ipsa* could not apply and dismissed the case against the surgeon.¹⁰² The Court of Appeals of Tennessee reversed. Siding with the majority of jurisdictions, it held that *res ipsa*'s exclusive control requirement should be broadly interpreted to allow the imposition of liability on many.¹⁰³ As in *Domany v.*

⁹⁷ See, e.g., *Burke v. Wash. Hosp. Ctr.*, 475 F.2d 364, 365 (D.C. Cir. 1973) (noting that the surgeon "attempted to shift responsibility for the injury [a retained sponge] by asserting that the nurse's sponge count was reported (obviously erroneously) as in order" and explaining that "[w]hile this may be enough to support shared liability on the part of the nurse's employer . . . it does not relieve the operating and supervising surgeon of his responsibility"); *Breaux v. Thurston*, 888 So. 2d 1208, 1214 (Ala. 2003) (holding that, despite clear hospital procedures assigning the role of counting sponges and instruments to nurses, such procedures do not "relieve the surgeon of his or her responsibility to remove the sponges in the first place" and explaining that "[t]he nurses' responsibility of counting [the sponges] amounts to only an added *precaution* taken by the defendant to help insure that he had properly performed his duty" (quoting *Powell v. Mullins*, 479 So. 2d 1119, 1126 (Ala. 1985))); *Baumgardner v. Yusuf*, 51 Cal. Rptr. 3d 277, 279–81 (Ct. App. 2006); *Chi Yun Ho v. Frye*, 880 N.E.2d 1192, 1200 (Ind. 2008) (agreeing with prior precedent that "a surgeon may not escape his responsibility to remove sponges used during the surgery simply by delegating responsibility for tracking surgical sponges to attending nurses"); *Coleman v. Rice*, 706 So. 2d 696, 699 (Miss. 1997); *Tutton v. Patterson*, 714 S.W.2d 268, 270 (Tenn. 1986) (explaining that "reliance on a sponge count does not, as a matter of law, relieve a doctor from liability for leaving a sponge in a patient"); *Easterling v. Walton*, 156 S.E.2d 787, 789, 791 (Va. 1967) (applying *res ipsa* against the surgeon despite the plaintiff's sister, a nurse in the hospital, testifying that "it was customary at the hospital for two nurses . . . to keep a count of the lap pads put in and taken out of the wound during an operation"); RESTATEMENT (SECOND) OF TORTS § 328D cmt. g, illus. 9 (AM. L. INST. 1965).

⁹⁸ *Deuel v. Surgical Clinic, PLLC*, No. M2009-01551-COA-R3-CV, 2010 WL 3237297, at *2, *16 (Tenn. Ct. App. Aug. 16, 2010).

⁹⁹ *Id.* at *2.

¹⁰⁰ *Id.* at *3.

¹⁰¹ *Id.* at *8.

¹⁰² *Id.* at *4.

¹⁰³ *Id.* at *12–13; see also *supra* note 97 and accompanying text (reviewing cases that prohibit contracting around and delegating liability).

Otis, the court held that the surgeon's duty was nondelegable.¹⁰⁴ The court explained that, "[w]hile responsibility for sponge counts may be delegated to support staff, liability cannot be."¹⁰⁵ As a result, the surgeon was held liable together with the nurses.

A notable exception to the rule prohibiting contracting around collective liability is *Van Hook v. Anderson*.¹⁰⁶ In *Van Hook*, as in *Deuel*, the hospital adopted written procedures that required two nurses to count the sponges inserted and removed, and to notify the surgeon if their counts did not match.¹⁰⁷ Consistent with the procedures, at the end of the surgery, the nurses notified the surgeon that all sponges were removed. They were wrong. A sponge was left in the patient's body. The question before the court was whether the surgeon was collectively liable with the nurses. The court answered in the negative. Unlike in *Deuel*, the *Van Hook* court gave full power to the hospital's procedure and held that the surgeon could not be held liable when the responsible nurses failed to count the sponges.¹⁰⁸

Van Hook allows a hospital (and the parties) to opt out of the collective liability regime and impose liability on the responsible party—the ones assigned with the task of monitoring. *Van Hook*, however, is a rarity in the legal landscape. The majority of jurisdictions do not allow actors to contract around collective liability rules.¹⁰⁹ Instead, they require innocent actors to subsidize the culprit and the latter to pay only a fraction of the harm caused. Courts do so in the name of fairness and deterrence.¹¹⁰ However, the result may be inefficient levels of monitoring and care as well as more accidents.

¹⁰⁴ *Deuel*, 2010 WL 3237297, at *16; see *Domany v. Otis Elevator Co.*, 369 F.2d 604 (6th Cir. 1966).

¹⁰⁵ *Id.* (quoting *Coleman v. Rice*, 706 So. 2d 696, 699 (Miss. 1997)).

¹⁰⁶ *Van Hook v. Anderson*, 824 P.2d 509, 513 (Wash. Ct. App. 1992).

¹⁰⁷ *Id.* at 510.

¹⁰⁸ *Id.* at 513. The court held "that a doctor in charge of an operation is in compliance with the medical standard of care if he or she, in the process of closing an incision, relies on a positive assertion by the nurses that the two counts match." *Id.* The court also declined to apply the captain-of-the-ship theory—another collective liability theory. *Id.* at 515. It explained that the nurses acted according to a policy established by their employer, the hospital, that the surgeon had no "reason to doubt the information that [the nurses] gave him," nor control over the nurses. *Id.*

¹⁰⁹ See, e.g., *supra* notes 55–60 and accompanying text (discussing *Domany v. Otis Elevator Co.*, 369 F.2d 604 (6th Cir. 1966), an opinion that illustrates this approach).

¹¹⁰ RESTATEMENT (THIRD) OF TORTS § 17 cmt. f (AM. L. INST. 2010); DOBBS, *supra* note 26, § 158, at 382, § 249, at 651 (noting that "[i]t is sometimes suggested that by holding all [healthcare providers] liable, those with knowledge would be forced to reveal it" and explaining that "[h]olding all the defendants hostage would itself be a justified response if evidence showed that all of them had knowledge of the facts," but also noting that in *Ybarra* this "was not the case and it is inherently improbable that everyone in an operating room knows exactly what everyone else is doing every second of the time; at least one person's eyes should be on the scalpel"); KEETON ET AL., *supra* note 43, § 39, at 253 (explaining that in cases like *Ybarra* "there is obviously a deliberate policy . . . which requires the defendants to explain or pay, and goes beyond any reasonable inference from the facts; and one

5. Monitoring to Not Take Care

Collective liability can also incentivize the parties to use monitoring as a means to ensure that no one takes care. This can happen, for example, in a case like *Ybarra*, where each actor can be a sufficient cause of the harm, as illustrated in Example A3 below.

Example A3: A patient can incur an expected damage, $D=\$70$ (e.g., due to trauma) unless each member treats the patient with care at a cost of \$20 (e.g., the cost of carefully repositioning the patient's body during the procedure). Each member can monitor the others at a cost of \$1. Absent cross-monitoring, if the victim is injured, it would be impossible to identify the injurer.

Consider first a case where monitoring can incentivize the parties to monitor each other and take care. To see that, consider a team with two actors. In such a case taking care is cost justified. It would result in a total investment of \$40 (20×2) to avert a \$70 harm. But if the parties are subject to collective liability, it is not clear that they will take care. To see why, note first that if both actors take care, each can expect to pay only \$20 (the harm is avoided). If neither takes care, both will be liable, and each can expect to pay for half of the harm, \$35 ($70/2$). Finally, if only one of them takes care, that actor can expect to lose \$55—the \$20 investment in care and an expected liability of \$35 (both must take care to avoid the harm). Consider now Actor-1's choices. Actor-1 is better off taking care if Actor-2 does the same ($20 < 70/2$), but Actor-1 is better off forgoing taking care if Actor-2 does not take care ($35 < 55$). The analysis of Actor-2's options is identical. The result is multiple equilibria, and as a result, neither party may elect to take care—an inefficient result.

Here, independent monitoring by the parties can substitute an agreement to take care (or ensure that it is adhered to if the parties can enter into an agreement). Each party can monitor the other's actions and take care so long as the other does the same. The result is that with a total investment of \$42 ($20+20+1+1$), the parties can avoid a \$70 harm.

But monitoring can also help the parties ensure that no one takes care. Consider, for example, a case with a team of five healthcare providers. Here, taking care is inefficient. It would require a total investment of \$100 (20×5) to avoid a \$70 harm. The parties would be better off if they forgo taking care. Even if they would be subject to liability, each can expect to pay only \$14 ($70/5$). An agreement to forgo taking care may be unethical, illegal, and unen-

may surmise that this is not unconnected with the refusal of the medical profession to testify against one another"); see, e.g., *Ybarra v. Spangard*, 154 P.2d 687, 690–91 (Cal. 1944).

forceable,¹¹¹ but the parties do not need to enter into such an agreement. Each can simply observe (that is, monitor) the others and avoid taking care so long as the others do the same. If successful, each can expect to pay \$15 (14+1), which is lower than the \$20 cost of care.

B. Defensive and Offensive Practices

The prior literature has demonstrated that, in the context of *individual* liability, parties can act strategically to shield themselves from liability, increase their benefits, or both. For example, previous empirical studies have shown that a physician can reduce her expected liability by taking excessive care in the form of prescribing unnecessary tests and drugs.¹¹² Such practices are known as “defensive medicine.”¹¹³

A service provider can also engage in offensive practices—practices that are aimed to increase the service provider’s benefits.¹¹⁴ For example, offensive medicine occurs when a physician induces the patient to choose a treatment that is not in the patient’s interest, but is more advantageous to the physi-

¹¹¹ Economic efficiency requires that the parties be exempted from liability (100>70). The parties may nevertheless be held liable because courts often engage in an individual cost-benefit analysis. They compare the cost of precaution of each party, \$20, to the avoidable harm, \$70. See J. Shahar Dillbary, *Contracting for Torts*, 52 WAKE FOREST L. REV. 1057, 1057–62 (2017) (discussing how tort law may enforce agreements that contract law would find to be against public policy due to their tortious nature).

¹¹² See, e.g., Daniel P. Kessler & Mark McClellan, *Do Doctors Practice Defensive Medicine?* 111 Q.J. ECON. 353, 388 (1996); Sabrina Safrin, *The C-Section Epidemic: What’s Tort Reform Got to Do with It?*, 2018 U. ILL. L. REV. 747, 762; Press Release, Am. Coll. Emergency Physicians, EMTALA Services Medical Liability Reform (2013), <https://www.acep.org/globalassets/uploads/uploaded-files/acep/advocacy/federal-issues/medical-malpractice-issue-paper.pdf> [<https://perma.cc/ERY9-FDG2>] (“More than half of emergency physicians responding to a 2011 survey said they order the number of tests they do because they feared being sued.”). Defensive medicine can also take the form of an inaction—avoiding beneficial treatments that may involve a higher risk of litigation or liability. See, e.g., J. Shahar Dillbary et al., *Why Exempting Negligent Doctors May Reduce Suicide: An Empirical Analysis*, 93 IND. L.J. 457, 490–93 (2018) (discussing liability’s overdeterrence effect).

¹¹³ Ronen Avraham & Max Schanzenbach, *The Impact of Tort Reform on Intensity of Treatment: Evidence from Heart Patients*, 39 J. HEALTH ECON. 273, 274 (2015).

¹¹⁴ Both defensive and offensive medicine are in tension with the Hippocratic Oath, which requires a physician to “prescribe regimen for the good of [their] patients . . . and never do harm to anyone.” See M. Sonal Sekhar & N. Vyas, *Defensive Medicine: A Bane to Healthcare*, 3 ANNALS MED. & HEALTH SCIS. RSCH. 295, 295 (2013) (quoting *The Oath of Hippocrates of Kos, 5th Century BC, Physician Oaths*, ASS’N AM. PHYSICIANS & SURGEONS, INC., <https://www.aapsonline.org/ethics/oaths.htm> [<https://perma.cc/35KT-6ZBL>]). For a more modern version, see William C. Shiel, *Medical Definition of Hippocratic Oath*, MEDICINENET, https://www.medicinenet.com/hippocratic_oath/definition.htm [<https://perma.cc/7S8Z-FY98>] (requiring doctors to “apply, for the benefit of the sick, all measures which are required, avoiding those twin traps of overtreatment and therapeutic nihilism”).

cian.¹¹⁵ A common example is choosing an invasive procedure (e.g., a Cesarean section (C-section)) over non-invasive, more effective, and less risky treatment (e.g., a vaginal delivery) because the former is more profitable for the physician.¹¹⁶

Unlike practices that stem from the threat of individual liability, the strategic behavior that may result from collective liability remains undertheorized. This Subpart takes the first step in remedying this gap in the literature. It reveals that the threat of collective liability can result in new forms of defensive and offensive practices. Section 1 focuses on providers' ex-ante incentives. It shows that actors can reduce their liability and increase their profits by inflating the number of actors that may be subject to group liability. Focusing on ex-post considerations, Section 2 shows that collective liability can increase actors' willingness to exacerbate the victim's injury. Collective liability may even encourage innocent actors—those who were not responsible for the victim's initial injury—to commit wrongs. Building on these insights, Section 2 turns to analyze the role such perverse incentives may play in civil rights violations cases. Section 3 illustrates how collective liability may encourage service providers, such as physicians, to induce patients to choose unnecessary, more dangerous, less effective, and socially undesirable procedures in ways not heretofore known.

1. Increasing the Group Size

In some cases, actors subject to a group responsibility regime may be able to reduce their expected liability by unnecessarily inflating the group size. To illustrate, consider a group with n actors (e.g., healthcare professionals) that is engaging in an activity (e.g., surgery) that may cause the victim an expected harm, D . Knowing that collective liability will apply if one member of the group injures the victim, the surgeon may ask additional healthcare providers to join the procedure. With additional h nurses, the surgeon's expected liability will drop from D/n to $D/(n+h)$. For example, with an expected harm of \$100, adding one additional member to a four-member team would decrease the individual expected liability by 20%, from \$25 ($100/4$) to \$20 ($100/5$). The surgeon would thus be inclined to inflate the team size, even if adding more physicians and nurses is unnecessary.

¹¹⁵ Avraham & Schanzenbach, *supra* note 113, at 275 (“Induced demand or offensive medicine occurs when healthcare providers pursue treatments that may not be best for the patient but offer large reimbursements.”); see also *infra* notes 147–153 and accompanying text (discussing physician-induced demand).

¹¹⁶ See *infra* notes 148–152 and accompanying text (examining physician-induced demand in the context of obstetric medicine).

