Eggshell Economics: A Revolutionary Approach to the Eggshell Plaintiff Rule

STEVE P. CALANDRILLO* & DUSTIN E. BUEHLER†

For more than a century, courts have universally applied the eggshell plaintiff rule, which holds tortfeasors liable for the full extent of the harm inflicted on vulnerable "eggshell" victims. Liability attaches even when the victim's condition and the scope of her injuries were completely unforeseeable ex ante.

This Article explores the implications of this rule by providing a pioneering economic analysis of eggshell liability. It argues that the eggshell plaintiff rule misaligns parties' incentives in a socially undesirable way. The rule subjects injurers to unfair surprise, fails to incentivize socially optimal behavior when injurers have imperfect information about expected accident losses, and fails to account for risk aversion, moral hazard, and judgment-proof problems. Additionally, the eggshell plaintiff rule dulls victims' incentives to take care and to self-protect.

To solve these problems, this Article proposes a revolutionary approach to eggshell liability: courts should reject the eggshell plaintiff rule and replace it with a foreseeability rule. Under this approach, tortfeasors would be liable only for the reasonably foreseeable scope of victims' injuries. Insurance markets would then step in to compensate eggshell victims for unforeseeable losses, thereby preserving the compensatory role served by the traditional eggshell plaintiff rule without compromising optimal behavioral incentives for injurers and victims.

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* Charles I. Stone Professor of Law, University of Washington School of Law, stevecal@uw.edu; J.D., Harvard Law School; B.A., University of California at Berkeley.

† Assistant Professor of Law, University of Arkansas School of Law, dbuehler@uark.edu; J.D., University of Washington School of Law; B.A., Willamette University.

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I. INTRODUCTION

A customer slips and falls in a store, suffering an unusually rare and severe fracture of his femur.[1] He sues the store for negligence.[2] Although the store admits its negligence, it argues it should not be liable for the unusual and

[1] The following factual scenario is based loosely on *Gresham v. Petro Stopping Centers, LP*, No. 3:09-cv-00034-RCJ-VPC, 2011 WL 1748569, at *1 (D. Nev. Apr. 25, 2011).

[2] Slip-and-fall incidents are remarkably common, leading to thousands of lawsuits each year. *See Protecting Ourselves from Slips, Trips and Falls*, NAT'L SAFETY COUNCIL, http://www.nsc.org/safety_home/Resources/Pages/Falls.aspx (last visited Aug. 1, 2012) (noting that in 2007 alone, "more than 21,700 Americans died as a result of falls and more than 7.9 million were injured by a fall").

unforeseeable scope of the injury.[3] To support its argument, the store introduces evidence suggesting that the customer could have done more to prevent the severity of his injuries.[4] The evidence shows that a treatable disease has dramatically weakened his bones for more than a decade,[5] in part because he never bothered to seek diagnosis.[6] The court rejects this argument out of hand, however, simply noting that "defendants take plaintiffs as they find them."[7]

In doing so, the court relies on the eggshell plaintiff rule, "[t]he principle that a defendant is liable for a plaintiff's unforeseeable and uncommon reactions to the defendant's negligent or intentional act."[8] Under the rule, a defendant at fault is liable for the full extent of plaintiff's injuries, even if the plaintiff possesses preexisting conditions that dramatically worsen the harm.[9] Most alarmingly, liability attaches even when the plaintiff's vulnerable condition and the scope of the resulting injuries were completely unforeseeable.[10] The practical consequence is that a defendant can be on the hook for extraordinary damages arising from relatively ordinary conduct.[11]

This makes the eggshell plaintiff rule an odd duck in modern tort law. During the last century, the common law of torts moved away from rigid strict liability rules, toward malleable notions of foreseeability.[12] And yet courts left the eggshell plaintiff rule's sharp edges and harsh consequences "virtually

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[3] *See, e.g.*, Glamann v. Kirk, 29 P.3d 255, 258 (Alaska 2001); *see also Gresham*, 2011 WL 1748569, at *4 (noting that defendant seeks to introduce evidence of plaintiff's preexisting condition).

[4] *See Gresham*, 2011 WL 1748569, at *3–4.

[5] *See Health Guide: Osteoporosis*, N.Y. TIMES, http://health.nytimes.com/health/guides/disease/osteoporosis/overview.html (last visited Aug. 1, 2012) ("Osteoporosis is a disease in which bones become fragile and more likely to fracture. Usually the bone loses density, which measures the amount of calcium and minerals in the bone.").

[6] *See id.* (discussing diagnosis and treatment methods for osteoporosis).

[7] Vidrine v. Sentry Indem. Co., 341 So. 2d 558, 563 (La. Ct. App. 1976); Shia v. Chvasta, 377 S.E.2d 644, 648 (W. Va. 1988).

[8] BLACK'S LAW DICTIONARY 593 (9th ed. 2009). Alternatively, courts and scholars call this the "eggshell-skull rule," the "thin-skull rule," the "special-sensitivity rule," or the "old-soldier's rule." *Id.*

[9] *See* Bruneau v. Quick, 447 A.2d 742, 750–51 (Conn. 1982); McCahill v. N.Y. Transp. Co., 94 N.E. 616, 617–18 (N.Y. 1911); RESTATEMENT (SECOND) OF TORTS § 461 (1965).

[10] *E.g.*, Gibson v. Cnty. of Washoe, 290 F.3d 1175, 1192–93 (9th Cir. 2002); Brackett v. Peters, 11 F.3d 78, 81 (7th Cir. 1993); Schafer v. Hoffman, 831 P.2d 897, 900 (Colo. 1992); *see also* W. PAGE KEETON ET AL., PROSSER AND KEETON ON THE LAW OF TORTS 291 (5th ed., Lawyer's ed. 1984).

[11] *See, e.g.*, Bartolone v. Jeckovich, 481 N.Y.S.2d 545, 546–47 (N.Y. App. Div. 1984) (finding a driver in a "minor" car accident liable for $500,000 because the other driver's "relatively minor . . . whiplash" turned into a debilitating mental disorder).

[12] Jane Stapleton, *Legal Cause: Cause-in-Fact and the Scope of Liability for Consequences*, 54 VAND. L. REV. 941, 989 (2001); *see also* Palsgraf v. Long Island R.R. Co., 162 N.E. 99, 99–101 (N.Y. 1928).

untouched."[13] The rule is a doctrinal dinosaur—"one of the few unchanged surviving elements of our ancient legal heritage."[14]

Perhaps the eggshell plaintiff rule has survived because it comports with tort law's general goal of compensating victims for their injuries.[15] To some extent, the rule appeals to our sense of justice because it shifts the burden of accident costs from victims to tortfeasors.[16] And some scholars argue that eggshell liability is essential for tort law's deterrence function—if courts were to impose liability only for the foreseeable extent of harm, tortfeasors would not internalize the full cost of their actions and would have diluted incentives to take care and prevent injuries.[17]

Whatever the rationale, the eggshell plaintiff rule is universally accepted and widely applied.[18] All American jurisdictions award eggshell damages.[19] Hundreds of judicial opinions have relied on the eggshell plaintiff rule during the last decade alone.[20] Indeed, the rule is so well established that scholars have largely ignored it.[21] Everyone apparently accepts the wisdom of the eggshell plaintiff rule, as well as its role in American tort law.

Everyone, that is, except us. Instead of taking the traditional arguments at face value, this Article explores the true effects of eggshell liability by

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[13] Gary L. Bahr & Bruce N. Graham, *The Thin Skull Plaintiff Concept: Evasive or Persuasive*, 15 LOY. L.A. L. REV. 409, 418 (1982).

[14] *Id.* at 410.

[15] *See* KEETON ET AL., *supra* note 10, at 6.

[16] *See* RICHARD A. EPSTEIN, CASES AND MATERIALS ON TORTS 524 (7th ed. 2000); *see also* William J. Harte, Note, *Liability for the Aggravation of a Pre-Existing Condition: Including the Allergy Factor*, 34 NOTRE DAME LAW. 224, 224 (1958) ("One of weak physical structure has as much right to protection from bodily harm as a robust athlete."); Anna I. Shinkle, Note, *Taking the Plaintiff as You Find Him*, 16 DRAKE L. REV. 49, 50 (1966) (noting that in eggshell cases, justice is better served if the consequences of the eggshell injury fall upon the negligent defendant rather than the innocent plaintiff).

[17] *See* VINCENT R. JOHNSON & ALAN GUNN, STUDIES IN AMERICAN TORT LAW 422–28 (4th ed. 2009); WILLIAM M. LANDES & RICHARD A. POSNER, THE ECONOMIC STRUCTURE OF TORT LAW 250 (1987).

[18] *See* McAllister Towing of Va., Inc. v. United States, No. 2:10cv595, 2012 WL 1438770, at *26 (E.D. Va. Apr. 25, 2012) (citing the "universally accepted" eggshell plaintiff rule); *accord In re* Kinsman Transit Co., 338 F.2d 708, 724 (1964).

[19] RESTATEMENT (THIRD) OF TORTS: LIAB. FOR PHYSICAL & EMOTIONAL HARM § 31 cmt. b, reporters' note (2005) ("Every United States jurisdiction adheres to the thin-skull rule; more precisely, extensive research has failed to identify a single United States case disavowing the rule.").

[20] The following search, run through Westlaw's All State and Federal Cases database, yielded 233 cases: "thin skull" "eggshell skull" "eggshell plaintiff" ("defendant takes" /5 (plaintiff victim) /5 finds /5 (him her them)) & da(aft 7/1/2002 & bef 7/1/2012) (query last performed Aug. 1, 2012).

[21] *See* Bahr & Graham, *supra* note 13, at 410 ("Tucked neatly away in a crevice of Prosser's Mount Proximate Cause, the thin skull principle has been interred by decades of dogmatic legal apathy.").

providing a pioneering economic analysis of the eggshell plaintiff rule.[22] In particular, the Article uses economic theory to determine whether the rule provides proper incentives for parties to take optimal actions ex ante that reduce accident losses and social costs.[23]

We argue that the eggshell plaintiff rule significantly misaligns parties' incentives in a socially undesirable way. The rule subjects injurers to unfair surprise, fails to incentivize socially optimal behavior when injurers have imperfect information about expected accident losses, and fails to account for the effects of risk aversion, moral hazard, and judgment-proof problems. Additionally, by offering compensation for the full extent of injuries, the eggshell plaintiff rule dulls victims' incentives to take care and self-protect against losses.

To better align the incentives of injurers and victims alike, this Article proposes a revolutionary approach: courts should reject the eggshell plaintiff rule and replace it with a foreseeability rule. Under this approach, injurers would not be liable for the unusual or unforeseeable extent of harm suffered by vulnerable victims. Instead, insurance markets would compensate eggshell plaintiffs for unforeseeable losses.

This Article proceeds in three parts. Part II briefly examines the development of the eggshell plaintiff rule, from its origins in nineteenth-century case law to the current debate over the rule's proper application. This Part shows that the eggshell plaintiff rule subjects tortfeasors to potentially limitless liability, as long as the tortfeasor was at fault and her actions were a cause in fact of the eggshell victim's injuries.

Part III provides an unprecedented economic analysis of the eggshell plaintiff rule. It argues that eggshell liability misaligns the behavioral incentives of both injurers and victims. Generally, injurers are ignorant of the true extent of liability and misestimate expected damages, leading them to exercise sub-optimal levels of care and activity. To the extent that risk-averse injurers are aware of the eggshell plaintiff rule, the possibility of exorbitant liability for unforeseeable consequences induces them to exercise too much care and engage in too little activity. Moreover, because victims receive full compensation under the eggshell plaintiff rule, they have no incentive to discover their vulnerabilities and self-protect.

Finally, Part IV outlines our proposal for a foreseeability-based approach to eggshell liability. Tortfeasors would be liable only for the reasonably

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[22] Economic analysis of the eggshell plaintiff rule is virtually nonexistent, consisting of no more than a few fleeting references. *See, e.g.*, RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW 238–39 (8th ed. 2011) (briefly mentioning eggshell liability); STEVEN SHAVELL, FOUNDATIONS OF ECONOMIC ANALYSIS OF LAW 236–37 (2004) (same).

[23] Economic analysis of the law involves "application of economic theory and econometric methods to examine the formation, structure, processes, and impact of law and legal institutions." Charles K. Rowley, *Public Choice and the Economic Analysis of Law*, *in* LAW AND ECONOMICS 123, 125 (Nicholas Mercuro ed., 1989).

foreseeable extent of victims' injuries, regardless of whether they injure an eggshell victim, a "normal" victim, or an unusually resilient "steel skull" victim. Although the tort system would no longer compensate eggshell victims for the full extent of their injuries, private or social insurance would serve this purpose. Ultimately, a foreseeability approach would enhance certainty, incentivize injurers to behave optimally, and encourage eggshell victims to self-protect and insure themselves against risk.

II. EVOLUTION OF THE EGGSHELL PLAINTIFF RULE

The eggshell plaintiff rule originated in nineteenth-century case law, when American and English courts began imposing liability on defendants for the full extent of damages caused to physically vulnerable plaintiffs.[24] Initially, courts limited the rule to cases involving victims whose preexisting conditions were purely physical.[25] Over time, many courts extended application of the eggshell plaintiff rule to cases involving mental harm and economic injury.[26] Considerable debate regarding the scope of the rule continues today, despite its universal acceptance in American jurisdictions and its entrenchment in state common law.[27]

A. *Historical Origins of the Rule*

The eggshell plaintiff rule was born in concept, if not in name, in 1891. That year, the Wisconsin Supreme Court decided the seminal case of *Vosburg v. Putney*.[28] In a common childhood altercation, twelve-year-old George Putney kicked fourteen-year-old Andrew Vosburg in the shin in a classroom in Waukesha, Wisconsin.[29] Unbeknownst to Putney, Vosburg had injured his leg the month before in a sledding accident.[30] The kick aggravated the previous

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[24] *See infra* Part II.A.

[25] *See infra* Part II.B.

[26] *See infra* Part II.C.

[27] *See infra* Part II.D.

[28] 50 N.W. 403 (Wis. 1891). *Vosburg* has somewhat of a cult following among law professors—the Wisconsin Supreme Court's two-page opinion has spawned hundreds of pages of analysis in law reviews. *See, e.g.*, James A. Henderson, Jr., *Why* Vosburg *Comes First*, 1992 WIS. L. REV. 853, 853; Elizabeth M. Jaffe, *Cyberbullies Beware: Reconsidering* Vosburg v. Putney *in the Internet Age*, 5 CHARLESTON L. REV. 379, 379 (2011); Robert L. Rabin, Vosburg v. Putney *in Three-Part Disharmony*, 1992 WIS. L. REV. 863, 863; Marshall S. Shapo, *Knowing Foul from Fair:* Vosburg, Garratt *and One Long Fly Ball*, 37 WASHBURN L.J. 243, 243 (1998); Zigurds L. Zile, Vosburg v. Putney*: A Centennial Story*, 1992 WIS. L. REV. 877, 877.

[29] *Vosburg*, 50 N.W. at 403; *see also* Zile, *supra* note 28, at 883–85 (providing a detailed account of the circumstances surrounding Putney's infamous kick).

[30] *See Vosburg*, 50 N.W. at 403; Zile, *supra* note 28, at 880–81.

injury and eventually led to Vosburg's permanent incapacitation.[31] The court found Putney liable for all damages arising as a result of the kick, even though he did not intend the harm, nor was he aware of Vosburg's previous injury.[32] According to the court, "the wrongdoer is liable for all the injuries resulting directly from the wrongful act, whether they could or could not have been foreseen by him."[33]

Other courts began adopting similar rules.[34] For example, in a Minnesota case decided eight years after *Vosburg*,[35] a salesman sprained his ankle while exiting a train, developed inflammatory rheumatism because of the sprain, and died from inflammation of the heart.[36] The court concluded that plaintiff's predisposition to rheumatism was immaterial and held the defendant liable "even though he could not have foreseen the particular results which did in fact follow."[37]

The term "thin skull" plaintiff finally emerged in 1901, when an English court decided *Dulieu v. White & Sons*.[38] In *Dulieu*, a negligently driven horse van crashed into a pub.[39] A pregnant woman working behind the bar suffered severe shock as a result of the crash, became seriously ill, and gave premature

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[31] The *Waukesha Freeman* reported at the time that "Vosburg was confined to his bed for a long time, is now unable to go without crutches, and will probably be a cripple for life." Zile, *supra* note 28, at 903 (quoting *Still A-Troubling*, WAUKESHA FREEMAN, Oct. 24, 1889, at 1).

[32] *Vosburg*, 50 N.W. at 403. The context of Putney's kick may have influenced the court's conclusion on liability. The court suggested that it might not have held Putney liable had he kicked Vosburg "upon the play-grounds of the school" while "engaged in the usual boyish sports," instead of doing so after class "had been called to order by the teacher, and after the regular exercises of the school had commenced." *Id.*

[33] *Id.* at 404.

[34] *See, e.g.*, Montgomery & E. Ry. Co. v. Mallette, 9 So. 363, 366 (Ala. 1891) (holding the defendant liable for aggravating plaintiff's prior injury); Freeman v. Mercantile Mut. Accident Ass'n, 30 N.E. 1013, 1014 (Mass. 1892) ("An injury which might naturally produce death in a person of a certain temperament or state of health is the cause of his death, if he dies by reason of it, even if he would not have died if his temperament or previous health had been different."); Hawkins v. Front St.-Cable Ry. Co., 28 P. 1021, 1024 (Wash. 1892) (allowing a plaintiff to recover when defendant's negligence caused her child to be stillborn, despite evidence of "insufficient nourishment"), *overruled on other grounds by* Brown v. Brown, 675 P.2d 1207, 1213 (Wash. 1984).

[35] Keegan v. Minneapolis & St. Louis R.R. Co., 78 N.W. 965, 965 (Minn. 1899).

[36] *Id.* at 965.

[37] *Id.*; *see also* Spade v. Lynn & Bos. R.R., 52 N.E. 747, 748 (Mass. 1899) (holding that "if the defendant's servant did commit an unjustifiable battery on the plaintiff's person, the defendant must answer for the actual consequences of that wrong to her as she was, and cannot cut down her damages by showing that the effect would have been less upon a normal person").

[38] [1901] 2 K.B. 669 at 679 (Eng.).

[39] *Id.*

birth.[40] The court awarded the woman damages, reasoning that it is "no answer to the sufferer's claim for damages that he would have suffered less injury or no injury at all, if he had not had an unusually thin skull or an unusually weak heart."[41]

B. *Development of the Doctrine*

The eggshell plaintiff rule soon developed into a doctrine used by courts to award damages in cases involving a variety of preexisting physical conditions. As Jacob Stein notes, these cases generally fall into four categories.[42] First, courts apply the rule when defendants unearth a latent condition ailing plaintiffs.[43] For example, in *Reed v. Union Pacific Railroad Co.*,[44] the plaintiff was injured when his truck hit an exposed replacement rail as he crossed the defendant's train tracks, aggravating an unknown, preexisting degenerative disk condition.[45] A federal appellate court held that the plaintiff was entitled to a jury instruction on the eggshell plaintiff rule; the fact that his condition was previously unknown was of no consequence.[46]

Second, the rule applies when a defendant's negligence re-activates a plaintiff's preexisting condition that had subsided due to treatment.[47] In *Bruneau v. Quick*,[48] the defendant performed an operation on the plaintiff's feet, which worsened an existing foot condition that the plaintiff had struggled with her entire life.[49] The defendant argued that his actions did not aggravate an unknown preexisting condition.[50] The court nonetheless concluded that application of the eggshell plaintiff rule was appropriate and held the defendant

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[40] *Id.*

[41] *Id.* at 679.

[42] *See* JACOB A. STEIN, 2 STEIN ON PERSONAL INJURY DAMAGES § 11:1 (3d ed.).

[43] *Id.* ("An illustration of this principle is a case involving a plaintiff with diabetes, who is apparently in good health prior to the defendant's conduct."); *see, e.g.*, Stoleson v. United States, 708 F.2d 1217, 1221 (7th Cir. 1983); Owen v. Dix, 196 S.W.2d 913, 915 (Ark. 1946); Intermill v. Heumesser, 391 P.2d 684, 687 (Colo. 1964); Knoblock v. Morris, 220 P.2d 171, 174 (Kan. 1950); Royer v. Eskovitz, 100 N.W.2d 306, 308 (Mich. 1960); Nelson v. Twin City Motor Bus Co., 58 N.W.2d 561, 563 (Minn. 1953); Watford v. Morse, 118 S.E.2d 681, 683 (Va. 1961); Reeder v. Sears, Roebuck & Co., 250 P.2d 518, 522 (Wash. 1952).

[44] 185 F.3d 712 (7th Cir. 1999).

[45] *Id.* at 714.

[46] *Id.* at 716–17.

[47] STEIN, *supra* note 42, § 11:1; *see, e.g.*, Wise v. Carter, 119 So. 2d 40, 43 (Fla. Dist. Ct. App. 1960); Dzurik v. Tamura, 359 P.2d 164, 165 (Haw. 1960); Walters v. Smith, 158 A.2d 619, 621 (Md. 1960); Rawson v. Bradshaw, 480 A.2d 37, 41 (N.H. 1984); Watson v. Wilkinson Trucking Co., 136 S.E.2d 286, 291 (S.C. 1964); Cobb v. Waddell, 369 S.W.2d 743, 746 (Tenn. Ct. App. 1963).

[48] 447 A.2d 742 (Conn. 1982).

[49] *Id.* at 744–45.

[50] *Id.* at 750.

liable for injuries that were "different in degree" because of plaintiff's condition.[51]

The third eggshell plaintiff category imposes liability on defendants if their actions aggravate known, preexisting conditions that have not yet received medical attention.[52] For example, in *Glamann v. Kirk*,[53] the defendant's car rear-ended the plaintiff's truck, resulting in severe headaches from whiplash and cervical spine injuries.[54] The defendant argued that she should not be liable for the extent of the injuries, on the theory that plaintiff's headaches had been caused in part by a fractured jaw from a prior car accident.[55] The Alaska Supreme Court rejected the argument and held defendant liable for the full extent of plaintiff's injuries.[56]

Finally, the eggshell plaintiff rule applies when a tortfeasor accelerates an inevitable disability or loss of life due to a condition possessed by the plaintiff, even when the injury would have eventually occurred in the absence of defendant's negligent conduct.[57] *McCahill v. New York Transportation Co.*[58] provides a representative example of this category of eggshell plaintiff cases. In that case, one of the defendant's employees negligently drove a taxi and struck the plaintiff, who suffered from alcoholism.[59] After sustaining various broken bones, the plaintiff died in the hospital from a condition associated with alcoholism.[60] The court affirmed an award of additional damages even though plaintiff's alcoholism likely would have eventually resulted in his premature death.[61]

In addition to these four categories, a few other features of the eggshell plaintiff rule bear mentioning. First, the rule extends to injuries that do not

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[51] *Id.* at 751.

[52] STEIN, *supra* note 42, § 11:1 ("For example, a patient who has been found to have an active case of diabetes can be treated with insulin. However, an injury may make the disease materially more difficult to control or may result in complications. Such a result is properly described as an aggravation of the preexisting condition."); *see, e.g.*, Maurer v. United States, 668 F.2d 98, 99–100 (2d Cir. 1981); Pozzie v. Mike Smith, Inc., 337 N.E.2d 450, 453 (Ill. App. Ct. 1975); Reed v. Harvey, 110 N.W.2d 442, 448 (Iowa 1961); Louisville Taxicab & Transfer Co. v. Hill, 201 S.W.2d 731, 733 (Ky. 1947); Gallardo v. New Orleans Steamboat Co., 459 So. 2d 1215, 1217 (La. Ct. App. 1984); Gregory v. Shannon, 367 P.2d 152, 154 (Wash. 1961).