The example assumes that the damage is capped—that as more actors join the activity, the expected harm remains the same. The assumption may seem unrealistic at first. With more actors engaging in the activity, the probability of an injury, its magnitude, or both—and accordingly, the expected harm, D —may increase. As explained below, however, this assumption, although unnecessary for the model, is an important feature of tort law.¹¹⁷

2. Aggravating the Victim's Injury

a. *The Law of Damages: Killing v. Injuring*

Another way actors subject to group liability can reduce their expected liability is by aggravating the injury to the victim. One reason is that damages—because of the way they are calculated—can be much higher for a severely injured person than for a dead victim. A number of reasons account for the wedge between damages awarded in the case of an injury and those awarded in the case of a death. To begin with, a common measure of one's life is the value of one's future earnings.¹¹⁸ This amount varies with the deceased's age and skill, but it is quite limited—less than \$1 million in half of all cases.¹¹⁹ By contrast, damages for an injured person, often due to required medical treatments and care during the victim's lifetime, can be much higher.¹²⁰

¹¹⁷ Under certain circumstances, inflating the team size may be profitable even if doing so would increase the expected harm to the victim. For example, the surgeon would benefit from adding a fifth member even if the latter increases the expected harm to \$110. As part of a team of five healthcare providers, the surgeon can expect to pay only \$22 ($110/5$), which is less than the \$25 ($100/4$) the surgeon can expect to pay as part of a group of four. See *infra* notes 157–159 and accompanying text. Although unnecessary, the assumption is realistic given, among other things, that in many states, damages in survival and wrongful death actions are capped irrespective of the number of defendants. See *infra* Part II.B.2.b and Example B2.

¹¹⁸ Eric A. Posner & Cass R. Sunstein, *Dollars and Death*, 72 U. CHI. L. REV. 537, 539, 543–44 (2005) (explaining that in the case of a death, “[t]ort law makes damages a function of lost income” based on the unique attributes of the deceased and that, as a result, tort law treats adults differently than children, and also treats individuals who are working differently than those who are retired).

¹¹⁹ *Id.* at 548 (describing data that suggests that “when outliers are excluded, the tort system generally values lost lives at well under \$3 million, and about half the time under \$1 million” but then hypothesizing that “real amounts are somewhat lower”).

¹²⁰ DOBBS, *supra* note 26, § 377, at 1047–53 (explaining that “[i]n personal injury cases the normal remedy is compensatory damages, awarded in a lump-sum, for all losses that have proximately resulted from the tort and all losses that will so result in the future,” including loss of earnings, medical expenses (such as diagnostics tests, drugs, and medical devices), pain and suffering, and emotional distress); Randall R. Bovbjerg et al., *Valuing Life and Limb in Tort: Scheduling “Pain and Suffering,”* 83 NW. U. L. REV. 908, 918 n.61 (1989) (“Modern medical care, however, has created the truly catastrophic event—survival from injury in debilitated condition and in need of continuing, expensive medical attention. These injuries claim the highest recoveries.”); Henry S. Farber & Michelle J. White, *Medical Malpractice: An Empirical Examination of the Litigation Process*, 22 RAND J. ECON. 199, 205 (1991) (“The severity measure is a key determinant of the damage award if the defendant is found negligent at trial. Patients who suffer permanent total disability have higher future medical care

Another reason for the wedge is that, compared to an injured victim, in the case of a death, certain types of damages are not awarded, and others are capped. For example, survival actions (for injuries to the deceased) and wrongful death actions (for loss of support to the deceased's family) provide a much lower compensation compared to what a living victim can receive.¹²¹ In addition, most states do not allow the plaintiff in a wrongful death action to recover punitive damages—damages that would be awarded to living victims.¹²² Some of these states also exclude recovery of the deceased's (but not a living victim's) pain and suffering.¹²³ Others, like Texas, cap recovery in specific types of cases, such as those involving the death of a patient in a medical malpractice case.¹²⁴

costs and more lost income than patients who suffer permanent partial disability, so the hospital's expected liability is higher. For patients who die, future medical care costs are zero, so the hospital's expected liability is lower in cases involving death than in cases involving permanent total disability.”); Walter Simmons & Rosemarie Emanuele, *Male and Female Recoveries in Medical Cases*, 62 REV. SOC. ECON. 83, 87 (2004) (analyzing data of closed medical malpractice claims from the Michigan Bureau of Health Services between 1986 and 1991 and finding that “[p]laintiffs who suffered permanent major and grave injuries were awarded larger damages than death cases, because of the higher opportunity cost of lost wages and future medical costs”); Neil Vidmar et al., *Jury Awards for Medical Malpractice and Post-verdict Adjustments of Those Awards*, 48 DEPAUL L. REV. 265, 284–85, 287–90 (1998) (finding, for example, that “the median award” in sampled New York medical malpractice cases “was \$9,644,460 [for grave injuries], but the median award when death occurred was \$1,076,441, almost nine times smaller” and illustrating several New York medical malpractice cases where jury awards to injured-but-surviving plaintiff-patients totaled in the tens of millions of dollars); see also Juliette Gillespie, *Top 20 Personal Injury Awards*, LAW.COM (Sept. 28, 2020), <https://www.law.com/njlawjournal/2020/09/28/personal-injury-top-20/?sreturn=20201120222406> [<https://perma.cc/8Z7X-X7UC>] (reporting that six (or 30%) of the top twenty personal injury (verdicts and settlements) granted in New Jersey between August 20, 2019 and September 20, 2020 were medical malpractice cases involving severe injuries with awards ranging from \$5 million to \$12.5 million and an average of \$7.83 million).

¹²¹ See 1 PUNITIVE DAMAGES: LAW & PRACTICE 2D § 5:10, at 362 (2020 ed.) (explaining that the wrongful death actions by and large do not allow for recovery of punitive damages); DOBBS, *supra* note 26, §§ 294, 296, at 803–05 (discussing wrongful death and survival actions and explaining that “[d]amages in . . . survival action[s] are often quite limited in amount”). Survival actions allow the decedent's estate to recover damages the *victim* incurred, such as pain and suffering and medical bills incurred while the victim was still alive and income lost between the injury and death. Wrongful death actions are intended to compensate *family members* for the injury they suffered as a result of the victim's death. They include compensation for their grief, loss of advice and parental care, and loss of income they would have received from the deceased. Both actions were not recognized in common law and are the result of statutory amendments. DOBBS, *supra* note 26, § 294, at 803–05.

¹²² RESTATEMENT (SECOND) OF TORTS § 925 cmt. c (AM. L. INST. 1979); DOBBS, *supra* note 26, § 294, at 803–04. Alabama is the only state that restricts recovery in wrongful death actions to punitive damages only. See, e.g., S. & N. Ala. R.R. Co. v. Sullivan, 59 Ala. 272, 278–79 (1877) (interpreting Alabama's wrongful death statute to permit a decedent's estate to recover punitive damages).

¹²³ For limitation on damages in survival actions, see, for example, ARIZ. REV. STAT. ANN. § 14-3110 (2020); WASH. REV. CODE ANN. § 4.20.046 (2020).

¹²⁴ TEX. CIV. PRAC. & REM. CODE ANN. § 74.301 (West 2019) (limiting liability against physicians and healthcare providers for non-economic damages to \$250,000 per claimant); *id.* § 74.303

The result is that “[p]laintiffs suing on behalf of a [deceased] victim who ha[d] no future income, no dependents, and no spouse, and who die[d] without feeling pain, should ordinarily receive zero damages or damages sufficient only to cover funeral expenses.”¹²⁵ In these states, for the injurers, a dead victim may “cost” much less than a living victim. The result is an incentive to kill those who are severely injured.¹²⁶

b. Collective Liability Regimes & Perverse Incentives to Kill

The limit on damages in cases involving a death provides a perverse incentive to kill in all cases, but its impact is more prominent in collective liability cases. To see the effect of the law of damages on parties’ actions, consider a case like *Ybarra*, but assume that during the operation, the parties realize that the victim is severely injured, likely due to malpractice that would give rise to *res ipsa*. In such a case, if the parties believe that they will be subject to collective liability, each of the n actors will expect to pay $1/n$ of the damage, D_1 , or D_1/n . Suppose also that if the victim dies, the parties will be held liable for a reduced amount of damages, D_2 ($D_2 < D_1$). Unless the parties are able to exculpate themselves, each would be better off if the victim dies. In such a case, their collective and individual expected liability would be reduced from D_1/n to D_2/n . For example, in the case of a team with $n=4$ members where compensation for an injured victim is expected to be $D_1=\$12$ million, but for a dead

(capping healthcare providers’ total liability—including economic and non-economic damages (but excluding medical expenses)—to \$500,000 per claimant). Both caps apply in wrongful death and survival action claims. *See, e.g., Rio Grande Reg’l Hosp., Inc. v. Villarreal*, 329 S.W.3d 594, 627–28 (Tex. App. 2010) (observing that, in Texas, “any damage award will be limited by applying the [\$250,000] non-economic damage cap in section 74.301, and then will further be limited by applying the total [\$500,000] cap of section 74.303” (quoting Jeff Waters, *Better to Kill Than To Maim: The Current State of Medical Malpractice Wrongful Death Cases in Texas*, 60 BAYLOR L. REV. 749, 760 (2008))), *rev. granted by Tex. App.—Corpus Christi* (Dec. 16, 2011), *judgment vacated, case dismissed by agreement* (Aug. 20, 2013).

¹²⁵ Posner & Sunstein, *supra* note 118, at 544.

¹²⁶ *See, e.g., Martin v. Ohio Cnty. Hosp. Corp.*, 295 S.W.3d 104, 109–10 (Ky. 2009). The issue in *Martin v. Ohio County Hospital Corp.* was whether a surviving spouse could be compensated for a loss of consortium that occurred after the death of her injured spouse. *Id.* at 107. In taking an expansive view, the Supreme Court of Kentucky explained the importance of fully compensating victims:

[A]llowing a loss of consortium claim only if the victim survives would appear to give perverse incentives to potential tortfeasors. *Such a rule could create incentives to kill victims instead of leaving them disabled, as only by instantly killing the victim can the tortfeasor be guaranteed to owe no loss of consortium damages.*

Id. at 109–10 (emphasis added); *see also Heath v. City of Hialeah*, 560 F. Supp. 840, 843–44 (S.D. Fla. 1983) (holding that under Florida law, “it would be far more profitable to kill the plaintiff than to scratch him” and finding such a result inconsistent with 42 U.S.C. § 1983, the purpose of which is “to protect the people from unconstitutional action under color of state law”).

victim, $D_2 = \$1$ million, killing the victim would reduce the expected liability for each actor from \$3 million ($12M/4$) to \$250,000 ($1M/4$).¹²⁷

The incentive to kill is exacerbated if some members of the group are worried that others could exculpate themselves. In the above example, if three members believe that the fourth will be exempted from liability, the expected liability of each will increase from \$3 million ($12M/4$) to \$4 million ($12M/3$), and so will their inclination to aggravate the victim's injuries.

Collective liability thus puts innocent actors in a tough (if not impossible) position. Those actors must choose between (a) *being wronged* in the sense that they must pay for a harm they did not inflict or (b) *committing a wrong*—killing a patient—to reduce their own liability. In other words, a group accountability regime may encourage innocent actors to engage in wrongdoing.

Moreover, in collective liability cases, the risk that a maimed victim will be killed is higher and increases with the number of actors in the group. The victim's life will be spared only if *all* actors—each of whom has the incentive to kill the victim—avoid doing so. The incentive to kill may also result in collusion to kill and the suppression of information ex post (the subject of Subpart C below).

Collective liability regimes exacerbate the concern that actors may succumb to the (law's) pressure and kill the victim for another reason. Some jurisdictions mandate a damage cap in wrongful death and survival actions that *cannot* be adjusted upward with the number of defendants.¹²⁸ The effect of such caps is that killing a patient is not only cheaper compared to injuring that patient, but that individual liability is also diluted when collective responsibility is imposed. Texas law, for example, provides such a perverse incentive. In

¹²⁷ For anecdotal evidence regarding willingness to kill, see Michael Daly, *FBI: Texas Hospice Boss Texted Nurses Execution Orders for Patients*, DAILY BEAST (Apr. 13, 2017), <https://www.the-dailybeast.com/fbi-texas-hospice-boss-texted-nurses-execution-orders-for-patients> [<https://perma.cc/N3UR-LQM5>] (reporting that according to the FBI, “[t]he founder and CEO of a hospice services company instructed nurses to administer fatal overdoses to patients” in order to increase profits); Steve Doughty, *Top Doctor's Chilling Claim: The NHS Kills Off 130,000 Elderly Patients Every Year*, DAILY MAIL (Oct. 26, 2012), <https://www.dailymail.co.uk/news/article-2161869/Top-doctors-chilling-claim-The-NHS-kills-130-000-elderly-patients-year.html> [<https://web.archive.org/web/20201017125706/https://www.dailymail.co.uk/news/article-2161869/Top-doctors-chilling-claim-The-NHS-kills-130-000-elderly-patients-year.html>] (arguing that “NHS doctors are prematurely ending the lives of thousands of elderly hospital patients”); see also *infra* notes 139–144 and accompanying text (discussing how a federal court considered California's wrongful death statute to have created an incentive to kill because the state law limited recovery to losses sustained prior to death and excluded noneconomic damages).

¹²⁸ See, e.g., MO. REV. STAT. § 538.210(2) (2020) (capping recovery for noneconomic damages against healthcare providers in wrongful death and survival actions “irrespective of the number of defendants”); *Sanders v. Ahmed*, 364 S.W.3d 195, 202, 214 (Mo. 2012) (en banc) (affirming the trial court's decision which reduced a \$9.2 million jury verdict in a wrongful death action to less than \$2 million due to Missouri's cap on noneconomic damages).

the case of a patient's death, liability for non-economic harm is limited to \$250,000 and liability for all damages to \$500,000.¹²⁹ Importantly, these caps remain constant “regardless of the number of . . . health care providers.”¹³⁰ By contrast, damages for an injured person are not capped at all.¹³¹ The result is a strong incentive to kill, rather than merely to maim, the injured patient.¹³²

c. Collective Liability and Civil Rights Violations

The last insight carries an important message to other areas of the law, chief among them are suits filed under 42 U.S.C. § 1983.¹³³ Courts adjudicating these suits have been wary about the perverse effect of tort law's damage calculation. However, they have failed to recognize that in cases involving multiple actors, the incentive to kill an injured victim is substantially higher than in those involving a single agent.¹³⁴ Moreover, in such cases, even fully compensating the victim would not thwart the pressure to kill. This subsection explains how collective liability may contribute to constitutional rights violations and offers a new way to remedy its adverse effects.

Derived from the Ku Klux Klan Act of 1871, § 1983 creates a cause of action for constitutional rights violations.¹³⁵ One of its primary goals is to “deter racial killing” by officials.¹³⁶ While federal law creates a cause of action, the actual amount recoverable in a § 1983 suit is dependent on state law and,

¹²⁹ TEX. CIV. PRAC. & REM. CODE ANN. §§ 74.301, 74.303(a) (West 2019). The \$500,000 cap applies to economic, noneconomic, and exemplary damages. Texas law defines economic damages as compensatory damages and noneconomic damages as non-pecuniary damages, including “physical pain and suffering, mental or emotional pain or anguish, loss of consortium . . . loss of companionship, loss of enjoyment of life [and] injury to reputation.” *Id.* §§ 41.001(4), (12); 74.001(6).

¹³⁰ *Id.* § 74.303(a) (emphasis added).

¹³¹ *Id.* § 74.303(c).

¹³² To illustrate the effect of Texas law on healthcare incentives, consider again the group of four healthcare providers who become aware of the victim's injury during a surgical procedure. Recall that an injured victim would be entitled to $D_1 = \$10$ million but a dead victim to only $D_2 = \$2$ million. Suppose also that in case of a death, of the \$2 million award, \$1.7 million are for non-economic damages (e.g., pain and suffering). Under Texas law, liability would be first reduced to \$550,000—\$250,000 being the maximum allowance for noneconomic harm and the additional \$300,000 ($2M - 1.7M$). Due to the total cap requirement, this liability would be further limited to \$500,000. This means that killing the patient would reduce each actor's expected liability from \$2.5 million ($10M/4$) to \$125,000 ($500K/4$). Individual liability can be further reduced if the size of the team is inflated (e.g., with $n=5$, each can expect to pay only \$100,000). See *Rio Grande Reg'l Hosp., Inc. v. Villarreal*, 329 S.W.3d 594, 627 (Tex. Ct. App. 2010) (holding that in wrongful death and survival actions, both the noneconomic and total recovery caps apply), *rev. granted by Tex. App.—Corpus Christi* (Dec. 16, 2011), *judgment vacated, case dismissed by agreement* (Aug. 20, 2013).

¹³³ *Cf.* 42 U.S.C. § 1983.

¹³⁴ See, e.g., *Carey v. Phipps*, 435 U.S. 247, 258–59 (1978).

¹³⁵ 42 U.S.C. § 1983.

¹³⁶ *Bell v. City of Milwaukee*, 746 F.2d 1205, 1239 (7th Cir. 1984).

specifically, the state's survival and wrongful death statutes.¹³⁷ Federal law, however, allows courts in § 1983 suits to override state law if it is inconsistent with the Constitution.¹³⁸ And this is exactly what courts do when they have expressed concern that state survival laws incentivize actors to kill.¹³⁹

An example is *Guyton v. Phillips*.¹⁴⁰ *Guyton* involved two undercover police officers who shot and killed an unarmed fourteen-year-old black boy. The incident began when the two officers suspected that the victim and another black man were either “dirty or going to rip [a nearby] car off.”¹⁴¹ At one point, a car chase ensued. It ended when the plainclothes officers rammed their unmarked vehicle into the victim's car. One of the officers shot and injured the victim, who then attempted to escape on foot. After a short pursuit, the victim was captured, but before he was handcuffed, he was shot again, this time in his back. The gunshots were fatal. Although the police officers' testimonies were inconsistent, it was clear that they did not see any weapon in the victim's possession, did not observe any threatening gestures, and did not attempt to stop the victim by way of warning.

The court held that the police officers' use of deadly force was excessive and unreasonable. It then held that California's survival statute was inconsistent with the goals of § 1983.¹⁴² The California statute limited damages to losses that the decedent sustained prior to his death and excluded non-economic damages.¹⁴³ It therefore did not allow recovery of pre-death pain and suffering and post-death funeral fees. These constraints, the court reasoned, would result in a perverse incentive to kill:

The clear purpose of § 1983 is . . . [h]ardly served when the police officer who acts without justification suffers a harsher penalty for

¹³⁷ 42 U.S.C. § 1988; *Chaudhry v. City of Los Angeles*, 751 F.3d 1096, 1103 (9th Cir. 2014).

¹³⁸ 42 U.S.C. § 1988.

¹³⁹ See *infra* notes 140–144 and accompanying text (describing a court's uneasiness with laws incentivizing actors to kill); see also *Chaudhry*, 751 F.3d at 1104 (holding that California's “prohibition against pre-death pain and suffering awards for a decedent's estate has the perverse effect of making it more economically advantageous for a defendant to kill rather than injure his victim”); *Bell*, 746 F.2d at 1239 (declining to follow Wisconsin law in a case involving the shooting of a black driver and a cover-up attempt by his colleague, explaining that if Wisconsin law—which would preclude recovery for the decedent's loss of life—applied, “deterrence would be further subverted since it would be more advantageous to the unlawful actor to kill rather than injure”); *Heath v. City of Hialeah*, 560 F. Supp. 840, 843 (S.D. Fla. 1983) (in a case involving the shooting and killing of a black victim by an off-duty policeman and a cover-up conspiracy, the court held that Florida's wrongful death statute is inconsistent with the deterrence rationale of 42 U.S.C. § 1983 because otherwise “it would be far more profitable to kill the plaintiff than to scratch him”).

¹⁴⁰ *Guyton v. Phillips*, 532 F. Supp. 1154, 1156 (N.D. Cal. 1981).

¹⁴¹ *Id.*

¹⁴² *Id.* at 1166–67.

¹⁴³ *Id.* at 1164, 1166–67.

injuring or maiming a victim than for killing him. The court must be able to fashion a remedy that will . . . serve as a deterrent to abusive conduct in the future.¹⁴⁴

The analysis in this Section supports the overruling of state law when it undercompensates victims in § 1983 cases. But this Article does more than that. It also proposes a new basis for overruling state law in civil rights actions. The Article reveals that even when state law *fully* compensates the victim, those acting under the color of law may still have a perverse incentive to kill when damages cannot increase with the number of actors. To avoid such a perverse effect, punitive damages—or other anti-dilution devices—must be introduced. Currently, however, the majority of states do not allow the plaintiff in a wrongful death suit to recover punitive damages.¹⁴⁵ Those states that do allow punitive damages often impose arbitrary limitations or base allocation of such damages on fault.¹⁴⁶

3. Actors' Induced Demand

Another well-documented form of offensive practice is supplier-induced demand.¹⁴⁷ In the medical context, physician-induced demand (PID) is defined as cases in which “the physician influences a patient’s demand for care against

¹⁴⁴ *Id.* at 1167. The court awarded the plaintiff a sum of \$100,000 for the deprivation of the constitutional right to life, \$15,000 for pain and suffering, \$487 for funeral expenses, and a total of \$85,000 in punitive damages. *Id.* at 1169.

¹⁴⁵ One exception is Alabama’s wrongful death statute. ALA. CODE § 6-5-410 (2020). The statute has been interpreted to allow only recovery of punitive damages. *See* *Trott v. Brinks, Inc.*, 972 So. 2d 81, 84 (Ala. 2007) (holding that “the only recoverable damages [in a wrongful death action] are punitive damages intended to punish the tortfeasor for its actions—not to compensate the plaintiff” and adding that “Medical expenses . . . are compensatory in nature and are not recoverable by a plaintiff in a wrongful-death action”); 1 ALA. PATTERN JURY INSTR. CIV. 11.28 (3d ed. 2018) (“The damages in [wrongful death cases] are punitive and not compensatory”). As such, it has the potential to deter actors from killing injured victims. *See* S. & N. Ala. R.R. Co. v. Sullivan, 59 Ala. 272, 278–79 (1877) (explaining that Alabama law is designed “to give greater security to human life [and] ‘to prevent homicides’”).

¹⁴⁶ *See, e.g.,* *Gen. Chem. Corp. v. De La Lastra*, 852 S.W.2d 916, 922 (Tex. 1993); *see also* 1 PUNITIVE DAMAGES: LAW & PRACTICE 2D, *supra* note 121, § 5:10, at 365–69 (discussing limitations where punitive damages are allowed in wrongful death actions).

¹⁴⁷ *See, e.g.,* Jeffrey Clemens & Joshua D. Gottlieb, *Do Physicians’ Financial Incentives Affect Medical Treatment and Patient Health?*, 104 AM. ECON. REV. 1320, 1347 (2014) (“find[ing] that financial incentives significantly influence physicians’ supply of health care”); Victor R. Fuchs, *The Supply of Surgeons and the Demand for Operations*, 13 J. HUM. RES. 35, 35 (1978) (finding “considerable support for the hypothesis that surgeons shift the demand for operations”); Thomas H. Rice & Roberta J. Labelle, *Do Physicians Induce Demand for Medical Services?*, 14 J. HEALTH POL. POL’Y & L. 587, 588 (1989) (explaining that “there is a great deal of evidence to indicate that physicians do induce demand for economic gain”).

the physician's interpretation of the best interests of the patient."¹⁴⁸ The choice between giving birth via a C-section or a vaginal delivery provides a good example. For low-risk patients, vaginal delivery is considered the preferred option.¹⁴⁹ Yet, many empirical studies now show that physicians perform many unnecessary C-sections.¹⁵⁰ Some scholars focus on the cost side of the equation. They blame the doctor's choice on "defensive medicine"—the doctor's interest in reducing her expected liability.¹⁵¹ Others focus on the monetary benefits the physician receives from the activity, arguing that the incentives to

¹⁴⁸ Erin Johnson & M. Marit Rehavi, *Physicians Treating Physicians: Information and Incentives in Childbirth*, 8 AM. ECON. J. 115, 119 (2016) (quoting Thomas G. McGuire, *Physician Agency*, in 1 HANDBOOK OF HEALTH ECONOMICS 461, 504 (Anthony J. Culyer & Joseph P. Newhouse eds., 2000)) (explaining that patients who are not in a position to evaluate alternative treatments may be persuaded by doctors to take a course of action that is less desirable to the patient but is more profitable to the healthcare provider); see Roger Feldman & Frank Sloan, *Competition Among Physicians, Revisited*, 13 J. HEALTH POL. POL'Y & L. 239, 239 (1988) (defining physician induced demand as "whether the demand curve for physician services is subject to shifts induced by physicians in pursuit of their own interests").

¹⁴⁹ Joanne Spetz et al., *Physician Incentives and the Timing of Cesarean Sections: Evidence from California*, 39 MED. CARE 536, 537 (2001) (explaining that "Cesarean section [C-section] delivery is normally precipitated by one or more medical conditions"); HENRI GOER ET AL., VAGINAL OR CESAREAN BIRTH: WHAT IS AT STAKE FOR WOMEN AND BABIES? 4 (Childbirth Connection 2012), <https://www.nationalpartnership.org/our-work/resources/health-care/maternity/vaginal-or-cesarean-birth-what-is-at-stake.pdf> [<https://perma.cc/4RL8-477V>] ("Overuse of cesarean delivery in low-risk women exposes more women and babies to potential harms of cesarean with minimal likelihood of benefit.").

¹⁵⁰ There is evidence that for-profit hospitals are more likely to perform unnecessary C-sections, implying that the benefits from C-sections are high or that the costs (including the risk of litigation) are low enough (or both) to justify many unnecessary procedures. See, e.g., Janet Currie & W. Bentley MacLeod, *Diagnosing Expertise: Human Capital, Decision Making and Performance Among Physicians*, 35 J. LAB. ECON. 1, 3, 15 (2016) (noting that "the C-section is the most common surgical procedure in the United States" and that "there is widespread recognition that C-section rates vary across hospitals in ways that cannot be explained either by the condition of the patients or by their preferences"); Janet Currie & W. Bentley MacLeod, *First Do No Harm? Tort Reform and Birth Outcomes*, 123 Q.J. ECON. 795, 803 (2008) [hereinafter Currie & MacLeod, *First Do No Harm?*] (estimating that "unnecessary C-sections contribute as much as four billion dollars a year in excessive healthcare costs, as well as in inflicting unnecessary surgery on million[s] of mothers"); Tara Haelle, *Your Biggest C-Section Risk May Be Your Hospital*, CONSUMER REPS. (May 10, 2018), <https://www.consumerreports.org/c-section/biggest-c-section-risk-may-be-your-hospital/> [<https://perma.cc/FS6Q-733K>] (reporting that "C-section rates for low-risk deliveries in the [United States] vary dramatically from hospital to hospital, even between those located in the same communities" and that "almost half of the C-sections performed in the [United States] are not required" and "can pose added risks to the mother and her child").

¹⁵¹ See, e.g., Clark T. Johnson & Erika F. Werner, *The Nationwide Relationship Between Malpractice Rates of Vaginal and Cesarean Delivery*, 123 OBSTETRICS & GYNECOLOGY 119S, 120S (2014) ("States with higher malpractice rates have lower vaginal delivery rates and higher cesarean delivery rates than states with lower malpractice rates."); Y. Tony Yang et al., *Relationship Between Malpractice Litigation Pressure and Rates of Cesarean Section and Vaginal Birth After Cesarean Section*, 47 MED. CARE 234, 234 (2009) ("[R]educed litigation pressure would likely lead to decreases in the total number [of] cesarean sections and total delivery costs.").

engage in the less desirable activity (e.g., C-sections) are hard to resist.¹⁵² However, all agree that asymmetric information plays an important role. The authors of a recent study explain that the “PID [hypothesis] posits that physicians can shift patient demand and move treatment quantity in the direction of their own interests because patients do not have the necessary medical knowledge to make independent decisions.”¹⁵³

The following subsections explore the role of *collective liability* in inducing demand—an area of research that remains under-studied. These subsections show that physicians may prefer to perform an unnecessary and potentially harmful procedure if it is more likely to result in collective liability. Beginning with the cost side, subsection a shows that such unnecessary procedures may reduce the physician’s exposure to liability. Subsection b reveals that the incentive to choose the unnecessary procedure remains strong even when the probability that collective liability would apply is low. Subsection c focuses on the benefits to physicians from procedures that are more likely to result in collective liability. It shows that such benefits may exacerbate the physician’s incentives to perform unnecessary procedures.

a. The Costs of Unnecessary and Harmful Services

As this subsection shows, collective liability regimes such as *res ipsa* may encourage physician-induced demand of the worst type. For example, in the medical context, the very existence of a collective liability regime may incentivize physicians to choose an unnecessary procedure that involves full anesthesia over one that does not. The reason is that, in some cases, by choosing a procedure that will be more likely to subject parties to collective *res ipsa*, a physician can reap a higher payoff due to *res ipsa*’s cost-sharing feature. Example B1 below is illustrative.

¹⁵² See, e.g., Nathanael Johnson, *For-Profit Hospitals Performing More C-Sections*, KAISER HEALTH NEWS (Sept. 13, 2010), <https://khn.org/news/californiawatch-profit-hospitals-performing-more-c-sections/> [https://perma.cc/D9M2-A4DL] (“A database compiled from state birthing records revealed that, all factors considered, women are at least 17[%] more likely to have a cesarean section at a for-profit hospital than at one that operates as a non-profit. A surgical birth can bring in twice the revenue of a vaginal delivery.”); Shankar Vedantam, *Money May Be Motivating Doctors to Do More C-Sections*, NAT’L PUB. RADIO (Aug. 30, 2013), <https://www.npr.org/sections/health-shots/2013/08/30/216479305/money-may-be-motivating-doctors-to-do-more-c-sections> [https://perma.cc/Y7TE-8KLA]. Non-monetary benefits also play a role. See, e.g., Erin Johnson, *Physician Induced Demand*, in 3 ENCYCLOPEDIA OF HEALTH ECONOMICS 77, 80 (2014) (reviewing the literature and noting that “[s]tudies of labor and delivery also suggest that obstetricians sometimes perform C-sections for their own convenience”); Spetz et al., *supra* note 149, at 537 (hypothesizing that “physicians have an incentive to provide cesarean sections to maximize leisure”).