[53] 29 P.3d 255, 261 (Alaska 2001).

[54] *Id.* at 257–58.

[55] *Id.* at 258.

[56] *Id.* at 261.

[57] STEIN, *supra* note 42, § 11:1; *see, e.g.*, Henderson v. United States, 328 F.2d 502, 504 (5th Cir. 1964); Holman v. T.I.M.E. Freight, Inc., 236 F. Supp. 462, 469 (W.D. Ark. 1964); Bemenderfer v. Williams, 745 N.E.2d 212, 218 (Ind. 2001); Hebenstreit v. Atchison Topeka & Santa Fe Ry. Co., 336 P.2d 1057, 1061 (N.M. 1959).

[58] 94 N.E. 616, 617–18 (N.Y. 1911).

[59] *Id.* at 617.

[60] *Id.*

[61] *Id.* at 618.

immediately manifest themselves at the time of the defendant's tortious action.[62] Second, the defendant must be at fault for the eggshell plaintiff rule to apply—in order to trigger the rule, the court must first conclude that the defendant breached a duty, and the breach caused the plaintiff's harm.[63] Third, the rule imposes liability even when plaintiffs possess vulnerabilities of their own making.[64]

Some scholars view the eggshell plaintiff rule "as an extension of the foreseeability test, which does not require the *extent* of the injury to be foreseeable, only the *type*."[65] Others view eggshell liability as an outright exception to rules requiring foreseeability.[66] Indeed, "courts are usually candid in recognizing that unforeseen personal injuries are not subject to the general proximate cause rule that harm be foreseeable."[67]

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[62] For example, the Supreme Court of North Carolina has allowed recovery for a plaintiff who developed injuries three months after the defendant's negligent acts. Lockwood v. McCaskill, 138 S.E.2d 541, 546–47 (N.C. 1964).

[63] DAN B. DOBBS & PAUL T. HAYDEN, TORTS AND COMPENSATION: PERSONAL ACCOUNTABILITY AND SOCIAL RESPONSIBILITY FOR INJURY 222 (3d ed. 1997).

[64] In *Thompson v. Lupone*, for instance, an obese plaintiff suffered first-degree burns when a waitress negligently spilled hot coffee on her. 62 A.2d 861, 862 (Conn. 1948). The plaintiff also slammed her knee against the counter in reaction to her burns. *Id.* The plaintiff's knee injury failed to improve in part because of her obesity, yet she still received compensation. *Id.* at 862–63. The Connecticut Supreme Court upheld the award by reciting the familiar eggshell plaintiff refrain: injurers must take victims as they find them. *Id.* at 863.

[65] JOHN L. DIAMOND ET AL., UNDERSTANDING TORTS 221 (2000); *see also* EMERGING ISSUES IN TORT LAW 126 (Jason W. Neyers et al. eds., 2007) (noting that the question of what is foreseeable "is usually framed in terms of whether the damage that has occurred was of the *same type* as the damage that was foreseeable"; as long as "the type or kind of damage could have been foreseen, it does not matter that its extent or the precise manner of its occurrence could not have been foreseen"); DAVID W. ROBERTSON ET AL., CASES AND MATERIALS ON TORTS 180 (3d ed. 2004) (distinguishing between type and extent of harm and noting that in eggshell cases, the defendant will be liable "if some injury of the general *type* plaintiff sustained was a foreseeable consequence of defendant's negligent conduct, although the *extent* of the injuries may be quite unexpected" (emphasis added)).

[66] JOHN L. DIAMOND, CASES AND MATERIALS ON TORTS 269–70 (2d ed. 2008).

[67] *Id.* at 270; *see also* KEETON ET AL., *supra* note 10, at 292 (noting that there have been "a considerable number of more or less unclassifiable cases of what can only be described as freak accidents of a preposterous character, in which the fact that the defendant could not possibly have foreseen the harm to the plaintiff has been held to be no bar to recovery"); P. J. Rowe, *The Demise of the Thin Skull Rule?*, 40 MOD. L. REV. 377, 387 (1977) (suggesting that the "unwillingness of many judges, especially in personal injury cases, to particulari[z]e the damage but to look at it 'broadly' is an indication of a desire to compensate the injured without becoming over-involved in distinctions between different kinds or types of injury").

C. *Eggshell Extensions: Mental Harm and Economic Injury*

In recent decades, courts have extended the eggshell plaintiff rule to psychological harms[68] and economic injuries.[69] When it comes to psychological harm, plaintiffs in most jurisdictions may now invoke the eggshell plaintiff rule to recover for physical and emotional harms resulting from preexisting psychological conditions.[70] For instance, in *Bonner v. United States*,[71] the court held the defendant liable for emotional injuries resulting from a car accident.[72] In that case, the plaintiff became permanently disabled months after the initial accident.[73] The treating physician found that the accident set in motion a series of events leading to psychiatric illness.[74] After concluding that the accident was a cause in fact of the plaintiff's mental illness, the court held the defendant liable for this psychological harm.[75]

Courts have also employed the eggshell plaintiff rule to impose liability for economic harm resulting from unforeseen or unknowable damage to property.[76]

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[68] *See, e.g.*, Tompkins v. Cyr, 202 F.3d 770, 780 (5th Cir. 2000); Jenson v. Eveleth Taconite Co., 130 F.3d 1287, 1294–95 (8th Cir. 1997); Wakefield v. NLRB, 779 F.2d 1437, 1438 (9th Cir. 1986); McBroom v. Iowa, 226 N.W.2d 41, 45–46 (Iowa 1975); Thames v. Zerangue, 411 So. 2d 17, 19–20 (La. 1982); Freyermuth v. Lutfy, 382 N.E.2d 1059, 1064 & n.5 (Mass. 1978). *But see* Munn v. Algee, 924 F.2d 568, 576 (5th Cir. 1991) (refusing to extend the eggshell plaintiff rule to preexisting mental conditions).

[69] *See, e.g.*, Martin v. Cnty. of L.A., No. B142528, 2002 WL 31117056, at *8 (Cal. Ct. App. Sept. 25, 2002); Colonial Inn Motor Lodge, Inc. v. Gay, 680 N.E.2d 407, 416 (Ill. App. Ct. 1997); *see also* RESTATEMENT (THIRD) OF TORTS: LIAB. FOR PHYSICAL & EMOTIONAL HARM § 31 cmt. d (2005) (noting that the eggshell plaintiff rule "is applicable to property, as well"); Richard W. Wright, *The Grounds and Extent of Legal Responsibility*, 40 SAN DIEGO L. REV. 1425, 1491 (2003) (noting that, under the eggshell plaintiff rule, "the defendant must take the plaintiff and the plaintiff's property as the defendant finds them"). *But see* Rowe, *supra* note 67, at 381 ("The thin skull rule is said not to apply to damage to property, although authority is sparse.").

[70] *See* AARON D. TWERSKI & JAMES A. HENDERSON, JR., TORTS: CASES AND MATERIALS 258 (2d ed. 2008). *See generally* Candice E. Renka, Note, *The Presumed Eggshell Plaintiff Rule: Determining Liability When Mental Harm Accompanies Physical Injury*, 29 T. JEFFERSON L. REV. 289 (2007). Courts also have held tortfeasors liable for aggravation of emotional distress brought about by negligent third-party treatment of an injury. *See, e.g.*, Stoleson v. United States, 708 F.2d 1217, 1221 (7th Cir. 1983) (citing Butzow v. Wausau Mem'l Hosp., 187 N.W.2d 349, 352–53 (Wis. 1971); Heims v. Hanke, 93 N.W.2d 455, 459 (Wis. 1958).

[71] 339 F. Supp. 640 (E.D. La. 1972).

[72] *Id.* at 641, 650.

[73] *Id.* at 646.

[74] *Id.* at 647.

[75] *Id.* at 650.

[76] This extension of the eggshell plaintiff rule seems to be conceptually rooted in the classic English tort law case, *In re Polemis & Furness, Withy & Co.*, [1921] 3 K.B. 560 (Eng.). *See* TWERSKI & HENDERSON, *supra* note 70, at 260 (noting the similarities between the *Polemis* case and eggshell plaintiff cases). In *Polemis*, one of the defendant's servants

For example, in *Colonial Inn Motor Lodge, Inc. v. Cincinnati Insurance Co.*,[77] a slow-moving car backed into a hotel's air-conditioning unit, ruptured a gas line, and caused an explosion that damaged the building.[78] The hotel owner sued the motorist to recover for the resulting property damage.[79] The defendant argued "the explosion was too bizarre to be a natural and probable consequence of slowly backing a car into the building."[80] The court rejected this argument, holding that liability extends to unforeseeable harms as long as the defendant's negligence caused the injury in fact.[81] It based its ruling on the eggshell plaintiff rule, even though "the evidence suggests that a building rather than a person may have had an 'eggshell skull.'"[82]

D. *Current Debate*

Expansion of the eggshell plaintiff rule has not been without controversy. Most notably, debate continues today over the rule's application to mental or psychological harm. J. Stanley McQuade argues in favor of this application,[83] criticizing proposals to limit recovery to mental harms that an ordinary person would sustain, or harms "reactivat[ed]" or "exacerbat[ed]" when tortfeasors have prior notice of a plaintiff's eggshell status.[84] Because psychological trauma is almost always the result of a "prior predisposing condition[]," McQuade argues that courts should treat mental harms the same way that they treat preexisting physical conditions.[85]

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dropped a wooden plank on a ship's hold, which happened to contain cans of benzene that were leaking flammable vapors. *In re Polemis & Furness, Withy & Co.*, [1921] 3 K.B. at 562–63. The plank caused a spark that ignited the vapors and destroyed the ship. *Id.* The court held that plaintiffs were entitled to full judgment, and reasoned that the fact that the resulting damage was "not the exact kind of damage one would expect is immaterial, so long as the damage is in fact directly traceable to the negligent act." *Id.* at 577. In other words, "[o]nce the act is negligent, the fact that its exact operation was not foreseen is immaterial." *Id.*

[77] 680 N.E.2d 407 (Ill. App. Ct. 1997).

[78] *Id.* at 410–11.

[79] *Id.* at 409.

[80] *Id.* at 414.

[81] *Id.* at 416.

[82] *Id.*

[83] *See generally* J. Stanley McQuade, *The Eggshell Skull Rule and Related Problems in Recovery for Mental Harm in the Law of Torts*, 24 CAMPBELL L. REV. 1 (2001).

[84] *Id.* at 6–7.

[85] *Id.* at 39. *But see* Scott M. Eden, Note, *I Am Having a Flashback . . . All the Way to the Bank: The Application of the "Thin Skull" Rule to Mental Injuries*—Poole v. Copland, Inc., 24 N.C. CENT. L.J. 180, 181 (2001) (noting that "mental injury may be completely subjective in its diagnosis, origin, and treatment," and that extension of the "thin skull" rule to these types of injuries "may create a flood of claims alleging that present outrageous conduct has caused a past traumatic event to resurface").