¹⁵³ Johnson & Rehavi, *supra* note 148, at 116.

Example B1: A physician must choose between two procedures. The cost of performing the procedures and the utility therefrom are the same. However, the procedures differ in the risk they pose to the patient and the payoffs to the healthcare provider.

The expected harm to the patient is lower from Activity-I (e.g., a vaginal delivery) compared to Activity-II (e.g., a C-section). The idiosyncratic costs and benefits to the patient can be estimated *ex ante* by the healthcare provider, but they cannot be easily discerned *ex post* by the factfinder.¹⁵⁴ Accordingly, the physician and the physician's team are unlikely to be held liable for simply choosing Activity-II over Activity-I (although they should be).¹⁵⁵

Although the physician and the physician's team will (likely) not be held liable for choosing one action over the other, they will be liable if they fail to meet the standard of care expected in each activity (e.g., if an actor causes a uterine rupture during a vaginal delivery or leaves a sponge inside the patient during a C-section).

Collective liability can encourage the wealth-maximizing doctor to prefer the less socially desirable Activity-II. To see why, consider first a case where the physician operates alone, and assume for the moment that the physician's benefits from the two activities are identical. Suppose Activity-I comes with an expected liability of \$10 and Activity-II with an expected liability of \$16. When liability is imposed on one party, the patient's and the physician's interests are aligned. The physician would prefer to engage in Activity-I ($10 < 16$)—the socially desirable activity.

Consider now the effect of the application of collective *res ipsa* on a physician who works with another healthcare provider (for example, a nurse). *Res ipsa* is more likely to apply in suits involving Activity-II (C-section) because in such cases the control requirement is satisfied.¹⁵⁶ Thus, so long as the accident

¹⁵⁴ *Id.* at 119–20.

¹⁵⁵ See *supra* notes 148–151 and accompanying text (discussing physician induced demand for C-sections and reviewing studies indicating that vaginal deliveries are associated with higher rates of medical malpractice suits even though the procedure generally poses less risk to most patients); see also Ariel Porat, *Misalignments in Tort Law*, 121 *YALE L.J.* 82, 120 (2011) (investigating the effect of individual liability and concluding that a physician is unlikely to be held liable “even if he negligently chooses the cesarean procedure”); Ariel Porat, *Offsetting Risks*, 106 *MICH. L. REV.* 243, 264–65 (2007) [hereinafter Porat, *Offsetting Risks*] (noting that “cesarean deliveries are performed in the United States at a much higher than optimal rate” and explaining that this is likely due “to defensive medicine”). While Porat finds that when liability is individual “[l]owering physician liability would decrease defensive medicine,” this Article shows that, when collective liability applies, under certain circumstances, increasing the expected liability of each actor may be more effective. Porat, *Offsetting Risks*, *supra*, at 265.

¹⁵⁶ Compared to a vaginal delivery, in a C-section, patients may be unconscious or semi-conscious and thus likely to have less access to information about what happened during delivery.

“bespeaks of negligence,” both healthcare providers would be held liable for the entire harm. As a result, the physician can expect to pay only \$8 if the physician chooses Activity-II (16/2) and \$10 if the physician chooses Activity-I. Now, the interests of the patient and the healthcare providers diverge. In Example B1, collective *res ipsa* incentivizes the physician to take the less efficient course of action.

Collective liability may also encourage physicians to choose the less desirable activity even if the harm increases with the number of actors. To see this, consider the following variant of Example B1:

Example B2: A physician must choose between two procedures. The expected liability associated with each activity and the benefits therefrom to the parties are the same. Specifically, assume that in each activity the physician expects to benefit \$100 and inflict a harm of \$60, whereas the nurse expects to benefit \$30 and inflict a harm of \$10.

Activity-I, where each actor is subject to individual liability, comes with an expected gain of \$40 ($100-60$) to the physician and \$20 ($30-10$) to the nurse. Once again, a collective liability regime, such as *res ipsa*, may incentivize the physician to switch to the less desirable (in fact, tortious) Activity-II. As part of a team of two, the physician can expect to pay \$35 ($70/2$) and gain \$65 ($100-35$). However, if the physician is joined by four nurses (thereby raising the expected harm to the victim from 70 to 100),¹⁵⁷ the physician’s expected payoffs from Activity-II would increase. The physician can expect a gain of \$80—the difference between the physician’s \$100 benefit and her \$20 portion of the damage ($(60+10 \times 4)/5$).¹⁵⁸ The result is an unnecessary procedure with an exorbitant number of healthcare providers. The hospital—often the employer of the assisting staff—would also benefit from the unnecessary procedure if its proceeds from Activity-II are higher compared to Activity-I.¹⁵⁹

¹⁵⁷ The expected harm is \$70 ($60+10$) when the team includes one doctor and one nurse and \$100 ($60+10 \times 4$) when the team is comprised of one doctor and four nurses.

¹⁵⁸ This assumes that *res ipsa* would apply to the aggregate \$100 ($60+10 \times 4$) harm. The assumption is later relaxed. Each nurse can expect a gain of \$10 ($30-(60+10 \times 4)/5$).

¹⁵⁹ This may be the case in C-sections. See, e.g., Jonathan Gruber & Maria Owings, *Physician Financial Incentives and Cesarean Section Delivery*, 27 RAND J. ECON. 99, 100 (1996) (arguing “that declining fertility increased the income pressure on ob/gyns and led them to substitute from normal childbirth toward a more highly reimbursed alternative: cesarean delivery”); Johnson & Rehani, *supra* note 148, at 117 (reviewing literature which reports that “Cesarean birth ends up being a profit center in hospitals, so there’s not a lot of incentive to reduce them” (quoting Lisa Girion, *More Cesareans, More Problems*, L.A. TIMES (May 17, 2019), <https://www.latimes.com/archives/la-xpm-2009-may-17-fi-cover-birth17-story.html> [<https://perma.cc/38RG-QNBR>])). In 1989, “the average charge for a C-section (including both physician and hospital components) was \$2,850 greater than the average charge for a vaginal delivery.” Emmett B. Keeler & Mollyann Brodie, *Economic Incen-*

b. The Rate of Res Ipsa

The analysis above ignores the rate at which res ipsa applies in Activity-II cases—and for a good reason. Even if res ipsa applies in only a fraction of Activity-II cases, say 1%, the actors' monetary incentive to engage in the tortious activity could remain strong.¹⁶⁰ Of course, the higher the rate—implying that more unnecessary actions are taken, resulting in accidents that bespeak negligence—the higher the gain to the physician.

c. The Benefits from Unnecessary and Harmful Services

The previous variants of Example B1 focus on the cost side of the actors' calculus while keeping the benefit from the activities constant. In many cases, however, the benefits associated with different activities are heterogeneous. An investigation of the impact of these benefits reveals that they, with the help of a collective liability theory like res ipsa, may exacerbate the incentive to steer patients to less desirable procedures. Once again, the choice between C-sections and vaginal deliveries provides a good example. Compared to vaginal deliveries, C-sections are more profitable to the hospital and, in many cases, to the

tives in the Choice Between Vaginal Delivery and Cesarean Section, 71 MILBANK Q. 365, 365 (1993). By 1999, the average difference charge for hospitals alone was estimated at \$4,360. See H. Shelton Brown III, *Lawsuit Activity, Defensive Medicine, and Small Area Variation: The Case of Cesarean Sections Revisited*, 2 HEALTH ECON., POL'Y & L. 285, 286 (2007).

¹⁶⁰ With some simplifying assumptions, it is easy to show that, despite a low rate of res ipsa, the physician would prefer the less desirable (and tortious) activity. By denoting b_{iMD} as the benefit to the physician MD from activity i , it is possible to express the physician's profit function from Activity-II (the left-hand side in Equation 1) relative to Activity-I (the right-hand side in Equation 1), as follows:

(1)

$$t \left(b_{2MD} - \frac{\Sigma D}{n} \right) + (1 - t)(b_{2MD} - D_{2MD}) > (b_{1MD} - D_{1MD})$$

where n is the number of actors, t is the rate of res ipsa, D_{ij} is the expected liability faced by actor j from activity i (i.e., D_{1MD} is the physician's expected liability from Activity-I), and ΣD is the total expected liability from Activity-II. Rearranging the expression and assuming, as does Example B2, that the expected harm inflicted by the physician in both procedures is the same, yields the following condition:

(2)

$$b_{2MD} - b_{1MD} > t \left(\frac{\Sigma D}{n} - D_{2MD} \right)$$

Equation 2 implies that, so long as the expected harm inflicted by the physician in Activity-II, D_{2MD} , is higher than the average expected harm, $\Sigma D/n$, (the tortious) Activity-II would remain more profitable to the physician. To illustrate, recall that in Example B2 with four nurses the expected gain to the physician from Activity-II is \$80 $(100 - (60 + 10 \times 4) / 5)$ when res ipsa applies and \$40 $(100 - 60)$ otherwise. With a res ipsa rate of $t = 1\%$, the physician's expected gain is \$40.4 $(1\% \times 80 + 99\% \times 40)$. Each nurse can expect a gain of \$19.9 $(1\% \times (30 - (60 + 10 \times 4) / 5) + 99\% \times (30 - 10))$.

physicians performing the procedure.¹⁶¹ They also take less time to perform, implying that a vaginal delivery comes with an even higher opportunity cost to the actors.¹⁶² To explore the impact of the benefit calculus, suppose that in Example B1, the team comprises two physicians, MD1 and MD2, whose expected payoffs from the two activities are described in Table 1 below.

	Activity I			Activity II		
	Benefit	Harm	Gain	Benefit	Harm	Gain
MD1	100	30	70	200	150	50
MD2	100	20	80	400	50	350

Table 1: The Parties' Expected Payoffs from the Different Activities

Activity-I promises an expected gain of \$70 (100-30) to MD1 and \$80 (100-20) to MD2. Activity-II promises a gain of \$50 (200-150) to MD1 and \$350 (400-50) to MD2. Without a cost-sharing doctrine like *res ipsa*, MD1 would not agree to engage in (the less desirable) Activity-II (70 > 50). But if *res ipsa* applies in Activity-II cases, both actors would be better off if they engage in Activity-II rather than Activity-I. In such a case, MD1 can expect to gain \$100 (200-(150+50)/2) and MD2 can expect \$300 (400-(150+50)/2).¹⁶³

C. The Information Extraction Fallacy

The second justification for applying collective liability is to extract information from a group of actors that would identify the wrongdoer.¹⁶⁴ The

¹⁶¹ Currie & MacLeod, *First Do No Harm?*, *supra* note 150, at 803 (explaining that “[o]ne reason for high rates of C-sections is that fees for C-sections are roughly double fees for normal deliveries” and reviewing the literature showing that “physicians are responsive to the incentives created by differentials between fees for vaginal births and Caesarean births”); *see supra* note 159 (collecting sources which describe the possible profit motivation behind increased rates of C-sections).

¹⁶² Currie & MacLeod, *First Do No Harm?*, *supra* note 150, at 797, 803; Jon Gruber et al., *Physician Fees and Procedure Intensity: The Case of Cesarean Delivery*, 18 J. HEALTH ECON. 473, 475 n.2 (1999); Gruber & Owings, *supra* note 159, at 102.

¹⁶³ For reasons explained at *supra* note 160, this is also true if *res ipsa* applies only in a fraction of Activity-II cases.

¹⁶⁴ *Ybarra v. Spangard*, 154 P.2d 687, 689 (Cal. 1944) (explaining that “the particular force and justice of the rule . . . consists in the circumstance that the chief evidence of the true cause . . . is practically accessible to [the defendants] but inaccessible to the injured person,” and noting that “[w]ithout the aid of the doctrine [the victim] . . . would be entirely unable to recover unless the doctors and nurses in attendance voluntarily chose to disclose the identity of the negligent person and the facts establishing liability” (quoting 9 JOHN HENRY WIGMORE, EVIDENCE IN TRIALS AT COMMON LAW § 2509, at 382 (3d ed. 1940))); RESTATEMENT (THIRD) OF TORTS § 17 cmt. f (AM. L. INST. 2010) (explaining that collective *res ipsa* “provid[es] incentives to ‘smoke out’ relevant evidence” and identify the careless party); Ronald J. Allen, *How Presumptions Should Be Allocated: Burdens of Proof, Uncertainty, and Ambiguity in Modern Legal Discourse*, 17 HARV. J.L. & PUB. POL’Y 627, 636 (1994) (explaining that *res ipsa* allows judges to “pry information from litigants”); *Res Ipsa Loquitur: Its Nature and Effect*, 3 U. CHI. L. REV. 126, 129 (1935) (“The universal justification for whatever

claim is that collective liability encourages innocent actors—witnesses—to share information that identifies the culprit. Saul Levmore illustrates this information-forcing function using a hypothetical that includes six elevator passengers.¹⁶⁵ At one point during the ride, one of them feels that her wallet containing \$100 has been taken. It is clear that one of the five other passengers stole the wallet, but the victim cannot identify the thief, and no passenger consents to a search or volunteers to identify the culprit. Collective liability would require the innocents and the thief to pay \$20 (100/5). This, according to Levmore, “might encourage otherwise silent witnesses to help identify the chief culprit who would then bear the entire liability.”¹⁶⁶ Levmore explains that the rule (collective liability) “is surprisingly similar to the famous case of *Ybarra v. Spangard*,” which he views as “shrewd, judge-made law, because of its information-forcing potential.”¹⁶⁷

This Subpart shows that the information-extraction rationale may be limited in scope and that collective liability may even lead to opposite results. To begin, in many cases, the parties do not have any information about the accident.¹⁶⁸ Nor are they in a position to collect and produce *ex ante* such information. Moreover, as this Subpart illustrates, even when the parties know what in fact happened, collective liability regimes such as *res ipsa* may be a poor mechanism to extract *useful* information. Section 1 begins by illustrating how collective liability can incentivize a party to suppress information. Section 2 shows that collective liability may even impel the parties to provide false information. Section 3 explores cases where collective liability may incentivize parties to *collude* in order to lie and commit insurance fraud.

1. The Witnesses’ Incentive to Suppress Information and Overinvestment

To analyze the incentive of actors to volunteer information or invest in its production, consider the following example.

benefit *res ipsa loquitur* gives the plaintiff is that the defendant apparently has greater access to the evidence and therefore is the proper one to furnish an explanation.”); David W. Robertson, *The Common Sense of Cause in Fact*, 75 TEX. L. REV. 1765, 1783 (1997) (noting that in *Ybarra*, the court used *res ipsa* to overcome “the hurdle presented by the defendants’ wall of silence”).

¹⁶⁵ Levmore, *supra* note 22, at 1561 (introducing the over-extraction mechanism to incentivize the tortfeasor to confess the wrongdoing).

¹⁶⁶ *Id.* at 1562.

¹⁶⁷ *Id.* at 1562–63.

¹⁶⁸ See, e.g., *Clark v. Gibbons*, 426 P.2d 525, 533 (Cal. 1967) (noting that “*Ybarra* involved an injury which may not have been received during the operation”); DOBBS, *supra* note 26, § 249, at 651 (explaining that “[h]olding all the defendants hostage would itself be a justified response if evidence showed that all of them had knowledge of the facts,” but noting that in *Ybarra* this “was not the case and it is inherently improbable that everyone in an operating room knows exactly what everyone else is doing every second of the time; at least one person’s eyes should be on the scalpel”).

Example C1: In breach of her duties, T , a tortfeasor, caused the victim damage, $D > 0$. T could be a doctor in a surgery gone wrong or an elevator passenger who stole the victim's wallet. W , a witness, can produce and share information that would shed light on the accident at an expected cost of $c > 0$. This includes the cost of communicating the information as well as the inconvenience involved in "ratting out" another or the loss of colleagues' friendship and trust.¹⁶⁹ W garners a (moral) benefit, b , from identifying T and assisting the victim.

W 's net cost from producing and communicating the information can be denoted by $\mu = c - b$. When $b > c$ (that is, when $\mu < 0$), W 's moral benefits from producing and sharing information outweigh the inconvenience and expected losses associated with such acts. In these cases, W has an internal motivation to produce and provide information. In other words, when $\mu < 0$, W already has a dominant strategy to identify T , and accordingly, the case for res ipsa is weak. Table 2 below describes the parties' expected costs without a collective liability scheme such as res ipsa.

Witness Tortfeasor	Provide Information (Identify T)		Keep Silent	
	T	W	T	W
Confess	D	μ	D	0
Keep Silent	T	W	0	0

Table 2: The Actors' Expected Costs Absent Res Ipsa Loquitur

The more interesting case, and the one which courts need to deal with, is when $b < c$ (or $\mu > 0$)—that is, when W 's moral motivation to share information is not strong enough. This may happen, for example, when the parties are repeat players, part of a close-knit group, or both (e.g., a team of doctors and nurses).¹⁷⁰ In these cases, if the actors are subject to individual liability they would both keep silent. W would have a dominant strategy to avoid providing information ($\mu > 0$), and knowing this, T would not confess. As a result, the plaintiff would remain remediless.

Consider now the effect of res ipsa, described in Table 3 below. If T and W keep silent, res ipsa will help the plaintiff prove her case against both T and

¹⁶⁹ Such non-monetary costs can be high and even prohibitive. See, e.g., 2 DAVID LOUISELL & HAROLD WILLIAMS, MEDICAL MALPRACTICE § 14.01 (2019) (discussing the stigma and retaliation doctors experience when they testify against others and providing examples).

¹⁷⁰ See *id.* § 14.01.

W , and accordingly, each can expect to pay half of the harm, $D/2$ (denoted by the bottom right cell in Table 3 below). When $0 < \mu < D/2$ (e.g., when $D = \$100$ and $\mu = \$20$), the result is a unique Nash equilibrium: W provides information whereas T is silent.¹⁷¹ In other words, *res ipsa* incentivizes the witness, W , to provide information as Levmore envisioned.

Witness Tortfeasor	Provide Information (Identify T)	Keep Silent
Confess	T W	T W
	D μ	D 0
Keep Silent	T W	T W
	D μ	D/2 D/2

Table 3: The Actors' Expected Costs with *Res Ipsa Loquitur*

But when $\mu > D/2$, *res ipsa* can lead to the opposite result: collective liability may incentivize the witness to *suppress* information. For example, suppose that W does not have an internal motivation to share information ($b = 0$). Assume also that the cost of producing and sharing information is $\mu = c = \$60$, and that the expected damage is $D = \$100$. In such a case, W would suppress the evidence because *res ipsa* dilutes W 's expected liability to the point that sharing is too costly. In other words, W would prefer to keep silent and be held liable together with T . W would prefer an expected judgment of \$50 ($100/2$) rather than incurring the \$60 expected cost associated with turning in a colleague.

Moreover, even in cases in which *res ipsa* would incentivize W to produce and share information, the result may be inefficient if W is not the lowest cost avoider—that is, if another witness can produce and share the information at a lower cost. Even if W is the best cost avoider, a welfare loss may occur, and the loss may increase with the number of actors if multiple parties would invest in producing evidence where only one should. For example, in Levmore's elevator hypothetical, if each of the five passengers can invest \$10 in produc-

¹⁷¹ Here, the parties do not have a dominant strategy. For example, W is better off keeping silent if T confesses ($0 < \mu$), but W is better off divulging information if T is silent ($\mu < D/2$). However, a cell-by-cell analysis reveals that T will keep silent and W will provide condemning information. The reason is that neither party has an incentive to deviate and adopt a different strategy (if W shares information, T does not have an incentive to confess—either way, T will pay D , and if T keeps silent, W is better off sharing information because $\mu < D/2$). Note that if one assumes that when T is silent, an adjudication process will impose some additional cost on T , it is impossible to tell what the parties will do (i.e., there is no Nash equilibrium). The possibility that the parties will lie (i.e., that W will confess to something she did not do, and that T will falsely blame W) is investigated in Sections 2 and 3 below.

ing and keeping exculpatory evidence, *res ipsa* may incentivize each to do so ($10 < 100/5$). As a result, evidence that can be produced at a cost of \$10 would be produced at a cost of \$50 (10×5).

To date, the claim that collective liability can serve as an effective information-forcing mechanism has not been proven empirically. This Article shows that the theory supporting its information-extraction ability is also lacking and overly optimistic. In some cases, collective liability regimes such as *res ipsa* can incentivize witnesses to suppress information. In other cases, collective liability may encourage them to produce and communicate information, but inefficiently so.

2. The Blame Game

The second justification for collective liability—that, in some cases, it may incentivize actors to produce information—relies on an empirical assumption: that *W* can *corroborate* *W*'s account using objective evidence that would make *W*'s testimony more likely than that of the injurer. For example, in a surgery gone wrong, *W* may be able to prove *T*'s carelessness by providing records showing that *T* used the wrong type of clamp or by furnishing the clamp *T* used. In the elevator hypothetical, *W* may be able to provide information that would lead to the victim's wallet and place it within *T*'s possession. In such cases, if *T* lies, *T* would not only have to compensate the victim but would also incur litigation costs, which makes lying a losing strategy. By contrast, if *W* only knows what happened but is unable to provide corroborating evidence, *W*'s account would be as likely as *T*'s. In these cases, a collective liability regime such as *res ipsa* may indeed break the "conspiracy of silence," but would result in the production of false information.¹⁷² In other words, it would incentivize lying.

Courts and scholars have failed to appreciate the perverse incentive to supply false information.¹⁷³ They focus on and laud the information-forcing aspect of *res ipsa*. But they overlook the fact that the justification for the doctrine, if any exists, is to encourage actors to supply (1) *truthful* information that (2) would help *identify* the tortfeasors.¹⁷⁴

¹⁷² See, e.g., *Jones v. Harrisburg Polyclinic Hosp.*, 437 A.2d 1134, 1138 (Pa. 1981).

¹⁷³ In Professor Levmore's elevator hypothetical the concern does not arise because one of five passengers steals the victim's wallet. See Levmore, *supra* note 22, at 1562–63. In this hypothetical, if the thief decides to confess wrongdoing, the thief can prove culpability using external evidence (i.e., by returning the wallet). Similarly, information provided by a witness can identify the true thief. When no external evidence exists, however, the prospects of lying loom larger.

¹⁷⁴ See *supra* note 164 and accompanying text (reviewing the prior literature's view of the role collective liability plays in information extraction).

Res ipsa may fail on both accounts. To illustrate, reconsider Example C1, but assume now that W does not have any external evidence to corroborate W 's account. For example, assume that in the elevator hypothetical T did not steal the passenger's wallet but instead stole a \$20 bill.¹⁷⁵ Or assume that in the surgery, W witnessed T 's careless behavior but is not in possession of the clamp that could prove T 's fault. In such cases, res ipsa may encourage the parties to lie. To escape liability, T could claim that W was at fault. Under certain circumstances (discussed in the next section), W may even falsely take responsibility for the careless conduct of another. Table 4 below shows the parties' payoffs when lying is considered and res ipsa does not apply.

Witness Tortfeasor	Provide Information (Truthfully Pin T)		Keep Silent		Lie (Falsely Admit)	
	T	W	T	W	T	W
Confess (Truthfully Admit)	D	μ	D	0	D/2	D/2
	T	W	T	W	T	W
Keep Silent	D	μ	0	0	0	D
	T	W	T	W	T	W
Lie (Falsely Pin W)	0	μ	0	D	0	D
	T	W	T	W	T	W

Table 4: The Actors' Payoffs Without Res Ipsa Loquitur (Lying Is an Option)

When $\mu < D$ (e.g., when $D = \$100$ and $\mu = 20$), there are two equilibria:¹⁷⁶ (1) both actors keep silent and (2) T lies when W confesses. Note that in these equilibria the victim cannot recover damages as each of the actors' account is, by definition, equally probable.¹⁷⁷

By contrast, when a collective liability doctrine applies, there is only one equilibrium: T lies and W confesses. The reason is that when the parties keep silent or provide contradictory accounts (e.g., when each tries to pin liability on the other), both will be held liable (because res ipsa applies), and each can expect to pay half of the damage. As a result, when W has (or can be incentivized to produce ex ante) corroborating evidence, res ipsa may incentivize W to identify T . But when W does not have corroborating evidence, res ipsa incentivizes T to lie, in which case the factfinder, by definition, will not be able to identify the true injurer.

¹⁷⁵ For simplicity, assume both T and W have a \$20 bill, in which case the thief's identity is indeterminable.

¹⁷⁶ For T , confessing is dominated by lying ($0 < D/2, D$), and consequently, for W , lying is dominated by providing information ($\mu < D$).

¹⁷⁷ Assuming the testimonies are equally probable.

What courts and scholars have missed is that *res ipsa* is useful only if a witness can also corroborate her testimony with objective evidence. The reason is that absent *res ipsa*, when neither is at risk of liability, everyone is better off keeping silent. By contrast, when *res ipsa* applies, *both* have an incentive to provide information: the witness may try to exculpate herself by pinning liability on *T*, and the tortfeasor will try to avoid liability by arguing that *W* is the culpable party. In other words, collective *res ipsa* incentivizes lying.

Ybarra may have been such a case. On remand, all defendants testified “that they did not observe any incident that could have caused the injury.”¹⁷⁸ It could be that all but the injurers were honest. Or, it could be that everyone lied because lying was each actor’s best strategy. Another possibility is that they all colluded to lie—the subject of the next Section.¹⁷⁹

3. Collusion to Lie and Suppress Evidence and Insurance (and Private Bargaining Over Collective Liability)

Collective liability regimes such as *res ipsa* are justified as a means to break the defendants’ “wall of silence.”¹⁸⁰ In practice, however, such communal liability schemes may incentivize injurers to *collude* with others in order to suppress evidence. Subsection a explains how collective liability can facilitate collusion, curb tortfeasors’ liability, and even shift it to innocent parties. Subsection b reveals that insurance can increase the risk of collusion. Subsection c explores self-implicating testimonies. It shows that, under certain conditions, actors would be willing to falsely take responsibility for an injury that they did not inflict.

a. Hedging the Risks and Shifting Liability to Innocent Defendants

To see how collective liability can benefit both the wrongdoer and those who witnessed the culprit, and even help co-conspirators shift liability to innocent parties, consider Example C2 below:

Example C2: In breach of her duties, *T*, a tortfeasor, caused the victim damage, $D > 0$. *T* could be a doctor in a surgery gone wrong or an elevator passenger who stole from the victim. *T* was part of a group of actors that included two additional parties, *W* and *N*. The victim is

¹⁷⁸ *Ybarra v. Spangard*, 208 P.2d 445, 446 (Cal. Dist. Ct. App. 1949).

¹⁷⁹ See *Dalley v. Utah Valley Reg’l Med. Ctr.*, 791 P.2d 193, 200 (Utah 1990) (applying *res ipsa* after all members of the medical team denied knowing “of anything . . . that could have caused the burn” on the plaintiff’s thigh during a C-section).

¹⁸⁰ See *Jones v. Harrisburg Polyclinic Hosp.*, 437 A.2d 1134, 1138 (Pa. 1981); Robertson, *supra* note 164, at 1783.

not in a position to identify the injurer, and *N* does not have any external evidence that can identify *T*.

Suppose *T* and *W* are more likely than *N* to be liable for the victim's harm. For example, it could be that in the surgery gone wrong, *T* and *W* were the doctors while *N* was the nurse-anesthetist, and it is more likely that a doctor caused the injury.¹⁸¹ Another example is a case where *T* and *W*, but not *N*, operated on the plaintiff's body part that suffered the injury.¹⁸² Or it could be that during an elevator ride in which money from the victim's pocket went missing, *T* and *W* stood next to the victim whereas *N* stood farther away.

In such cases, both *T* and *W* would be interested in the application of a collective liability regime such as *res ipsa*. Once applied, a collective liability regime would allow *T* and *W* to corroborate each other's false narrative. They would be able—and may even collude—to argue that *N*, the innocent party, was the one at fault. If successful, both *T* and *W* would be able to exculpate themselves, and the innocent party would be held liable. But even if liability were imposed on all, *T* and *W* would still be better off. *T* would be required to pay only a fraction (1/3) of the harm *T* caused. And *W*, the innocent party, would be able to hedge (i.e., minimize) the risk that *W* would be solely liable for the entire harm (a false negative).¹⁸³ *W*'s incentive to collude with *T* would be even stronger if *W* stood to benefit from exculpating *T*, for example, if the two were colleagues or if *T* paid *W* to present a unified front.

Cavero v. Franklin General Benevolent Society provides an example of such a possible setting.¹⁸⁴ *Cavero* involved the death of a three-year-old child during a tonsillectomy. The team included two doctors, a mother and son, aided by a nurse-anesthetist. The latter was employed by the hospital. In an interesting turn of events, “[a]t the request of the *defendant doctors*[,] the court gave a *res ipsa loquitur* instruction . . . against the doctors [themselves] and the hospital.”¹⁸⁵ Why would defendants ask for an inference of breach against themselves? Defendants may do so to *hedge* their risk of liability. By asking the court to apply *res ipsa* against them, they ensured that each one would pay a fraction of the damage, or even nothing, if the verdict against each was within the insurance limit. Another reason defendants may ask a court to apply collective liability against them is to *shift* liability to an innocent party. Under this

¹⁸¹ The example is modeled based on *Cavero v. Franklin General Benevolent Society*. See 223 P.2d 471 (Cal. 1950); *infra* notes 184–186 and accompanying text (describing the facts and outcome of *Cavero*).

¹⁸² The example is based on *Leonard v. Watsonville Community Hospital*. See 305 P.2d 36 (Cal. 1956); *infra* notes 190–193 and accompanying text (describing the facts and outcome of *Leonard*).

¹⁸³ The impact of the actors' insurance is discussed *infra* notes 187–189 and accompanying text.

¹⁸⁴ *Cavero*, 223 P.2d at 472–75.