Mark Levy and Saul Rosenberg disagree, and maintain that mental harm should not receive the same treatment as physical harms.[86] They contend that an overbroad eggshell plaintiff rule "confuse[s] subsequence with consequence"—assigning liability for psychological injuries simply on the basis of causation-in-fact grossly oversimplifies the underlying causes of such injuries.[87]

Using Post-Traumatic Stress Disorder[88] as an example, Levy and Rosenberg argue that the eggshell plaintiff rule is inadequate to explain the "complex constellation of interdependent factors that contribute to actual, as well as merely alleged, mental damages."[89] They suggest that potential eggshell plaintiffs undergo thorough investigations of their lives prior to and after any injury sustained due to negligent conduct.[90] Such inquiries would produce a "far more scientifically accurate" determination of whether the alleged harms arose from the defendant's conduct or from the plaintiff's preexisting mental condition.[91] Levy and Rosenberg's proposed approach resists automatic burden shifting and seeks to achieve a reliable method for calculating damages.[92]

Another current—and controversial—debate surrounds the eggshell plaintiff rule's application to religious beliefs. Some commentators argue that the rule should not extend to damages that result from a person's religious

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[86] Mark I. Levy & Saul E. Rosenberg, *The "Eggshell Plaintiff" Revisited: Causation of Mental Damages in Civil Litigation*, 27 MENTAL & PHYSICAL DISABILITY L. REP. 204, 204 (2003).

[87] *Id.* at 205.

[88] As Levy and Rosenberg explain:

> Posttraumatic Stress Disorder (PTSD) may develop 30 days or so after a person experiences a life-threatening event that engenders extreme feelings of helplessness, fear, or horror. PTSD is the only psychiatric diagnosis where causation is *implied* by the diagnosis, that is, the condition is *assumed* to be a reaction to the life-threatening event that preceded it. Consequently, it is one of the few psychiatric conditions where the concept of a mentally fragile plaintiff possessing particular vulnerabilities or "risk factors" may indeed apply.

Id.

[89] *Id. But see* Rachel V. Rose et al., *Another Crack in the Thin Skull Plaintiff Rule: Why Women with Post Traumatic Stress Disorder Who Suffer Physical Harm from Abusive Environments at Work or School Should Recover from Employers and Educators*, 20 TEX. J. WOMEN & L. 165, 168 (2011) (arguing that "abusive behavior in educational and work environments can cause physical harm to PTSD sufferers and open the negligent actors up to tort law liability under the universally accepted 'thin skull' plaintiff rule").

[90] Levy & Rosenberg, *supra* note 86, at 205–06.

[91] *Id.* at 206.

[92] *See id.* In addition to causation issues, scholars also have considered the more fundamental question of the rule's fairness in psychological cases. *See* EMERGING ISSUES IN TORT LAW, *supra* note 65, at 127 (suggesting that psychiatric harm and physical injury appear to be distinct forms of damages in cases where the plaintiff suffers a minor physical injury but has a "constitutional predisposition to psychiatric harm," undercutting the rationale for applying the eggshell plaintiff rule to mental injuries).

convictions (e.g., a refusal to accept blood transfusions).[93] Others suggest that religious beliefs constitute an integral component of each human being, analogous to preexisting mental and physical conditions.[94] As such, injuries exacerbated by religious strictures should qualify for additional damages under the eggshell plaintiff rule.[95] Although the debate is far from settled, courts considering this issue have so far refused to include religious beliefs in the category of preexisting conditions that trigger the eggshell plaintiff rule.[96]

Most recently, discussion has focused on the eggshell plaintiff rule's implications in the media age. For example, Annika Martin argues that the rule should be extended to victims of pro-eating disorder websites, to hold those websites liable for exacerbating eating disorders.[97] Martin notes that other media tort cases have considered the psychological state of victims, and contends that viewers of pro-eating disorder websites are eggshell victims due to their psychological vulnerabilities.[98]

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[93] *See, e.g.*, Beth Linea Carlson, Comment, *"Blood and Judgment": Inconsistencies Between Criminal and Civil Courts When Victims Refuse Blood Transfusions*, 33 STETSON L. REV. 1067, 1081–82 (2004) (arguing that, unlike preexisting physical or mental conditions, religious beliefs are based on voluntary and conscious reasoning and thus should not give rise to eggshell vulnerability).

[94] *See, e.g.*, Anne C. Loomis, Comment, *Thou Shalt Take Thy Victim as Thou Findest Him: Religious Conviction as a Pre-existing State Not Subject to the Avoidable Consequences Doctrine*, 14 GEO. MASON L. REV. 473, 493–98 (2007); Jennifer Parobek, Note, *God v. The Mitigation of Damages Doctrine: Why Religion Should Be Considered a Pre-Existing Condition*, 20 J.L. & HEALTH 107, 110 (2007); Jeremy Pomeroy, Note, *Reason, Religion, and Avoidable Consequences: When Faith and the Duty to Mitigate Collide*, 67 N.Y.U. L. REV. 1111, 1152 (1992); *see also* Marc Ramsay, *The Religious Beliefs of Tort Victims: Religious Thin Skulls or Failures of Mitigation?*, 20 CAN. J.L. & JURISPRUDENCE 399, 400 (2007) (arguing that "religious victims' choices occur within a highly protected zone of personal choice" and, as a result, "constitutional commitments to religious freedom and equality require us to treat these choices as reasonable ones").

[95] *See* Pomeroy, *supra* note 94, at 1156.

[96] *See, e.g.*, Munn v. Algee, 924 F.2d 568, 576 (5th Cir. 1991); Williams v. Bright, 658 N.Y.S.2d 910, 915 (N.Y. App. Div. 1997); *see also* TWERSKI & HENDERSON, *supra* note 70, at 259 ("While the thin skull rule encompasses most injuries flowing directly from the defendant's negligent conduct, plaintiffs who suffer special injuries as a result of religious beliefs or past mental trauma may not take advantage of the rule.").

[97] Annika K. Martin, *"Stick a Toothbrush Down Your Throat": An Analysis of the Potential Liability of Pro-eating Disorder Websites*, 14 TEX. J. WOMEN & L. 151, 173–74 (2005). According to Martin, "pro-eating disorder" websites include sections that list low calorie foods, and provide advice on how to avoid eating and hide an eating disorder. *Id.* at 155. Additionally, the websites generally include "'inspiring' photographs of extremely thin celebrities and fashion models." *Id.* at 155 n.19.

[98] *Id.* at 174. Although Martin admits that it would be difficult to determine whether the harm resulted from a particular website or from plaintiff's preexisting condition, she nonetheless concludes that defendants operating such websites could potentially be liable for some of the harm under the existing eggshell plaintiff rule. *Id.*

In sum, the eggshell plaintiff rule is now a universally accepted principle, although the rule's exact scope remains in flux. Under the rule, defendants take plaintiffs as they find them and are liable for the full extent of the harm they cause. Liability is based on plaintiffs' preexisting physical and mental makeup, not on the foreseeable extent of damages.

III. EGGSHELL ECONOMICS: EXAMINING THE RULE'S BEHAVIORAL INCENTIVES

With this background in mind, we examine the behavioral incentives of the eggshell plaintiff rule. We start by articulating the need for an economic analysis of the rule.[99] Next, we outline the basic economic argument in favor of eggshell liability: the rule arguably preserves tort law's deterrence function by tying damages to actual harm, ensuring that injurers internalize the full cost of their actions.[100] We then critique this argument by describing the ways in which the eggshell plaintiff rule misaligns private and social incentives.[101] Our discussion initially focuses on the rule's effect on the incentives of injurers,[102] and then examines its effect on victims' incentives.[103] We conclude that the eggshell plaintiff rule misaligns parties' incentives in socially undesirable ways.

A. *Revisiting the Rule: The Need for an Economic Analysis*

The American tort system serves three primary policy goals: deterrence of wrongful conduct, corrective justice, and victim compensation.[104] Historically, tort law played an especially important role in making victims whole, as insurance markets did not develop until the late nineteenth century, and plaintiffs had no other means of obtaining compensation for their injuries.[105] Despite the extensive development of insurance markets in the twentieth century, there remains a strong belief today that one of the primary purposes of

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[99] *See infra* Part III.A.

[100] *See infra* Part III.B.

[101] *See infra* Part III.C–D.

[102] *See infra* Part III.C.

[103] *See infra* Part III.D.

[104] *See* F. Patrick Hubbard, *The Nature and Impact of the "Tort Reform" Movement*, 35 HOFSTRA L. REV. 437, 445–47 (2006); Nancy L. Manzer, Note, *1986 Tort Reform Legislation: A Systematic Evaluation of Caps on Damages and Limitations on Joint and Several Liability*, 73 CORNELL L. REV. 628, 638–39 (1988); *see also* SHAVELL, *supra* note 22, at 268 (noting that tort law is rooted in the "classical and intuitively appealing notion of corrective justice, that a wrongdoer should compensate his victim").

[105] SHAVELL, *supra* note 22, at 269; *see also* Henry Hansmann & Reinier Kraakman, *Toward Unlimited Shareholder Liability for Corporate Torts*, 100 YALE L.J. 1879, 1926 (1991) ("Liability insurance was poorly developed in the middle of the nineteenth century. Weak actuarial data and the regionalism of insurance markets limited opportunities to diversify risks.").

tort law is to "restore injured parties to their original condition, insofar as the law can do this, by compensating them for their injury."[106]

Because the eggshell plaintiff rule exemplifies the notions of victim compensation and corrective justice, several scholars view the rule as "expressly moral."[107] And yet application of the rule can be anything but fair. Depending on the case, one's sense of justice could favor a slightly negligent injurer who faces financial ruin if forced to fully compensate the victim for unforeseeable, extraordinary losses. In *Bartolone v. Jeckovich*,[108] for example, a driver in a car accident was ordered to pay $500,000 because the injured driver's "relatively minor" whiplash progressed into a debilitating mental disorder.[109] Given the facts of the case, one could reasonably argue that the outcome was unjust.

More than a century has passed since courts began using the eggshell plaintiff rule.[110] Rather than continuing to assume the rule's veracity, courts and scholars should critically examine the rule's behavioral incentives. We do so through an economic approach, which focuses primarily on reducing risk through the adoption of legal rules that deter harmful conduct and provide incentives toward safety.[111]

Economic analysis takes into account several principles that are not always considered by a traditional tort law analysis. Most notably, it seeks to maximize social welfare, defined as the sum of the benefits from a particular action, minus its social costs.[112] Liability is set at a level that ensures that the only persons who engage in a particular activity are those who obtain more utility from their actions than the harm they cause to society.[113] Under an economic approach, the

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[106] VICTOR E. SCHWARTZ ET AL., PROSSER, WADE, AND SCHWARTZ'S TORTS: CASES AND MATERIALS 1–2 (12th ed. 2010).

[107] Camille A. Nelson, *Considering Tortious Racism*, 9 DEPAUL J. HEALTH CARE L. 905, 957 (2005) (explaining the theory that "the innocent plaintiff, however vulnerable or peculiar, should not bear the costs of the accident"); *see also* Dennis Klimchuk, *Causation, Thin Skulls and Equality*, 11 CAN. J.L. & JURISPRUDENCE 115, 116 (1998) (arguing that "the principle of equality requires that we adopt the thin skull rule").

[108] 481 N.Y.S.2d 545 (N.Y. App. Div. 1984).

[109] *Id.* at 546.

[110] *See* Vosburg v. Putney, 50 N.W. 403, 404 (Wis. 1891).

[111] *See* SHAVELL, *supra* note 22, at 268 (noting that "if the liability system has a real purpose today, it must lie in the creation of incentives to reduce risk"); *see also* W. KIP VISCUSI, REFORMING PRODUCTS LIABILITY 89–94 (1991) (arguing that tort liability should be imposed when there is "a failure to fully appreciate the risks that are present").

[112] *See, e.g.*, A. Mitchell Polinsky & Steven Shavell, *The Uneasy Case for Product Liability*, 123 HARV. L. REV. 1437, 1440 n.7 (2010) (summarizing the "social welfare-maximizing" goal underlying the economic analysis of the law, with citations to several leading authorities).

[113] Importantly, the economic approach recognizes that "not all injuries can or even should be deterred"—in other words, some activity is desirable even though it will result in harm as well. Dustin E. Buehler & Steve P. Calandrillo, *Baseball's Moral Hazard: Law, Economics, and the Designated Hitter Rule*, 90 B.U. L. REV. 2083, 2096 (2010); Steve P.

primary goal of our liability system is the optimal alignment of private and social behavioral incentives—not compensation of victims per se—because accident insurance is widely available to accomplish the latter purpose.[114]

B. *The Basic Argument in Favor of the Eggshell Plaintiff Rule*

The few scholars who have briefly examined the economics of eggshell plaintiffs assume that the current rule properly aligns injurers' incentives.[115] Richard Posner and Steven Shavell cite the rule in support of their general argument that tort damages should equal the actual harm caused by injurers.[116] By tying damages to actual harm (rather than a "foreseeable" level of harm), liability rules ensure that injurers fully internalize the harm they cause, preserving tort law's deterrence function even when multiple levels of harm are possible.[117]

A simple unilateral accident model illustrates the economic allure of the eggshell plaintiff rule as part of a damages-equal-actual-harm approach.[118] Suppose that someone owns a vicious (but beloved) dog that is prone to biting people.[119] Assume that 90% of victims would sustain "normal" damages of $100 from a dog bite, and that 10% would suffer $10,000 in damages because

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Calandrillo, *Responsible Regulation: A Sensible Cost-Benefit, Risk Versus Risk Approach to Federal Health and Safety Regulation*, 81 B.U. L. REV. 957, 979 (2001); *see also* SHAVELL, *supra* note 22, at 179 (noting that "the optimal level of care may well not result in the lowest possible level of expected accident losses").

[114] *See* MARK C. RAHDERT, COVERING ACCIDENT COSTS 42 (1995) ("First-party health and/or accident insurance is now widely available to many potential victims, usually through the relatively efficient mechanism of group policies maintained by employers."); *see also* Douglas H. Cook, *Personal Responsibility and the Law of Torts*, 45 AM. U. L. REV. 1245, 1266–68 (1996) (discussing the utilization and availability of insurance).

[115] *See, e.g.*, POSNER, *supra* note 22, at 238–39; SHAVELL, *supra* note 22, at 236–37.

[116] POSNER, *supra* note 22, at 238; SHAVELL, *supra* note 22, at 236–37; *see also* Louis Kaplow & Steven Shavell, *Fairness Versus Welfare*, 114 HARV. L. REV. 961, 1333 (2001) (referencing the argument that "the valuations employed in measuring tort damages or in performing cost-benefit analysis . . . should reflect actual harm rather than victims' uninformed ex ante estimates").

[117] *See* SHAVELL, *supra* note 22, at 236–37 (noting that if damages fall short of actual harm, incentives to reduce risk will be inadequate, and if expected damages exceed harm, incentives to reduce risk will be too high). This calculation also assumes "rational" actors. "That is, they are forward looking and behave so as to maximize their expected utility." *Id.* at 1.

[118] In unilateral accidents, "the actions of injurers but not of victims are assumed to affect the probability or severity of losses." Steven Shavell, *Strict Liability Versus Negligence*, 9 J. LEGAL STUD. 1, 1 (1980). In bilateral accident scenarios, "potential victims as well as injurers may influence the probability or magnitude of accident losses." *Id.* at 6.

[119] *See* SHAVELL, *supra* note 22, at 197 (describing a similar hypothetical).

they are particularly vulnerable to bites (e.g., they are unusually susceptible to bacterial infections, or have brittle skin or bones).[120]

Suppose also that the owner's willingness to walk her dog in less populated areas of the city affects the probability of dog bites. If the owner exercises no care and walks the dog in her heavily populated neighborhood, there is a 30% chance of a dog bite. Alternatively, for a cost of $10 the owner can exercise a moderate level of care by driving to a less dense neighborhood,[121] which reduces the probability of a dog bite to 10%. And for a cost of $20, the owner can exercise a high level of care by driving to a remote area of town, reducing the chance of a dog bite to 5%.[122]

The following table shows the expected accident losses and social costs associated with the levels of care described above[123]:

Table 1: *Level of Care, Accidents, and Social Costs*

Level of Care	Cost of Care	Accident Probability	Expected Accident Losses	Total Social Costs
None	0	30%	*30% x (90% x 100 + 10% x 10,000)* = 327	*0 + 327* = 327
Moderate	10	10%	*10% x (90% x 100 + 10% x 10,000)* = 109	*10 + 109* = 119
High	20	5%	*5% x (90% x 100 + 10% x 10,000)* = 54.5	*20 + 54.5* = 74.5

The table illustrates that it is socially desirable for the owner to exercise a high level of care by driving to a remote area of town—the total social cost of doing so is $74.50 (the $20 cost of care plus $54.50 in expected accident losses to both normal and eggshell victims).[124] These social costs are significantly less

[120] These assumptions regarding the severity of harm and the proportion of normal versus eggshell victims are purely hypothetical; we use them merely to illustrate one possible outcome under our model. Obviously policymakers should adjust these numbers to reflect available accident data.

[121] The hypothetical $10 cost of care could conceivably include the cost of gas, vehicle depreciation, lost time, etc.

[122] Assume for the sake of simplicity that the various probabilities of risk and costs of care in this model are constant. In other words, the costs of care and associated probabilities of dog bites are not affected by other variables, such as time of day, day of the week, weather, etc.

[123] For a similar model and table illustrating the relationship between the care of injurers and accident risks, see SHAVELL, *supra* note 22, at 179.

[124] *See id.* at 178 (identifying the "social goal" of an economic approach as the "minimization of the sum of the costs of care and of expected accident losses").

than the social costs associated with no care ($327) or a moderate level of care ($119).[125] Thus, the law should incentivize the owner to exercise a high level of care in order to maximize social welfare.[126]

Assuming that a dog owner has perfect information regarding the relevant costs of care and accident probabilities, the eggshell plaintiff rule will incentivize her to exercise an optimal level of care.[127] This is true regardless of whether the rule is used in tandem with strict liability or negligence.[128] If courts apply the eggshell plaintiff doctrine with *strict liability* rules, the owner is liable for all of the harm her dog causes, including any injuries to eggshell plaintiffs.[129] The owner will internalize the full social cost of her actions and will exercise high care to minimize her total expected costs.[130] And if courts instead apply the eggshell plaintiff doctrine with *negligence* rules, that approach also induces optimal behavior as long as courts set the due care standard to equal high care.[131] If that is the case, the dog owner will exercise a high level of care to avoid liability altogether.[132]

In addition to the eggshell plaintiff rule's effect on the level of care, the rule arguably induces injurers to engage in an optimal level of activity, at least when strict liability applies. Generally, it is socially desirable for an individual to continue to engage in an activity as long as the utility he gains exceeds total

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[125] *See id.* (comparing the total social costs of various levels of care).

[126] Although in our example it is socially optimal for the injurer to exercise the highest possible level of care, this will not always be the case. If the marginal increase in the cost of care exceeds the marginal decrease in expected accident losses, it is possible (and perhaps likely) that the optimal level of care will be moderate, not high. *See id.* at 179.

[127] *See* POSNER, *supra* note 22, at 238–39 (suggesting that the eggshell plaintiff rule induces socially optimal behavior); SHAVELL, *supra* note 22, at 229 (discussing the effect of parties' misperception of risk and the level of due care).

[128] In reality, most states have imposed some form of strict liability for dog bites, although the law varies by jurisdiction. *See* Hilary M. Schwartzberg, Note, *Tort Law in Action and Dog Bite Liability: How the American Legal System Blocks Plaintiffs from Compensation*, 40 CONN. L. REV. 845, 857 (2008); Rebecca F. Wisch, *Quick Overview of Dog Bite Laws*, ANIMAL LEGAL & HIST. CENTER (2004), http://www.animallaw.info/articles/qvusdogbite.htm (last visited Aug. 1, 2012).

[129] *See* POSNER, *supra* note 22, at 226–31 (outlining the economics of strict liability); SHAVELL, *supra* note 22, at 179–80 (same).

[130] Explained in more detail, the dog owner would exercise a high level of care under a strict-liability-plus-eggshell-plaintiff-rule regime because the total expected cost of $74.50 (the $20 cost of care, plus $54.50 in expected liability resulting from accidents with 5% probability) is less than the total expected cost of $327 if she exercises no care, and it is also less than the total expected cost of $119 if she exercises a moderate level of care.

[131] It is debatable whether courts actually set the due care standard at optimal levels. *See* SHAVELL, *supra* note 22, at 224–29.

[132] *See* Shavell, *supra* note 118, at 2 (noting that "under the negligence rule all that an injurer needs to do to avoid the possibility of liability is to make sure to exercise due care if he engages in his activity"); *see also* POSNER, *supra* note 22, at 213–17; SHAVELL, *supra* note 22, at 180.

social costs (costs of care plus expected accident losses).[133] Using the example described above, suppose that legal rules properly incentivize the dog owner to exercise an optimal level of care—each time of day she walks her dog the cost of care is $20, and expected accident losses are $54.50.[134] Suppose also that the dog owner derives $100 in utility the first time each day she walks her dog, $50 in utility the second time she walks her dog, and only $30 in utility the third time she walks her dog.[135]

The following table shows the utility and total social costs associated with the levels of activity described above[136]:

Table 2: *Level of Activity, Utility, and Social Costs*

Level of Activity	Total Utility	Cost of Care	Expected Accident Losses	Total Cost	Utility Minus Cost
0	0	0	0	0	0
1	100	20	54.5	*20 + 54.5* = 74.5	*100 – 74.5* = 25.5
2	150	40	109	*40 + 109* = 149	*150 – 149* = 1
3	180	60	163.5	*60 + 163.5* = 223.5	*180 – 223.5* = -43.5

This table illustrates that it is socially desirable for the owner to walk the dog only once per day because that level of activity maximizes social welfare at $25.50. Additional walks are socially undesirable because the increase in total cost exceeds the marginal increase in the dog owner's utility.[137]

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[133] SHAVELL, *supra* note 22, at 193; *see also* T. Randolph Beard et al., *Tort Liability for Software Developers: A Law & Economics Perspective*, 27 J. MARSHALL J. COMPUTER & INFO. L. 199, 219 (2009) (noting that "when the level of activity is added to the model, the social goal is to maximize social welfare; whereas before, the goal was simply to minimize social cost").

[134] For sake of simplicity, we assume that any increase in the dog owner's activity level will lead to a proportional increase in both the cost of care and expected accident losses. In other words, if the owner walks the dog once, the cost of care will be $20 and expected accident losses will be $54.50; if she walks the dog twice, the cost of care and expected accident losses will double to $40 and $109 respectively.

[135] This reflects the reality that "marginal benefits diminish as the actor increases his activity level . . . because the actor gains less in utility from an additional unit of the activity as his activity level expands." Keith N. Hylton, *The Economics of Public Nuisance Law and the New Enforcement Actions*, 18 SUP. CT. ECON. REV. 43, 49 n.8 (2010).

[136] For a similar model illustrating the relationship between activity levels, accident losses, and social welfare, see SHAVELL, *supra* note 22, at 194–97.

[137] *See id.* (comparing the total social costs of various levels of activity).

From an economic standpoint, the eggshell plaintiff rule ensures optimal levels of activity by forcing injurers to internalize the full cost of accident losses (including losses suffered by vulnerable victims).[138] Expected accident losses in Table 2 include damages to eggshell dog-bite victims; thus, the dog owner internalizes the full extent of harm caused by her activity. She will walk her dog exactly once per day, which is socially optimal.