¹⁸⁵ *Id.* at 476 (emphasis added).

strategy, the application of *res ipsa* is meant to generate an initial inference of carelessness against all defendants—the doctors and the nurse. The defendant-doctors could then each blame the nurse, and by corroborating each other's testimonies present a unified front to exculpate themselves. In *Cavero*, the defendants claimed that the nurse's carelessness led to the death of the child—a claim the jury accepted.¹⁸⁶

b. The Availability of Insurance

One would think that the actors' insurance would dull the incentive to collude. However, it is possible to show that insurance can actually *increase* the risk of collusion. Suppose, for example, that each defendant is insured up to \$1 million and the victim's injury is \$3 million.¹⁸⁷ If liability is imposed on one party only, say *W* (due to a mistake), *W* can expect to pay \$2 million (3-1) out of pocket. By contrast, if *res ipsa* applies and *T*, *W*, and *N* collude and deny any knowledge of what happened, each will be held liable for \$1 million (3/3). In such a case, the defendants will not pay any damages out of pocket. Their insurance will fully compensate the victim.

The interest of *T* and *W* in colluding remains even when it is expected that *N* will be able to exculpate herself. The reason, once again, is insurance fraud. Without *res ipsa*, *T* can expect to pay \$2 million out of pocket. But if *res ipsa* applies to *T* and *W*, each can expect to pay only \$500,000 out of pocket (their respective insurance policies will pay the remaining \$2 million). The collusion thus allows *T* to reduce *T*'s liability from \$2 million (3-1) to \$500,000 and more than compensate *W*.¹⁸⁸

Note that collective liability provides the parties with another benefit. It creates a "veil of ignorance" that allows *T* and *W* to maintain their "innocence" (each can assert not being the truly liable party). And, at least to some extent,

¹⁸⁶ *Id.* at 472.

¹⁸⁷ Kathryn Zeiler et al., *Physicians' Insurance Limits and Malpractice Payments: Evidence from Texas Closed Claims, 1990–2003*, 36 J. LEGAL STUD. S9, S11, S32 (2007) (noting that "[t]he conventional wisdom is that most doctors buy medical malpractice policies with \$1 million per-occurrence limits" and finding that "[o]ut-of-pocket payments are infrequent even though many physicians purchase policies that are well below mean and median jury awards"); James F. Sweeney, *Malpractice Guide*, MED. ECON. (Sept. 19, 2018), <https://www.medicaleconomics.com/view/malpractice-guide> [<https://perma.cc/4PWV-HB9K>] ("In general, carriers' standard coverage limits are \$1 million per claim and \$3 million aggregate, which is the most the policy will pay in a year for all claims.").

¹⁸⁸ For example, a promise to pay *W* \$700,000 will make both *T* and *W* better off. *T* would be paying only \$1.2 million—\$500,000 to the plaintiff and \$700,000 to *W*—which is lower than the \$2 million *T* would pay out of pocket if *T* were held solely liable. *W* would be subject to a \$500,000 judgment but will receive \$700,000 from *T*, and as explained above, can avoid the stigma of a liability verdict by maintaining innocence despite being found liable because of a collective liability regime, which by definition, holds innocent parties liable.

mitigate the market sanctions (e.g., reputational damage) that often follow a liability judgment.¹⁸⁹

In the examples above, collusion among the insured parties allows them to hedge a number of risks. First, by suppressing information and committing a fraud against their insurance, they are able to reduce their individual exposure. The conspiracy allows the insured to remain within the insurance limit and avoid paying the victim out of their pockets. Their respective insurance companies will pick up the entire bill. Second, the conspiracy is itself a form of insurance. It protects the innocent parties from the possibility that one of them will wrongly be held solely liable for the entire harm. The conspiracy also helps the culprit escape from fully internalizing the consequences of her negligent behavior.

c. *Self-implicating Testimonies*

In Example C2 and its variants, the victim received full compensation. As this subsection shows, in some cases, collective liability may incentivize the parties to collude to reduce their expected liability at the expense of the victim.

Consider, for example, the leading case *Leonard v. Watsonville Community Hospital*.¹⁹⁰ In *Leonard*, a clamp was left in the plaintiff's abdomen during an operation performed by doctors Lacy and Slegal with the assistance of doctor Eiskamp and the hospital's nurse. At trial, Eiskamp's denial of any wrongdoing was corroborated by Lacy and Slegal, who testified that they were the only doctors who used the forgotten clamp.¹⁹¹ The court found their testimony to be of such compelling evidentiary power that it exempted Eiskamp from liability. Lacy and Slegal's statements, the court explained, "did not in any way tend to benefit Lacy or Slegal."¹⁹² Rather, the statements were "disadvantageous to [Lacy and Slegal] because the exoneration of one defendant would have the *necessary* effect of increasing the possibility of liability on the part of each of the other defendants."¹⁹³ In other words, the court held that the doctors' self-implicating testimonies should be believed, because by exempting one defendant (Eiskamp), each of the remaining defendants faced a higher expected liability ($D/2 > D/3$).

But this is not necessarily so. Self-implicating testimonies can in fact benefit all defendants. The *Ybarra* and *Leonard* courts were aware of the pos-

¹⁸⁹ See *infra* Part III.

¹⁹⁰ *Leonard v. Watsonville Cmty. Hosp.*, 305 P.2d 36, 38 (Cal. 1956).

¹⁹¹ *Id.*

¹⁹² *Id.* at 42.

¹⁹³ *Id.* (emphasis added).

sibility of collusion among defendants.¹⁹⁴ But what they did not realize was that their prescribed antidote—the doctrine of collective *res ipsa*—was itself instrumental in incentivizing the parties to collude and suppress evidence. In fact, there are reasons to suspect that in many cases, collusions do take place and that victims are not in a position to unravel them.¹⁹⁵ Example C3 below illustrates how a collective liability regime can enable such hard-to-detect collusive activity.

Example C3: *T1* and *T2* are doctors who perform many operations together. *T1* and *T2* are co-defendants in two trials involving different surgeries that resulted in injuries to patients. The subject of Trial-I is a surgery in which *T1*'s careless behavior caused a patient damage, D_1 , under circumstances in which *res ipsa* applies. The subject of Trial-II is a surgery in which *T2*'s careless behavior caused a patient an injury, D_2 . In Trial-II *res ipsa* does not apply, but *T1* has external evidence of *T2*'s wrongdoing.

Suppose *T1* approaches *T2* and makes the following offer: “If you take responsibility for my actions in Trial-I, I will suppress the evidence against you in Trial-II.”¹⁹⁶ Consider first the parties’ payoffs if *T2* rejects the deal—that is, if *T2* refuses to falsely take responsibility for *T1*'s actions in Trial-I. In such a case, because *res ipsa* applies, absent any exculpatory evidence, *T1* and *T2* will both be held liable in Trial-I. Accordingly, each can expect to pay half the injury, $D_1/2$. In addition, *T2* can expect to pay D_2 in Trial-II (because *T1* will turn in the evidence against *T2*). As a result, *T1* can expect to pay a total of $D_1/2$ and *T2* a total of $D_1/2 + D_2$. Consider now the parties’ payoffs if *T2* takes the deal and (falsely) admits responsibility in Trial-I. Per *Leonard*, *T2* will be the only party liable in Trial-I and can expect to pay D_1 . In Trial-II, neither *T1* nor *T2* will be held liable (because, per the deal, *T1* will suppress the condemning evidence against *T2*). The result is that *T1* will not be responsible for her ac-

¹⁹⁴ See *id.* at 41–42; *Ybarra v. Spangard*, 154 P.2d 687, 689 (Cal. 1944); *Ybarra v. Spangard*, 208 P.2d 445, 446 (Cal. Dist. Ct. App. 1949); DOBBS, *supra* note 26, § 249, at 651 (explaining that in *Ybarra* it was “hardly conceivable that all those present contributed to [the victim’s] injury,” and noting that “[t]he court did not appear to argue that the facts justified a rational inference that all actors were negligent . . . [instead] [t]he court went on to suggest that it was really only holding all of the doctors and nurses as financial hostages so that the guilty would confess or the innocent would point the finger at the responsible person”).

¹⁹⁵ Moreover, *Leonard*'s holding—that a nonsuit would be granted when the exculpatory evidence is “uncontradicted”—likely imposes an impossible burden on the plaintiff. Cf. 305 P.2d at 41.

¹⁹⁶ The parties must be confident that each will perform. For example, *T1* may require *T2* to sign an affidavit stating that *T2* was solely responsible for the injuries inflicted during the first surgery, thereby locking *T2* into a false statement under oath. Similarly, *T2* may require that in exchange for the affidavit, *T1* sign an affidavit declaring *T2* did not commit any wrong in the surgery that is the subject of Trial-II and delivers to *T2* the external condemning evidence.

tions, and $T2$ can expect to pay D_1 . The parties' payoffs are summarized in Table 5 below.

	T1	T2
Deal	0	D_1
No Deal	$D_1/2$	$D_1/2+D_2$

Table 5: The Parties' Total Payoffs

From Table 5, it is easy to see that $T2$ will take the deal if $D_1 < D_1/2 + D_2$ or $D_2 > D_1/2$. A simple numerical example may be helpful. Suppose that in Trial-I the expected harm is $D_1 = \$10,000$. $T2$ will take the deal so long as $D_2 > \$5,000$. To illustrate, consider $T2$'s choices when D_2 is equal to \$6,000, \$20,000, and \$50,000. If $T2$ takes the deal, $T2$ can expect to pay \$10,000. By contrast, if $T2$ forgoes the deal, $T2$ can expect to pay substantially more: \$11,000 ($10K/2K + 6K$), \$25,000 ($10K/2K + 20K$), and \$55,000 ($10K/2K + 50K$) respectively.¹⁹⁷ As the example illustrates, the incentive to enter into the deal increases as the gap between the expected damages ($D_2 - D_1$) in the two trials grows.

The result is that in cases where the parties are involved in repeated activities, they may have an incentive to collude and suppress evidence. Once again, a collective liability regime, such as *res ipsa*, may incentivize the parties to "talk," not to provide truthful information that would identify the wrongdoer, but rather to reduce their total expected cost. Moreover, unlike Example C2, in Example C3, the collusion would allow $T2$ to reduce her exposure by falsely taking responsibility for the action of another and render a victim—the plaintiff in Trial 2—remediless.

The concern of collusion may be exacerbated due to the fact that the parties may have been "efficiently negligent,"¹⁹⁸ in the sense that their careless behavior was due to their human nature. People simply cannot avoid mistakes when they act repeatedly over time, even if they attempt to take care at all times. Drivers sometimes speed up or ignore a sign even when they try to drive carefully. Similarly, healthcare providers are not immune to human fallibilities. When the parties are efficiently negligent, the moral cost of colluding may be very low.¹⁹⁹

¹⁹⁷ If $T2$ forgoes the deal, $T2$ stands to pay half of the expected damage in Trial-I, \$5000 ($10K/2$). In addition, $T2$ stands to pay the expected damage, D_2 , in Trial-II as $T1$ will provide the damning evidence.

¹⁹⁸ See Grady, *supra* note 20, at 897–98 (explaining that, due to the high cost of consistent performance, actors often "commit[] efficient 'compliance errors'"—that is, inadvertent departure from the required rate of precaution).

¹⁹⁹ Courts do not exempt efficiently negligent doctors from liability, although at least one court exempted a lawyer who admitted his malpractice, perhaps because of the high compliance cost. See *id.*

III. THE INFORMATIONAL ROLE OF NEGLIGENCE

Collective liability suffers from another major problem that, to date, the prior literature ignored, and that weighs heavily against applying it. First and foremost, collective liability dulls the informational role of a negligence verdict. Consider first a negligence verdict against an individual service provider. The verdict serves a number of important functions. First, it alerts *future customers* that the service provider's practices fall below the acceptable standard of care.²⁰⁰ In the short run, this information may result in reduced demand, lower prices for the provider's services, and allow better providers to distinguish themselves.²⁰¹ In the long run, market forces may encourage the service provider to increase her quality to the acceptable level.

Second, a negligence verdict has a public good attribute in the sense that a verdict of carelessness inures to the benefit of the entire industry. It informs other *service providers* about the expected level of precaution, whether a certain procedure is outdated, and what steps they must take. For example, a negligence verdict against one producer informs others that a behavior (e.g., the use of a certain method) comes with higher expected liability.

By contrast, collective liability mutes these important signals. A verdict against a team of healthcare providers that relies on a collective liability doctrine such as *res ipsa* does not, by definition, identify the culprit. As a result, it does not help consumers avoid careless actors. The result could be a market for lemons.²⁰² If better providers are not able to distinguish themselves and com-

at 900–01. *Compare* Myers v. Beem, 712 P.2d 1092, 1093 (Colo. App. 1985) (concerning legal malpractice for failure to submit a complaint on time), with Ravi v. Williams, 536 So. 2d 1374, 1377–78 (Ala. 1988) (holding a surgeon liable for leaving a sponge in the patient's body), *abrogation recognized* by Houserman v. Garrett, 902 So. 2d 670 (Ala. 2004).

²⁰⁰ See David Dranove et al., *Delivering Bad News: Market Responses to Negligence*, 55 J.L. & ECON. 1, 2 (2012) (noting that “[o]bstetric patients may be relatively poorly informed about the quality of their obstetricians, and news about a negligent act, conveyed through lawsuits or word of mouth, could lead patients to revise their beliefs about quality”); Juan José Ganuza et al., *Product Liability Versus Reputation*, 32 J.L. ECON. & ORG. 213, 231–33, 34 (2016) (discussing the “signal to the market stemming from the specific court outcomes of the cases involving . . . a given firm” and showing that a liability regime can enhance market sanctions when consumers are able to observe legal outcomes and adjust buying behavior accordingly).

²⁰¹ See, e.g., Dranove et al., *supra* note 200, at 3, 9–14, 21–24 (demonstrating that obstetricians who were sued for medical malpractice saw an overall decrease in demand for their services); David W. Prince & Paul H. Rubin, *The Effects of Product Liability Litigation on the Value of Firms*, 4 AM. L. & ECON. REV. 44, 44, 64–71 (2002) (finding that with regard to pharmaceuticals, “the filing of a lawsuit, or news stories that subsequently lead to the filing of a lawsuit, is associated with significant losses in firm value” whereas the filed-against-firm’s competitors see greater market returns).

²⁰² See Akerlof, *supra* note 34, at 489 (explaining that when buyers cannot distinguish between high-quality products (which are costly to produce) and low-quality products (the “lemons”), sellers of high-quality products will not be able to command high prices and will exit the market); cf. Naci Mocan, *Can Consumers Detect Lemons? An Empirical Analysis of Information Asymmetry in the*

mand the high price that is necessary to maintain a high-quality service, they may need to either stop offering their services or reduce their quality. Moreover, such a verdict will not be able to inform other service providers as to the acceptable standard.

Furthermore, collective liability does not come with the same moral indignation and reputational harm that accompanies individual liability. Rather, it allows each defendant to maintain innocence and argue that only the others were careless. In other words, collective liability allows each defendant (including the injurer) to self-portray as a victim, not a villain. This latter insight may fuel the parties' incentives to collude in order to suppress information.