Note, however, that legal rules will induce a socially optimal level of activity only in the context of strict liability.[139] If negligence law applies instead, exercise of due care will absolve the injurer from liability for accident losses, and as a result the injurer will keep engaging in the activity as long as the marginal increase in her utility exceeds the costs of care.[140] Applied to our example above, if the owner takes due care each time she walks her dog, she will be absolved from negligence liability and will have no reason to consider the accident losses resulting from her actions.[141] As a result, a dog owner subject to negligence liability will engage in a socially excessive level of activity—she will walk her dog three times because she gains $180 in utility for only $60 in care (the additional $163.50 in cost imposed on society is not her problem).[142] The presence or absence of the eggshell plaintiff rule does not affect the dog owner's behavior in this scenario because she has no reason to consider expected accident losses.[143]

In sum, the main economic argument in support of the eggshell plaintiff rule is that the rule ensures that tort damages equal actual harm, incentivizing injurers to exercise an optimal level of care. In the context of strict liability, the

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[138] *See* POSNER, *supra* note 22, at 238–39 (suggesting that the eggshell plaintiff rule induces socially optimal behavior).

[139] *See* SHAVELL, *supra* note 22, at 196–99.

[140] *See id.* at 196 (noting that injurers who take due care under a negligence regime "have no reason to consider the effect that engaging in their activity has on accident losses"); Beard et al., *supra* note 133, at 220 ("Since [negligence] liability is unaffected by the activity level, the injurer selects an activity level that is too high (activity continues as long as total utility rises more than care costs with additional activity).").

[141] *See* SHAVELL, *supra* note 22, at 196.

[142] Perhaps courts could guard against this socially undesirable effect by factoring activity levels into the due care standard for negligence. For a discussion on the feasibility of doing so, see, for example, Stephen G. Gilles, *Rule-Based Negligence and the Regulation of Activity Levels in Negligence Law*, 21 J. LEGAL STUD. 319, 327–37 (1992) (arguing that courts often incorporate activity levels into the negligence inquiry); and LANDES & POSNER, *supra* note 17, at 69–71 (arguing that courts do not incorporate activity levels into negligence determinations, because it is costly to evaluate activity levels).

[143] Ultimately, this reflects a defect in the negligence approach in general, rather than a defect in the eggshell plaintiff rule in particular. *See* SHAVELL, *supra* note 22, at 198 ("The failing of the negligence rule results from an implicit assumption that the standard of behavior for determining negligence is defined only in terms of the level of care, an assumption that seems generally to be true in reality." (footnote omitted)).

rule arguably also incentivizes injurers to engage in a socially optimal level of activity.

C. *Perverse Consequences from the Best of Intentions: Misalignment of Injurers' Incentives*

The argument for the eggshell plaintiff rule is less persuasive when one considers other economic consequences of the rule, however. We argue that eggshell liability significantly misaligns the incentives of both injurers and victims. Looking first to the incentives of injurers, the eggshell plaintiff rule subjects injurers to unfair surprise,[144] fails to incentivize socially optimal behavior when injurers have imperfect information about expected accident losses,[145] and fails to account for the effects of risk aversion, moral hazard, and the judgment-proof problem.[146]

1. *Unfair Surprise: The Rule's Stark Contrast with Contract Law*

The most problematic feature of the eggshell plaintiff rule is that it subjects injurers to unfair surprise.[147] When the rule comes into play, injurers must fully compensate victims, even if the extent of the injury is unusual, bizarre, or perhaps completely unforeseeable.[148] In such cases, holding the injurer liable for the full extent of the eggshell plaintiff's unforeseeable injuries "may impose a ruinous liability which no private fortune could meet, and which is out of all proportion to the defendant's fault."[149]

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[144] *See infra* Part III.C.1.

[145] *See infra* Part III.C.2.

[146] *See infra* Part III.C.3.

[147] Once a court concludes that the defendant is at fault, the eggshell plaintiff rule applies without mercy: "the defendant does not escape liability for the unforeseeable personal reactions of the plaintiff." DOBBS & HAYDEN, *supra* note 63, at 222.

[148] *See* R.E.T. Corp. v. Frank Paxton Co., 329 N.W.2d 416, 420 (Iowa 1983) ("[T]ort damages are not limited by the reasonable contemplations of the parties. . . . [T]he amount of direct injury is compensated, whether its extent was contemplated or not."); KEETON ET AL., *supra* note 10, at 291 (noting that it is "as if a magic circle were drawn about the [eggshell plaintiff], and one who breaks it, even by so much as a cut on the finger, becomes liable for all resulting harm to the person, although it may be death").

[149] KEETON ET AL., *supra* note 10, at 293 (footnote omitted). In contrast to the eggshell plaintiff rule's logic, numerous decisions abound with statements to the effect that "the punishment should fit the crime," and indeed often explicitly reference the Eighth Amendment's prohibition on excessive fines and cruel and unusual punishment. *See, e.g.*, BMW of N. Am., Inc. v. Gore, 517 U.S. 559, 575 n.24 (1996) ("The principle that punishment should fit the crime is deeply rooted and frequently repeated in common-law jurisprudence." (internal quotation marks omitted)).

In contrast to tort law's eggshell plaintiff rule, the avoidance of unfair surprise is a fundamental principle for damage assessments in contract law.[150] As every first-year law student knows, the seminal case of *Hadley v. Baxendale*[151] lays out the rule that contract damages are recoverable only if they are foreseeable. That foreseeability may come either generally (because the loss arises naturally from defendants' breach of contract) or specially (because "special circumstances . . . were communicated by the plaintiff[s] to the defendant[s], and thus known to both parties").[152]

Hadley's rule is based on the rationale that the victim often is in a better position than the injurer to avoid the consequences of a breach of contract, even if the victim cannot prevent the breach herself.[153] The victim may communicate her vulnerability to the breacher, thus putting the breacher on notice of the potential consequential damages; or the victim may take extra precautions herself to avoid those damages.[154]

It is not immediately clear why *Hadley*'s rationale should not also apply in the context of tort injuries.[155] Injurers are not on notice of the potentially catastrophic injuries that eggshell victims suffer from seemingly routine actions.[156] Moreover, injurers are held liable even when victims know of their preexisting conditions or unusual vulnerabilities and are in a far better position to avoid harm.[157] The current rule does not consider whether an eggshell victim can take extra precautions to protect herself, whether she can communicate her condition to others, or whether she can take other actions to notify injurers of her vulnerabilities.[158]

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[150] *See* POSNER, *supra* note 22, at 158–59.

[151] (1854) 26 Eng. Rep. 398 (Exch.).

[152] *Id.* at 402.

[153] POSNER, *supra* note 22, at 159.

[154] The general principle excusing a party from liability for consequential damages if the risk of loss is known only to the other party creates incentives to allocate risk in the most efficient manner. This is so because if the party with knowledge of the risk is the most efficient preventer of the loss, he will take precautions to reduce the risk; if this party believes that the other party might be the most efficient preventer of loss, he will reveal the risk to the other party and pay him to prevent it. *See id.* at 158–59. *But cf.* Louis Wolcher, *Price Discrimination and Inefficient Risk Allocation Under the Rule of* Hadley v. Baxendale, 12 RES. L. & ECON. 9, 9–26 (1989) (modeling *Hadley*'s rule in a less-than-competitive market and finding that the incentive to provide information about unforeseeable losses can be inefficient, because once a provider with market power knows the plaintiff's special vulnerability to losses, he is in a position to extract that plaintiff's consumer surplus).

[155] *See* POSNER, *supra* note 22, at 158–59 (raising this issue).

[156] *See* KEETON ET AL., *supra* note 10, at 293 (noting that it is "inconceivable that any defendant should be held liable to infinity for all of the consequences which flow from a single act").

[157] *See supra* notes 52–56 and accompanying text.

[158] For example, one of the authors recalls the first time he went skiing in California. Several blind skiers were enjoying the slopes while wearing bright orange vests. The blind

2. *Imperfect Information, Levels of Care, and Levels of Activity*

Injurers also likely have imperfect information ex ante about expected eggshell losses, which can misalign their incentives in a socially undesirable way.[159] The following discussion illustrates this effect by examining the behavioral incentives of two types of injurers: those who are *entirely* ignorant of possible eggshell damages, and those who are *partially* ignorant of possible eggshell damages. As we shall see, the eggshell plaintiff rule fails to incentivize optimal behavior in both situations.

First, let us examine behavioral incentives when injurers are completely (and reasonably) ignorant of the harm they might cause (e.g., a student negligently kicks a classmate in the shin, not expecting any harm, but the kick shatters the classmate's leg due to a latent brittle-bone disease).[160] Because this "reasonable" injurer is unaware of the possibility that he is striking an eggshell plaintiff, he will not factor the probability and severity of eggshell damages into his decision calculus.[161] As a result, the injurer likely will take too little care and engage in too much activity.[162]

To illustrate this point, we revisit our model from the previous section.[163] Suppose that the owner of the vicious dog is entirely ignorant of the fact that 10% of dog-bite victims will suffer eggshell damages of $10,000.[164] Instead, the owner reasonably (but incorrectly) believes that all victims will suffer $100 in damages. The following table illustrates the effect that this incorrect belief has on the dog owner's level of care:

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skiers presumably wore these vests to notify sighted skiers around them of their condition in order to avoid accidents.

[159] *Cf.* Robert A. Mikos, *"Eggshell" Victims, Private Precautions, and the Societal Benefits of Shifting Crime*, 105 MICH. L. REV. 307, 345–47 (2006) (discussing information distortions in the context of eggshell victims of crimes).

[160] *See* Vosburg v. Putney, 50 N.W. 403, 404 (Wis. 1891). It is worth noting that the same situation would result if injurers are unaware that the law holds them liable for eggshell damages. We do not address this "ignorance of the law" situation, because all laws are subject to the same critique. *See* SHAVELL, *supra* note 22, at 563 ("If a person is held liable for violating well-appreciated laws or laws that can be learned through reasonable effort, he will have an incentive to learn the laws and adhere to them.").

[161] In an ideal world, "[a] risk-neutral party makes decisions on the basis of probability-discounted, or expected, values." SHAVELL, *supra* note 22, at 178. Inaccurate information obviously would affect the optimality of these decisions.

[162] *See* SHAVELL, *supra* note 22, at 236–37 (noting that if damages fall short of actual harm, incentives to reduce risk are inadequate).

[163] *See supra* notes 118–22 and accompanying text.

[164] This mirrors reality—most injurers likely are completely ignorant of the possibility of excessive damages for relatively rare eggshell vulnerabilities. *See* Tali Nachshoni & Moshe Kotler, *Legal and Medical Aspects of Body Dysmorphic Disorder*, 26 MED. & L. 721, 731 (2007) (noting that "eggshell skulls are fortunately rare in medicine").

Table 3: *Level of Care if the Injurer Is Ignorant of Eggshell Victims*

Level of Care	Cost of Care	Accident Probability	*Perceived* Accident Losses	*Perceived* Costs
None	0	30%	*30% x (100% x 100)* = 30	*0 + 30* = 30
Moderate	10	10%	*10% x (100% x 100)* = 10	*10 + 10* = 20
High	20	5%	*5% x (100% x 100)* = 5	*20 + 5* = 25

Although our prior discussion demonstrated that it is socially optimal for the dog owner to take high care,[165] Table 3 shows that when injurers are completely ignorant of the possibility of eggshell damages, they will exercise a socially inadequate level of care. Because the owner is unaware of the possibility that her dog might bite eggshell victims, her ex ante perception of expected accident losses is too low,[166] and she mistakenly believes that it is in her interest to take moderate care, not high care.[167]

Moreover, ignorance of the possibility of eggshell damages makes it likely that injurers will engage in socially excessive levels of activity. The following table illustrates the effect that the dog owner's ignorance of eggshell victims would have on her level of activity, assuming that her ignorance indeed leads her to exercise a moderate level of care.

[165] *See supra* notes 124–26 and accompanying text.

[166] If the dog owner is aware that there is a 10% chance that a dog-bite victim will suffer $10,000 in damages and a 90% chance that a victim will suffer $100 in damages, she knows that the expected harm from each bite is $1,090. But if the owner instead mistakenly thinks that all victims will suffer $100 in damages, then she perceives that the harm from each bite is $100—an amount that is not even 10% of the actual expected harm.

[167] Stated another way, if injurers are completely ignorant of the possibility of eggshell plaintiffs, then the eggshell plaintiff rule has no effect on injurers' behavior.

Table 4: *Level of Activity if the Injurer Is Ignorant of Eggshell Victims*

Level of Activity	Total Utility	Cost of Care	*Perceived* Accident Losses	*Perceived* Total Cost	*Perceived* Utility Minus Cost
0	0	0	0	0	0
1	100	10	10	*10 + 10* = 20	*100 – 20* = 80
2	150	20	20	*20 + 20* = 40	*150 – 40* = 110
3	180	30	30	*30 + 30* = 60	*180 – 60* = 120

Although our previous discussion demonstrated that it is socially optimal for the dog owner to walk her dog only once,[168] Table 4 shows that when injurers are completely ignorant of the possibility of eggshell damages, they will engage in socially excessive levels of activity. The dog owner's ignorance of the full extent of damages induces her to choose a less expensive (and socially inadequate) level of care and leads her to underestimate expected accident losses.[169] This makes it more likely that the marginal increase in the owner's utility from each walk exceeds her perception of the total costs.[170] As a result, the dog owner mistakenly believes that it is in her interest to walk her dog three times, rather than once.[171]

Second, the eggshell plaintiff rule also fails to induce optimal behavior in the modified unforeseeability scenario—where injurers have *some* knowledge of eggshell plaintiffs but are partially ignorant of the probability or extent of eggshell damages.[172] This group represents the functional interpretation of

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[168] *See supra* notes 136–37 and accompanying text.

[169] If the dog owner assumes that all victims will suffer $100 in damages and is ignorant of the fact that 10% of victims will suffer $10,000 in damages, she will significantly underestimate expected accident losses—she will wrongly conclude that expected accident losses are only $100, instead of $1,090. Because the dog owner underestimates accident losses, there is a greater chance that she will conclude that a lower (and cheaper) level of care minimizes her losses. *See supra* notes 124–26, 166–67 and accompanying text.

[170] In our example, the dog owner wrongly believes that expected accident losses increase by only $10 each time she walks her dog. Thus, the increases in her marginal utility (ranging from $100 the first time she walks her dog, to $30 the third time she walks her dog) will always justify additional activity.

[171] As Table 4 illustrates, the owner mistakenly believes that her marginal utility will be maximized when she walks her dog for the third time (which she believes will yield $120 in utility-minus-costs, exceeding the net utility of $80 for one walk and $110 for two walks).

[172] This scenario is probably the most common. Many injurers probably are aware that eggshell victims are out there, but they have little or no idea how likely it is that they will encounter an eggshell victim. *See* SHAVELL, *supra* note 22, at 481 (noting that "individuals

existing law—in practice, "unforeseeable damages" are not damages that are impossible to foresee; the term actually describes damages that a reasonable person would fail to foresee.[173] The partial-knowledge scenario will encompass situations in which the injurer is aware that he is on the hook for eggshell damages but is guessing about the probability and amount of those damages.[174]

Injurers in this category likely will misestimate the expected damages from their activity.[175] Whether injurers with partial knowledge overestimate or underestimate damages (and to what extent) depends on a variety of factors and is the subject of much scholarly debate.[176] Regardless of whether injurers overestimate or underestimate the probability and severity of harm, their partial knowledge will lead them to act sub-optimally, decreasing social welfare.[177] The previous model illustrates this conclusion with respect to the underestimation of damages.[178] One can extrapolate scenarios from that model

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often experience difficulty in assessing and interpreting probabilities, especially small ones").

[173] JERRY J. PHILLIPS ET AL., TORT LAW: CASES, MATERIALS, PROBLEMS 417 (3d ed. 2002). The term "unforeseeable damages" is therefore subject to the same limitations as the words "reasonable" and "foreseeable." *See* Palsgraf v. Long Island R.R. Co., 162 N.E. 99, 103 (N.Y. 1928).

[174] *See* WILLIAM HALTOM & MICHAEL MCCANN, DISTORTING THE LAW: POLITICS, MEDIA, AND THE LITIGATION CRISIS 147 (2004) (examining the gap between media presentation of tort cases and the actual cases).

[175] *See* W. KIP VISCUSI ET AL., ECONOMICS OF REGULATION AND ANTITRUST 660–63 (2d. ed. 1997) ("[S]ituations involving risk and uncertainty are also well known for the irrational decisions that they may generate. . . . This pattern of overreaction and underreaction suggests that market decisions will seldom be optimal.").

[176] *Compare* SHAVELL, *supra* note 22, at 227 ("[U]ncertainty will tend to induce parties to take higher than desirable levels of care to guard against being found liable by mistake."), *and* Robert A. Hillman, *The Limits of Behavioral Decision Theory in Legal Analysis: The Case of Liquidated Damages*, 85 CORNELL L. REV. 717, 724 (2008) ("Notwithstanding evidence of overconfidence, people tend to overestimate the chance of 'available' risks. . . . [I]nclud[ing] recent events that have received lots of publicity."), *with* Christine Jolls, *Behavioral Economics Analysis of Redistributive Legal Rules*, 51 VAND. L. REV. 1653, 1663 (1998) ("It is difficult to come up with examples of events giving rise to individual liability the probability of which is likely to be overestimated rather than (as suggested above) underestimated."), *and* Louis Kaplow & Steven Shavell, *Why the Legal System Is Less Efficient Than the Income Tax in Redistributing Income*, 23 J. LEGAL STUD. 667, 671 n.5 (1994) ("[T]here is no compelling reason to assume that their guesses would be too low rather than too high.").

[177] Of course, one could argue that the overestimations and underestimations will average out. But this scenario seems unlikely. And even if injurers' misestimations do average out, that result is the product of chance and thus inferior to a rule that properly incentivizes individuals to maximize social welfare. *See* David Rosenberg, *Mandatory-Litigation Class Action: The Only Option for Mass Tort Cases*, 115 HARV. L. REV. 831, 874 (2002) (noting that "[b]ecause offsetting distortions will occur only by coincidence," courts should reject a legal rule that relies on such an outcome).

[178] *See supra* notes 164–71 and accompanying text.

in which injurers overestimate harm (i.e., injurers exercise a socially excessive level of care and engage in undesirably low levels of activity).[179] Either way, imperfect information makes it likely that incentives are sub-optimal under the existing eggshell plaintiff rule.

3. *Risk Aversion, Moral Hazard, and Judgment-Proof Problems*

Aside from imperfect information about the probability and severity of accidents involving eggshell victims, other unintended consequences of the eggshell plaintiff rule can induce injurers to take socially undesirable actions. Pitfalls include and result from the reality of risk aversion, moral hazard, and the judgment-proof problem.

First, risk aversion may induce injurers to exercise socially excessive levels of care or socially inadequate levels of activity.[180] Risk-averse individuals are "uncomfortable with volatility or uncertainty,"[181] and are unwilling to bear risk even in situations in which it would be actuarially fair to do so.[182] Injurers tend to be risk averse when they engage in conduct that could result in serious injury and large damages awards—conduct that "would be likely to cause losses that

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[179] As the perceived harm increases, injurers will be more likely to exercise a higher level of care to reduce the risk of that harm. Increases in perceived harm also make it more likely that perceived accident losses will exceed the utility that injurers gain from various levels of activity.

An excellent real-world illustration of the fact that eggshell damages can lead injurers to dramatically reduce activity levels below the social optimum arises in the context of vaccinations. While everyone knows that routine childhood immunizations benefit 99+% of our population and have prevented literally millions of deaths, it is also true that a small minority of recipients will experience adverse effects, like allergic reactions, seizures, or even death in extremely rare cases. The expansion of tort liability against vaccine manufacturers in the 1960s and 1970s drove dozens of companies out of business, to the point where the medical community was concerned that essential vaccines would become unavailable. Congress finally acted to correct the problem in 1986, passing the National Childhood Vaccine Injury Act. *See* Steve P. Calandrillo, *Vanishing Vaccinations: Why Are So Many Americans Opting out of Vaccinating Their Children?*, 37 MICH. J.L. REFORM 353, 408–11 (2004). This Act created an insurance pool to compensate the few victims of childhood immunizations, while making it far more difficult to bring tort cases, where lottery-like damages had been bankrupting manufacturers. *Id.*

[180] *See* SHAVELL, *supra* note 22, at 260; *see also* John W. Pratt, *Risk Aversion in the Small and the Large*, 32 ECONOMETRICA 122, 122 (1964) (discussing risk aversion). *But see* Charles A. Holt & Susan K. Lowry, *Risk Aversion and Incentive Effects*, 92 AM. ECON. REV. 1644, 1644 (2002) (noting circumstances in which individuals prefer risk).

[181] BLACK'S LAW DICTIONARY 1442 (9th ed. 2009).

[182] KENNETH J. ARROW, ESSAYS IN THE THEORY OF RISK-BEARING 90 (1974). For example, "[a] risk-averse person would pay to avoid a risk, such as one involving a 50 percent chance of losing $1,000 and a 50 percent chance of winning $1,000." SHAVELL, *supra* note 22, at 258. For these people, "losses loom larger than gains." Daniel Kahneman & Amos Tversky, *Prospect Theory: An Analysis of Decision Under Risk*, 47 ECONOMETRICA 263, 279 (1979).

are significant in relation to their assets."[183] If liability insurance is unavailable, risk-averse injurers are forced to bear risk.[184] To avoid (or reduce) this risk, they tend to exercise socially excessive levels of care or engage in socially inadequate levels of activity.[185]

The eggshell plaintiff rule could induce precisely this type of behavior among uninsured risk-averse injurers, especially in the context of strict liability. The rule requires injurers to compensate eggshell victims for the full extent of their damages;[186] thus, injurers are exposed to the possibility of large damages awards.[187] If strict liability applies and insurance is unavailable, risk-averse injurers will exercise an excessive level of care and also will curb their level of activity.[188] Note, however, that this undesirable effect among risk-averse injurers arguably would be limited to the context of strict liability; if negligence rules apply, injurers can avoid the risk of large damages awards by exercising due care.[189]

Conversely, if liability insurance is available, injurers may exercise inadequate care levels or engage in socially excessive activity levels if the presence of insurance creates a moral hazard effect.[190] Moral hazard refers to "the tendency for an insured party to take less care to avoid an insured loss than the party would have taken if the loss had not been insured, or even to act

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[183] SHAVELL, *supra* note 22, at 258. In contrast, injurers tend to be risk neutral when faced with the prospect of liability for small losses. *Id.* Most persons are risk averse to some extent. *See* Kenneth J. Arrow, *Uncertainty and the Welfare Economics of Medical Care*, 53 AM. ECON. REV. 941, 959 (1963) (characterizing individuals as "normally risk-averters").

[184] *See, e.g.*, Stephen G. Gilles, *The Judgment-Proof Society*, 63 WASH. & LEE L. REV. 603, 669 (2006); Peter Siegelman, *Adverse Selection in Insurance Markets: An Exaggerated Threat*, 113 YALE L.J. 1223, 1265 (2004).

[185] SHAVELL, *supra* note 22, at 260.

[186] STEIN, *supra* note 42.

[187] *See* John C.P. Goldberg, *Twentieth-Century Tort Theory*, 91 GEO. L.J. 513, 534 (2003) (noting that the eggshell plaintiff rule exposes defendants to "large damage awards because of a hidden vulnerability in the plaintiff").

[188] Specifically, because uninsured injurers would be liable for the full extent of harm under a strict-liability-plus-eggshell-plaintiff-rule regime, they would bear the full cost of harm they inflict, as well as the risk associated with large damages awards. Injurers would adjust both their level of care and level of activity to reduce this risk. *See* SHAVELL, *supra* note 22, at 260.