To illustrate, recall Example C2 where two of the defendants, *T* and *W*, asked the court to apply *res ipsa* against them and another defendant, *N*. If *W* takes the deal (and agrees to be subject to *res ipsa* together with *T*, the true tortfeasor), *W* would be held liable for something *W* did not do. But the cost of doing so may not be prohibitive. Even if *W* does not avoid the stigma of a court record, *W* will be fully indemnified by *T*, who would likely pay for *W*'s willingness to share the initial burden—*W*'s share of \$500,000.²⁰³ Importantly, for the conspiracy to work (i.e., for collective liability to apply), both *W* and *T* would have to deny responsibility. This, in turn, would allow *W* and *T* to maintain their innocence by blaming each other or just *N* (if *N* was not able to exculpate herself). In other words, collective liability creates a smokescreen—a veil of ignorance—that allows culpable parties to escape moral indignation and market sanctions.

Example C3, where *T2* agrees to take responsibility for *T1*'s actions in exchange for *T1*'s willingness to suppress evidence against *T2*, highlights another concern.²⁰⁴ Collective liability may result in *individual* liability, but against the wrong party, thereby tampering with the informational function of negligence. If *T2* fails to take the deal, *T2* will be found liable in Trial-I for something *T2* did not do (due to *res ipsa*), and in Trial-II for *T2*'s own wrongdoing (due to the damning evidence). By contrast, if *T2* takes the deal, *T2* would be liable for the lesser injury and may even escape the stigma of a court record (if *T2* admits, the parties will likely settle). Moreover, the lesser injury is more likely to be within the policy limit of *T2*'s medical malpractice insurance, thereby reducing *T2*'s personal (immediate monetary) cost to a fraction

Market for Child Care, 20 J. POPULAR ECON. 743, 743–44, 774 (2006) (finding that “the market for center-based child care has aspects of a ‘market for lemons’”).

²⁰³ See *supra* notes 188–189 and accompanying text (discussing Example C2 and the potential effect of insurance policies in such settings).

²⁰⁴ See *supra* notes 195–199 and accompanying text (discussing Example C3 and describing situations in which collective liability can encourage collusion).

of the harm caused. In both cases, however, the verdict will fail to serve its informational function. In fact, it may help disseminate false information.

This, of course, does not mean that collective liability should never be applied. In some circumstances, collective liability may be the best available option. The informational role of negligence and the detrimental effects discussed in Part II suggest that group liability should be applied with much caution and be avoided if better alternatives exist. Part IV below discusses such alternatives.

IV. RECONSIDERING COLLECTIVE LIABILITY

To date, the prior literature on collective liability focused on finding the culprit.²⁰⁵ The recognition that collective sanctions can adversely impact care and activity levels and incentivize collusion calls into question its usefulness and should be alarming to those who seek justice and efficiency. This Part explores two alternatives to the *Ybarra*-style collective liability regime and illustrates their effect using real-life examples. In deviation from the prior literature, both alternatives *abandon* the quest for the true injurer altogether. The first, discussed in Subpart IV.A, considers collective liability regimes that avoid the dilution trap (e.g., by adjusting damages upward). The second alternative, discussed in Subpart IV.B, explores the possibility of imposing liability on one chosen (likely innocent) party.

A. Collective Liability

1. Theory and Application

One possible alternative is not simply to hold everyone liable but also to ensure that the incentives to take care and monitor are not overly diluted. This can be done, for example, by requiring each member of the group to fully internalize the consequences of the injurer's actions.²⁰⁶ Many collective liability

²⁰⁵ See, e.g., Levmore, *supra* note 22, at 1561–64 (explaining how collective *res ipsa* can extract information that would identify the injurer). Grady posits that courts apply the doctrine in cases where compliance with the standard of care is especially difficult because, in such cases, “the defendant was probably negligent.” Grady, *supra* note 20, at 922–25 (arguing that *Byrne* is a “strong *res ipsa* case” because it involved a dangerous activity—moving barrels above a public sidewalk—that necessitated a high compliance rate); see also *supra* Subpart II.C.

²⁰⁶ See Levmore, *supra* note 22, at 1561–65. Levmore’s “overextraction” rule would require each group member to pay more than the damage incurred by the victim. Levmore lauds the ability of collective liability to force information out of witnesses. *Id.* His goal is to allow collective liability regimes to also persuade the *tortfeasor*, not just the witnesses, to confess. *Id.* By contrast, this Article doubts the ability of collective liability to extract useful information and shows that collective liability can result in suppression of information, lying, and inefficient levels of monitoring. These differences between Levmore’s solution and the solution proposed herein are not merely theoretical. Levmore’s article focuses on the *tortfeasor*, and accordingly, under his rule, “it is imperative that the target group contain the actual wrongdoer.” *Id.* at 1576. Conversely, this Article bypasses the identification prob-

regimes have taken this route. Consider, for example, the Twin Case discussed in the Introduction.²⁰⁷ The court required each of the brothers to fully pay child support. With two fathers, the child received a windfall. She was awarded twice the child support that a similarly situated child would receive. Yet, by doing so, the court ensured that the culprit fully internalized the consequences of his actions, thereby providing others with *ex ante* incentives to avoid similar harms. This approach also disincentivizes the defendants-twins from engaging in collusive behaviors. The One Strike Rule employs a similar solution.²⁰⁸ In the context of public housing, if one tenant (or a tenant's guest) engages in drug activity, all are evicted. The result is that each member of the household suffers the full breadth of the law, not just a fraction thereof.

Many historical and modern examples of collective liability regimes follow this pattern: they impose on each member of the group full responsibility for the culprit's actions. Consider, for example, the "nine familial exterminations" rule of the Qin and Tang dynasties in ancient China.²⁰⁹ The rule was a tactic to identify and eliminate political dissidents.²¹⁰ When one was suspected of a crime, nine levels of relatives were punished.²¹¹ These included the suspect's parents, grandparents, children, grandchildren, siblings and siblings-in-law, uncles and aunts and their spouses, cousins, spouse, and the spouse's parents.²¹²

Classrooms and the army are familiar forms of non-dilutable sanctions.²¹³ The act of one subjects everyone to the same severe sanctions. A recent example is the punishment of one thousand Canadian military cadets in 2018. A few

lem altogether. Instead, it would allow, under certain circumstances, to hold liable only one clearly innocent party (e.g., the hospital in a case like *Ybarra*). Moreover, Levmore's rule faces hurdles that require it to "remain[] a thought experiment." *Id.* at 1578. For example, the rule necessitates mechanisms that would allow the tortfeasor to confess anonymously or otherwise avoid additional penalties (beyond payment). *Id.* at 1575–76. The solutions pressed here, although not free of concerns and shortcomings, do not focus on the tortfeasor and do not require such mechanisms.

²⁰⁷ See *supra* notes 1–11 and accompanying text (discussing the facts of the Twin Case).

²⁰⁸ See *supra* notes 13–22 and accompanying text (explaining how authorities apply the One Strike Rule).

²⁰⁹ See F.W. Mote, *Fang Hsiao-ju*, in *DICTIONARY OF MING BIOGRAPHY*, 1368–1644, at 431–32 (L. Carrington Goodrich & Chaoying Fang eds., 1976); S.Y. Teng, *The Role of Family in the Chinese Legal System*, 11 *J. ASIAN HIST.* 121, 142 (1977).

²¹⁰ Meghan MacRae, *One Thousand Cuts . . . Terrifying Ancient Chinese Torture and Execution Methods*, *CVLT NATION* (Oct. 23, 2014), <https://cvltnation.com/one-thousand-cuts-terrifying-ancient-chinese-torture-and-execution-methods/> [<https://perma.cc/X293-NFGJ>] (recounting that, in one case, the emperor executed 873 individuals related to a scholar who refused to write the emperor's inaugural address).

²¹¹ *Id.*

²¹² *Id.*

²¹³ See, e.g., Irwin Lipnowski, *A Partial Rehabilitation of the Principle of Collective Punishment*, 8 *CAN. J.L. & SOC.* 121, 122–23 (1993).

cadets wore jeans during off-campus hours in violation of the institution's rules.²¹⁴ As a result, all one thousand cadets were confined to their rooms, had to endure inspections, and were required to parade in frigid weather without proper clothing.²¹⁵

The solution—holding the innocent and the culprit liable without overly diluting their liability—comes with a number of shortcomings. One concern is a moral hazard. When the expected award to the victim exceeds the victim's injury, the victim may be interested in being subject to accidents that would give rise to group liability.²¹⁶ The victim may even seek to collude with others to orchestrate such a tort. Another concern, likely a more serious one, is a reduction in activity levels. If an actor is unable to shield herself from liability by taking care—that is, when being faultless is not a defense (or impossible to prove)—she may try to avoid activities that may give rise to group liability.

These two insights help explain why the solution was applied in some cases but not others. In the Twin Case, requiring each brother to fully pay child support did not pose a substantial risk of moral hazard. It is unlikely that the verdict would incentivize would-be-mothers or fathers to engage in a similar activity to gain more child support for their offspring.

The second concern—a reduction in activity levels—also explains why the solution may be suitable in the examples above but not in other cases. Lower activity levels may be less of a concern—in fact, they may be the very reason—for holding faultless actors liable. This is the case when the behavior at stake is considered undesirable. For example, in the Twin Case, holding the innocent brother liable could encourage him to avoid impersonating his brother in the future. Similarly, in the context of the nine-familial-extirpations rule, class punishment, and army sanctions, collective liability may incentivize actors to chill speech when the speech is considered by the rule-maker (i.e., the emperor, teacher, or commander) to be undesirable.²¹⁷

²¹⁴ David Pugliese, *Updated—Battle Over Jeans at the Royal Military College Results in 1,000 Cadets Being Punished*, OTTAWA CITIZEN (Mar. 2, 2018), <https://ottawacitizen.com/news/national/defence-watch/battle-over-jeans-at-the-royal-military-college-results-in-1000-cadets-losing-privileges> [<https://perma.cc/48GZ-2DLD>].

²¹⁵ *Id.*

²¹⁶ Consider an accident with an expected harm of \$100. If each of five defendants will be required to fully compensate the victim, the latter can expect a net gain of \$400—the total compensation, \$500 (5x100), minus the actual damages, \$100. There are ways to mitigate the moral hazard concern. For example, a court can direct any compensation in excess of the victim's damage—the \$400 in the above example—to a third party (e.g., a charity).

²¹⁷ See *supra* notes 212–214 and accompanying text (discussing such examples).

2. Frankpledge & the One Party Pays Solution

The compulsory system of law enforcement and policing in medieval England, known as the frankpledge, is another famous example on which law and economic scholars rely. Saul Levmore, for example, explains that under the frankpledge, a tithing—that is, a “small groups of (at least ten) individuals—forfeited their bonds or deposits when one of their number escaped arrest for a crime.”²¹⁸ He then immediately draws an analogy to *res ipsa*. The frankpledge, he notes, “is surprisingly similar to the famous case of *Ybarra v. Spangard*, where a patient was able to recover from a number of health professionals for an injury sustained during an operation.”²¹⁹ Daryl Levinson draws a similar analogy. He explains that “[v]iewed functionally, pre-modern collective sanction regimes like blood feud and frankpledge seem continuous with similar regimes in more developed societies.”²²⁰ According to Levinson, modern analogs include *Ybarra* (i.e., collective *res ipsa*).²²¹ In such a case, he argues, collective liability has an “information forcing” feature.²²²

The analogy, however, is incomplete. The frankpledge, blood feuds, and military sanctions are very different from the liability imposed in *Ybarra*. To begin, collective sanctions such as the One Strike Rule and the Twin Case can be viewed as a form of strict liability.²²³ By definition, they impose liability on faultless members of the group. As explained above, a known side effect of holding innocent actors liable is a possible reduction in activity levels. The no-fault liability may be justified when the goal is to curb actions that are deemed undesirable or immoral. For example, in public housing, the “no-fault” eviction rule may incentivize tenants to socialize less if they are worried that their guests may bring drugs with them.²²⁴ And in the Twin Case, holding the innocent brother liable could result in less social fraud and what is, in essence, rape.

²¹⁸ Levmore, *supra* note 22, at 1562.

²¹⁹ *Id.*

²²⁰ Levinson, *supra* note 19, at 350.

²²¹ *Id.* at 379 (arguing that *Ybarra* exemplifies the “information-forcing feature of collective sanctions [that] is familiar from the frankpledge system, which was designed to motivate neighbors to help enforce the law by snitching on one another”).

²²² *Id.*

²²³ The Supreme Court in *Rucker* referred to the rule as a “no-fault” rule and one that imposes “[s]trict liability.” *Dep’t of Hous. & Urb. Dev. v. Rucker*, 535 U.S. 125, 134 (2002).

²²⁴ This was the court’s stated goal in *Rucker. Id.* (“With drugs leading to ‘murders, muggings, and other forms of violence against tenants,’ and to the ‘deterioration of the physical environment that requires substantial government expenditures,’ 42 U.S.C. § 11901(4) (1994), it was reasonable for Congress to permit no-fault evictions in order to ‘provide public and other federally assisted low-income housing that is decent, safe, and free from illegal drugs,’ § 11901(1) (1994).”).

Similarly, in the frankpledge, a compulsory system, there was no concern that imposing liability on the innocent members of the group would result in less individual enlisting for the tithing. By contrast, in the medical context, a reduction in activity levels is a source of much concern. For example, to shield themselves from liability for a harm they did not cause, physicians may decide to conduct fewer surgeries (even when a surgery is in the patient's best interest) or elect to specialize in non-surgical medicine.²²⁵

Res ipsa is also different in another important aspect from its purported analogs—the frankpledge and military sanctions. If taken as described, in these collective liability regimes, the act of one person imposes the same level of sanction on innocent parties. In the army context, if one cadet wears jeans, all of them must run in the rain. In the frankpledge system, each member of the tithing could lose his bond or deposit for one person's wrongdoing. In these cases, the expected sanction would not become diluted as the number of actors in the group increased. Collective res ipsa, however, is different. Because liability is often capped, as the number of actors increases, the individual expected liability of each actor may decrease.²²⁶ As Part II explained, the result could be inefficient levels of care and monitoring as well as the suppression of information. Res ipsa, in that sense, is more of an exception to the rule, rather than the rule that law and economic scholars portray it to be.²²⁷

Analogizing res ipsa to the frankpledge system may in fact be correct, but for the opposite reason: to show collective liability's shortcomings. There is evidence that at least some forms of the frankpledge system were very different from those described by legal scholars. Unlike its monolithic description in the literature on collective liability, the frankpledge system is subject to much confusion—not surprising given that the system originated around 1066, a millennium ago.²²⁸ Notwithstanding its description in the legal literature, there was no single, uniform frankpledge system.²²⁹ Rather, the frankpledge system took different forms in different localities and morphed over time.²³⁰ The number of people in the group also varied. In some cases, the number was as small as

²²⁵ See, e.g., Dillbary et al., *supra* note 112, at 487 (finding “evidence that psychiatrists may respond to increased levels of liability by screening and avoiding the patients that are most at risk for committing suicide”); J. Shahar Dillbary, *Multiple Causes and Stacked Inferences*, 176 J. INSTITUTIONAL & THEORETICAL ECON. 54, 68 (2020) (explaining how collective liability may adversely impact activity levels).

²²⁶ See *supra* Part II.

²²⁷ This may be due to the fact that res ipsa was designed to impose individual liability before it morphed, perhaps immaturely, into a collective liability regime.

²²⁸ Bruce R. O'Brien, *From Morðor to Murdrum: The Preconquest Origin and Norman Revival of the Murder Fine*, 71 SPECULUM 321, 332 (1996).

²²⁹ D.A. Crowley, *The Later History of Frankpledge*, 48 BULL. INST. HIST. RSCH. 1, 2–9 (1975) (exploring regional differences).

²³⁰ *Id.*

ten (a tithing) or lower, whereas in others, it included one hundred members or even an entire village—an important feature that the legal literature has ignored.²³¹

Importantly, according to leading accounts, dilution of liability was not only possible, but it may have also accounted for the decline of the frankpledge system. Some historians report that when the tithing failed to fulfill its mission, the fine was amerced on the tithing, implying that all members were responsible and accordingly that liability was *collective*, and as such subject to dilution.²³² Others are more explicit. William Morris, the leading frankpledge historian, reports that “if . . . the tithing failed to perform its duty, all were still amerced in *common*.”²³³

It is thus not a surprise that such forms of frankpledge resulted in collusion to suppress information—as Part II would predict. For example, H.R.T. Summerson reports cases where the frankpledge led vills to “close ranks against officials” and “unite to conceal a felony or protect a felon.”²³⁴ Morris focuses on another concern highlighted in Part II—a decreased incentive to monitor. He explains that as the number of the group members, n , increased, and the fine, D , remained constant, the individual incentive of each member to monitor dissipated:

To bring home to each locality a realizing sense of its responsibility, therefore, [in 1285] Edward I enacted a new law making people of each hundred and franchise responsible for robberies and damages arising through their failure to produce the offenders. The half-mark usually paid by the tithing for the escape of an offending member in the time of Henry II [i.e., the 1100s],—so heavy a burden that in some instances the sheriff seems to have been compelled to defer its collection for a year or even longer,—had now come to represent a far slighter value, the payment of which was *inadequate to spur the*

²³¹ Cf. *id.* at 3–7, 11 (describing the evolution of different tithings); O’Brien, *supra* note 228, at 322, 327.

²³² See, e.g., WILLIAM ALFRED MORRIS, THE FRANKPLEDGE SYSTEM 96, 99 (1910) (explaining that the fine was “exacted . . . from the tithing” and that the “tithing . . . paid the fine”); O’Brien, *supra* note 228, at 322 (reporting that “when a Frenchman was found slain, the districts surrounding the site would be amerced for a substantial fine unless the English identified or turned the slayer”).

²³³ MORRIS, *supra* note 232, at 108, 128 (emphasis added); see also STEPHEN C. YEAZELL, FROM MEDIEVAL GROUP LITIGATION TO THE MODERN CLASS ACTION 44 (1987) (“The penalty for [the tithing’s] failure in either of [its] tasks was a fine—again, imposed on the *collectivity* of the frankpledge . . .” (emphasis added)); Stephanie Juliano, *Superheroes, Bandits, and Cyber-Nerds: Exploring the History and Contemporary Development of the Vigilante*, 7 J. INT’L COM. L & TECH. 44, 50 (2012) (reporting that “if [one] member was fined, . . . the rest of the group could be held accountable”).

²³⁴ H.R.T. Summerson, *The Structure of Law Enforcement in Thirteenth Century England*, 23 AM. J. LEGAL HIST. 313, 317 (1979); see also YEAZELL, *supra* note 233, at 49–50.

*community to capture a fugitive neighbor with whom it was often in sympathy.*²³⁵

Note that as the number of members in the tithing, n , increased by a factor of 10 (from 10 to 100), the expected liability was reduced by the same factor (from D/n to $D/10n$).²³⁶

These accounts show that the frankpledge system (or at least some forms of it) was far from the ideal liability regime portrayed by the prior literature. It was ineffective and incentivized group members to lie and collude with others to lie.²³⁷ In summary, to the extent that the frankpledge can be analogized to *res ipsa*, it highlights many of the shortcomings and concerns that can plague collective liability regimes.

B. Imposing Liability on One (Non-Random) Innocent Party

Another solution that abandons the quest for identifying the culprit is to hold only one party, even if clearly innocent, liable for the culprit's behavior. The *single* faultless liable party should be the one in the best position to ex ante avoid the harm and ex post identify the injurers. To ensure adequate ex ante incentives, the actor should also be solvent enough to pay the expected judgment. Although imposing liability on one clearly innocent party may initially sound patently unfair, such a regime can be justified on economic and fairness grounds.

Consider, for example, the anti-graffiti ordinance proposed in 2009 by residents and local businesses of Orange County, California. The proposal came after annual graffiti abatement costs reached \$2.4 million.²³⁸ The ordinance proposed to hold faultless parents responsible for their minor children's actions. This included responsibility "for paying the fine, for paying restitution[,] for scrubbing out the graffiti [and] accompany[ing] their children for at least some of the community service."²³⁹ The underlying assumption—whether

²³⁵ MORRIS, *supra* note 232, at 152 (emphasis added).

²³⁶ The individual liability, $D/10n$, decreased even further to $D/20n$ as "[t]he actual sum collected . . . in the reign of Edward I, as well as in the reigns of his son and grandson, was often . . . just half the original amount." *Id.* at 152–53.

²³⁷ It was clear by the late 1200s that the frankpledge had failed to fulfill its primary objects. *Id.* at 151–52.

²³⁸ Doug Irving, *Santa Ana Residents Want To Punish Parents for Graffiti*, ORANGE CNTY. REG. (June 8, 2009), <https://www.ocregister.com/2009/06/08/santa-ana-residents-want-to-punish-parents-for-graffiti> [https://perma.cc/7XHN-9N7S].

²³⁹ *Id.*; see also SANTA ANA, CAL., CODE ORDINANCES § 10-224.1 (2020) (imposing collective liability on the parents and their "minor for payment of all fines"); SANTA ANA, CAL., CODE ORDINANCES § 10-229(a) (imposing collective liability for abatement expenses on a minor engaged in graffiti violations and on "parent(s) or legal guardian(s) having custody and control of the minor"); SANTA ANA, CAL., CODE ORDINANCES § 10-229(d) (extending parents' liability to "all costs to the

factually correct or not—must have been that the parents are in the best position to control their children.²⁴⁰

Another example is the frankpledge system. Recall that because the fine was collectively imposed on a group of actors, the individual liability of each was diluted and so was the incentive of each to monitor. The dilution concern was mitigated to some extent by nominating one (and in some cases, two) members as chief pledge. Chief pledges were men who “had the security of at least a modest holding of land and a permanent place in the village community.”²⁴¹ Part of their role was to collect from members of the tithing the amounts amerced on the group. Because most members were poor and there was no right of contribution, the chief pledge had more at stake. Chief pledges “occupied the unenviable position of being responsible to courts for the behavior of the groups they represented, without being able to invoke the aid of those courts to call the members to task.”²⁴² It is thus not surprising that some concluded that “collective behavior was in fact ‘thinly disguised individualism.’”²⁴³ In other words, the chief pledge’s incentive to see that the group succeeded in its tasks was stronger than that of the other group members. Being at high risk of solely paying the amount owed by the tithing, the chief pledge had a strong motivation and the authority to select reliable members, replace incompetent ones, and take other actions to mitigate their liability.²⁴⁴

city or any person or business incurred in connection with the removal of graffiti caused by conduct of said minor, and for all attorney’s fees, court costs, and civil penalties incurred in connection with the civil prosecution of any claim for damages or reimbursement up to twenty-five thousand dollars”).

²⁴⁰ By contrast, under the common law, parents are not vicariously liable for their children. KEETON ET AL., *supra* note 43, § 123, at 913. When only one tenant is the formal lessee, as was the case with Ms. Rucker, the One Strike Rule can be viewed, at least on its face, as a modern version of the one-innocent-party-pays-all solution. However, because the sanction—an eviction—works equally against all members of the household, the rule incentivizes each member to monitor against drug activities. As such, it seems to fall under the first solution—group liability. *See supra* note 14 (discussing an eviction case involving the federal One Strike Rule).

²⁴¹ Crowley, *supra* note 229, at 3; *see* MORRIS, *supra* note 232, at 104–05.

²⁴² YEAZELL, *supra* note 233, at 86, 89 (“[W]hen the chief pledge returned from the view of frankpledge with the inevitable news that the tithing had been amerced? . . . [L]iability simply lay where it fell, with the representative of the group bearing individual responsibility for collective obligations.”); *see also* MORRIS, *supra* note 232, at 103; Crowley, *supra* note 229, at 3–4.

²⁴³ YEAZELL, *supra* note 233, at 89 (quoting FREDERIC W. MAITLAND, TOWNSHIP AND BOROUGHS 78 (1898)).

²⁴⁴ MORRIS, *supra* note 232, at 108–09 (discussing the chief pledge’s ability to “keep the best possible men in the position,” have “troublesome person transferred” and fulfill his collection duties); Crowley, *supra* note 229, at 3–4. The chief pledge position was so unpopular that some tried to escape it, even by paying a large bribe. MORRIS, *supra* note 232, at 110; *see also* YEAZELL, *supra* note 233, at 89; Crowley, *supra* note 229, at 10 (reporting that “[i]n the thirteen-fifties surety obligations were removed from the chief pledges” so that they were only “held responsible for tithingmen failing to attend the view, but even that degree of corporate responsibility . . . was abandoned by 1357”).

Medical cases like *Ybarra* and *Anderson* are also good candidates for such an alternative regime. In these cases, both practice and theory teach us that attempts to identify the injurer by imposing collective liability are futile.²⁴⁵ By contrast, holding the hospital—the one party who clearly did not injure the victim—liable for the injurer’s actions may mitigate many of the concerns highlighted above. Importantly, liability should be imposed only on one party (e.g., the hospital or the chief surgeon).

To begin with, such a regime will eliminate the ills of diluted liability. As the sole liable party, the hospital will have a strong incentive to ex ante invest in care, select the best procedure and machinery, hire and contract with the appropriate healthcare providers, and ensure that they are adequately trained. Second, the hospital is also in the best position to monitor and reduce doctors’ compliance errors—the main rationale underlying *res ipsa* according to many.²⁴⁶ The hospital can do so by requiring healthcare providers to use techniques or supply machinery that would reduce the risk of avoidable harm, by instituting procedures that would reduce the rate of compliance errors and installing monitoring devices.

Additionally, the hospital—as the only liable party—will also have the incentive and likely the means to identify the true injurer. It is true that finding the culprit will not exculpate the hospital (liability would be absolute).²⁴⁷ However, identifying the injurer will allow the hospital to reduce future exposure. This is especially so given the repeat nature of the activity at hand: doctors and nurses engaging in multiple surgeries. The hospital is also uniquely positioned to produce identifying evidence that would help it track and punish the culprit. It can do so by using recording technology and by creating logs of proper chains of custody over instruments and unconscious patients. Moreover, as the sole liable party overseeing multiple surgeries, the hospital will also have the incentive to accumulate and review injury data in order to identify healthcare providers who fail (or likely failed) to meet the standard of care, even if they did not cause a serious injury or were not sued by patients.²⁴⁸

Holding the hospital liable comes with other benefits. Hospital insurers will likely act as a second monitoring agent and put pressure on the hospital to

²⁴⁵ See *supra* notes 173–179 and accompanying text (discussing how, in some situations, collective liability may incentivize actors to collude and lie, rather than provide information that would identify the tortfeasor).

²⁴⁶ See *supra* notes 33, 164–179 and accompanying text (reviewing the prior literature); Grady, *supra* note 20, at 907–12.

²⁴⁷ The discussion here is by no means exhaustive. One can envision a number of alternative regimes that would avoid the dilution trap and still maintain the hospital’s incentives.

²⁴⁸ Reputation and competition—two related market mechanisms—may provide a similar incentive, but due to the structure of the market for healthcare services and the local monopolies enjoyed by certain hospitals, they may not be effective enough.

properly monitor its healthcare providers. The fact that the hospital, patients, and insurance companies are all bound by a contractual framework will likely result in better and more transparent risk-spreading effort. It would also help set the price of medical services at the proper level. It may even lead to better competition between hospitals (where such competition is possible).²⁴⁹

Finally, it should be noted what this solution is not. Under this proposed alternative, the solely liable (and possibly innocent) party *cannot* be chosen randomly. The reason is that a random selection would also have a dilutive effect. With a group of n actors, a random selection means that each group member faces a $1/n$ chance of being selected, and thus each has an expected liability of D/n . Rather, a rule that imposes liability on one innocent actor should specify *ex ante* who will be the solely liable party in case of an injury.

CONCLUSION

Collective liability—defined as the imposition of liability on a group that may include innocent actors—is commonplace. From ancient to modern times, legislators, regulators, courts, and market actors were, and still are, willing to impose such liability when they believe that the culprit is a member of the group.

Although collective liability regimes are ubiquitous, they remain under-theorized and under-studied. The few articles that have investigated the effects of communal liability regimes justify their application on two grounds: deterrence and information-sharing. This Article questions these rationales and demonstrates that, in some cases, collective liability regimes may lead to the opposite results and perverse outcomes. This Article reveals that imposing liability on many may lead to under-deterrence. Group liability can even incentivize actors to aggravate injuries, inflate the group size, and engage in new forms of offensive and defensive practices.

The Article also shows that cross-monitoring can be impossible, inefficient, and ineffective. Even when cross-monitoring is justified, tort law raises hurdles that make cross-monitoring infeasible or sub-optimal. The information-extraction rationale is also limited. Using a simple model, the Article shows that, contrary to conventional wisdom, communal liability may incentivize parties to suppress evidence and provide false information, either unilat-

²⁴⁹ One could argue that like collective liability, holding one innocent party liable—a form of absolute liability—creates a veil of ignorance that mutes important signals to consumers and producers alike. However, unlike collective liability, which may incentivize parties to suppress information and lie, the imposition of liability on one innocent party who is better able to take care, monitor, and incentivize others to do the same, should mitigate the concern. Furthermore, the reputational damage may not fall on the actual injurer, but it will fall on the hospital, thereby providing a clear market signal to third parties.

erally or in collusion with others. These findings call into question the usefulness of collective liability regimes and should concern those who seek justice and efficiency alike.

This Article continues to challenge the prior literature by also showing that not all collective liability regimes are equal. Some (like *res ipsa*) raise more concerns than others. This Article ends with a call for much caution in applying collective liability regimes. It recommends the re-institution of anti-dilution measures that were removed by many tort reforms, and it offers two alternatives that could remedy the ills that plague many collective liability regimes without falling into the identification trap.