[189] This of course assumes that courts can accurately assess the optimal level of care in various accident scenarios and that injurers are aware of that level of care—assumptions that are not always true. *See, e.g.*, Mark F. Grady, *A New Positive Economic Theory of Negligence*, 92 YALE L.J. 799, 806–13 (1983) (critiquing the "conventional theory" that injurers can accurately identify the due care standard set by courts).

[190] For a discussion of moral hazard, see, for example, CAROL A. HEIMER, REACTIVE RISK AND RATIONAL ACTION: MANAGING MORAL HAZARD IN INSURANCE CONTRACTS (1985); Tom Baker, *On the Genealogy of Moral Hazard*, 75 TEX. L. REV. 237 (1996).

intentionally to bring about that loss."[191] If insurers have difficulty observing whether injurers take adequate precautions, insurance premiums will not reflect injurers' actual level of care and, more importantly, the exercise of care will not lower premiums.[192] In that situation, injurers are insured against losses (including eggshell damages), and would have no premium-based incentive to take care or curb excessive activity.[193]

Finally, the eggshell plaintiff rule will have little or no effect on the behavior of judgment-proof injurers.[194] Individuals are judgment-proof when their assets are insufficient to pay for the accident losses they cause.[195] When injurers are judgment proof, they view losses exceeding their assets as merely equaling their assets, and this in turn leads injurers to exercise inadequate levels of care and excessive levels of activity.[196] For example, if there is a possibility of $100,000 in eggshell damages but the injurer only has $5,000 in assets, the injurer will not be concerned with the risk of losses exceeding $5,000, significantly diluting the incentives created by the eggshell plaintiff rule.[197]

In sum, the eggshell plaintiff rule fails to incentivize socially optimal behavior among injurers for a variety of reasons. First, the rule subjects injurers to unfair surprise. Second, injurers with no knowledge of eggshell plaintiffs will still exercise too little care and engage in excessive levels of activity. Injurers with some knowledge of eggshell plaintiffs will likely misestimate expected damages and exercise sub-optimal care and activity levels (either too high or

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[191] Jacob Loshin, Note, *Insurance Law's Hapless Busybody: A Case Against the Insurable Interest Requirement*, 117 YALE L.J. 474, 506 (2007).

[192] SHAVELL, *supra* note 22, at 262–63.

[193] *Id.* at 263. *But see* Muhammad Masum Billah, Note, *Economic Analysis of Limitation of Shipowners' Liability*, 19 U.S.F. MAR. L.J. 297, 312 (2007) (noting that "insurers are able, by and large, to check the problem of moral hazard or under-deterrence through various strategies such as partial coverage, deductibles, and differentiating premium rates based on past loss experience").

[194] For a discussion of the judgment-proof problem, see generally Lynn M. LoPucki, *The Death of Liability*, 106 YALE L.J. 1 (1996); Lynn M. LoPucki, *The Essential Structure of Judgment Proofing*, 51 STAN. L. REV. 147 (1998); Charles W. Mooney, Jr., *Judgment Proofing, Bankruptcy Policy, and the Dark Side of Tort Liability*, 52 STAN. L. REV. 73 (1999); Steven L. Schwarcz, *The Inherent Irrationality of Judgment Proofing*, 52 STAN. L. REV. 1 (1999); Steven Shavell, *The Judgment Proof Problem*, 6 INT'L REV. L. & ECON. 45 (1986).

[195] *See* BLACK'S LAW DICTIONARY 921 (9th ed. 2009) (defining judgment-proof as "unable to satisfy a judgment for money damages because the person has no property, [or] does not own enough property within the court's jurisdiction to satisfy the judgment").

[196] SHAVELL, *supra* note 22, at 230–31.

[197] This scenario may be common because individuals have opportunities to protect their assets from liability. *See* LoPucki, *The Death of Liability*, *supra* note 194, at 14–38 (describing various strategies individuals use to protect assets against liability). *But see* Schwarcz, *supra* note 194, at 1 ("[A]n economic analysis of these transactions suggests that widespread use of these judgment proofing techniques is unlikely.").

too low). Moreover, the rule fails to take into account the effects of risk aversion, moral hazard, and judgment-proof injurers.

D. *Misalignment of Victims' Incentives*

The discussion above assumes that accidents are unilateral in nature; in reality, most accidents are bilateral, meaning that *both* injurers and victims can take actions to reduce risk.[198] In addition to the eggshell plaintiff rule's creation of sub-optimal incentives for injurers, the rule has a socially undesirable effect on the behavior of victims as well—it dulls or may even eliminate eggshell victims' incentive to take care and self-protect against losses. For purposes of this Article, victims can be separated into two categories: those who *know* of (or reasonably should be expected to discover) their eggshell condition; and those who *do not know* of (and reasonably should not be expected to discover) their eggshell condition.[199]

As for the first category, we begin by analyzing those eggshell plaintiffs who know of (or could discover) their eggshell condition and who can also self-protect (by warning the injurer, wearing a helmet, ceasing to engage in a particular activity, etc.).[200] In these situations, the eggshell plaintiff rule fails to incentivize efforts to discover and self-protect against eggshell conditions, and actually perversely encourages the opposite result.

To illustrate why, we revisit our dog-bite example.[201] Assume that the cost for victims to discover whether they are particularly vulnerable to bites is minimal—in other words, dog-bite victims either know or could easily discern whether they are among the 90% of victims who would sustain "normal" damages of $100 from a bite, or the 10% of vulnerable victims who would suffer $10,000 in damages from a bite.[202] Also assume that the dog owner will

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[198] *See* SHAVELL, *supra* note 22, at 183; Jennifer H. Arlen, *Reconsidering Efficient Tort Rules for Personal Injury: The Case of Single Activity Accidents*, 32 WM. & MARY L. REV. 41, 46 (1990); Ram Singh, *'Causation-Consistent' Liability, Economic Efficiency and the Law of Torts*, 27 INT'L REV. L. & ECON. 179, 181 (2007).

[199] In reality, there could be a third group: victims who *partially* know about their eggshell condition (and for whom it is unreasonable to expect complete knowledge of the condition). We omit discussion of this group because the points made about victims with complete knowledge also would apply to some extent to victims with partial knowledge.

[200] For more discussion on the role of self-protection by victims, see, for example, MARK F. GRADY, CASES AND MATERIALS ON TORTS 90–95 (1994) (citing cases of victims' self-protection as it relates to strict liability and negligence); Tomas J. Philipson & Richard A. Posner, *The Economic Epidemiology of Crime*, 39 J.L. & ECON. 405, 411–22 (1996) (discussing victims' self-protection as it relates to criminal law).

[201] *See supra* notes 118–22 and accompanying text.

[202] Situations in which victims would reasonably be expected to know about their vulnerabilities are not uncommon. For example, many—perhaps even most—individuals know whether they are allergic to bee stings, peanut butter, penicillin, and many other common, everyday risks. Many individuals also know whether they have conditions that

exercise an optimal level of care (high care, costing $20) and an optimal level of activity (walking the dog once), which will minimize accident probability at 5%.[203] If the dog bite is a *unilateral* accident only under the control of the dog owner,[204] the total expected social cost of each dog bite would be:

$$\$20 + (5\% \times (90\% \times \$100 + 10\% \times \$10{,}000)) = \$74.50$$

Suppose, however, that our dog-bite accident scenario is *bilateral* in nature, and victims with knowledge of their eggshell condition could reduce damages from a dog bite to a "normal" level of $100 by purchasing special anti-dog Kevlar pants for $200.[205] If this were the case, the total expected social cost of each dog bite would change to[206]:

$$\$20 + (10\% \times \$200) + (5\% \times (100\% \times \$100)) = \$45$$

In this example, it is optimal for eggshell victims to buy Kevlar pants because it reduces the expected social cost of dog bites from $74.50 to $45.[207] This demonstrates that it is socially desirable for victims with relatively easy access to knowledge of their eggshell condition to self-protect, when doing so would reduce expected social costs.[208]

And yet the eggshell plaintiff rule induces precisely the opposite result, at least in the context of strict liability: it removes the incentive for eggshell victims to discover their condition, self-protect against losses, and reduce social costs.[209] When a strict-liability-plus-eggshell-plaintiff-rule regime applies, the

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could aggravate accident damages, such as high blood pressure, alcoholism, a bad back, or a weak immune system.

[203] *See supra* notes 119–26, 134–37 and accompanying text.

[204] Meaning, in this context, that only the injurer can take action to reduce expected accident losses; the victim can do nothing. SHAVELL, *supra* note 22, at 178.

[205] *See* Damien Stannard, *Consumer Road Test—Kevlar Jeans*, SUNDAY MAIL (Adelaide, Austl.), May 22, 2011, at 85 ("Let's face it, who hasn't needed Kevlar pants at some time in their past?").

[206] Because we assume that victims are aware of their vulnerabilities, we multiply the cost of the Kevlar pants ($200) by the percentage of victims that have an eggshell condition (10%) and thus would have a need for Kevlar pants.

[207] Of course, it will not always be optimal for both injurers and victims to take care. SHAVELL, *supra* note 22, at 182–83. In the hypothetical above, for example, it would not be optimal for victims to take care if the Kevlar pants cost $1,000—if that were the case, the total expected social cost of each dog bite would be: $\$20 + (10\% \times \$1{,}000) + (5\% \times (100\% \times \$100)) = \$125$, which exceeds the social cost of $74.50 if victims take no care.

[208] *See id.* at 182 ("The optimal levels of care of injurers and of victims will reflect their joint possibilities for reducing accident risks and their costs of care."). Again, this situation assumes that the plaintiff is not ignorant of the law. *See id.* at 562–63.

[209] *Cf.* POSNER, *supra* note 22, at 158–59 (describing, in the contract context, the incentive effects of allowing a victim of breach to recover the full consequences of the

victim knows she will be fully compensated for the full extent of her injuries, whether they were foreseeable or not, and whether she could have avoided them or not.[210] Victims have no incentive to incur expenses ex ante that could reduce losses.[211]

Note, however, that this effect on victims' incentives is not as problematic if either negligence rules apply or if victims are reasonably ignorant of their eggshell condition.[212] First, when negligence rules apply and those rules are properly administered by courts (meaning the "due care" standard is set optimally),[213] the eggshell plaintiff rule likely has no positive or negative effects on victims' behavior.[214] Injurers will exercise due care to avoid liability,[215] and the eggshell plaintiff rule will not apply.[216] Instead, victims will bear the risk of accident losses under a properly functioning negligence rule, providing an incentive for them to discover their vulnerabilities, engage in optimal levels of care and activity, and self-protect.[217]

Second, the eggshell plaintiff rule has no positive or negative effect on the other category of victims in eggshell cases: those who are reasonably ignorant of their vulnerable condition.[218] In these circumstances, the presence or absence

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breach despite the fact that such consequences were unforeseeable to the breacher of the contract).

[210] *See, e.g.*, DOBBS & HAYDEN, *supra* note 63, at 222 (noting that under the eggshell plaintiff rule, "the defendant does not escape liability for the unforeseeable personal reactions of the plaintiff").

[211] *See* SHAVELL, *supra* note 22, at 184 (noting that, in the context of strict liability, "victims will be fully compensated by injurers for accident losses" and "will not take care").

[212] This is similar to the effect of the eggshell plaintiff rule on injurers' incentives, which is problematic in the context of strict liability but less problematic in the context of negligence. *See supra* notes 186–89 and accompanying text.

[213] *See* Alan J. Meese, *The Externality of Victim Care*, 68 U. CHI. L. REV. 1201, 1210 n.44 (2001) ("A negligence regime is 'well-administered' if, among other things, courts can accurately determine each party's level of 'due care' and whether the injurer satisfied that standard.").

[214] SHAVELL, *supra* note 22, at 185–86. Additionally, a regime of strict liability with the defense of contributory negligence likely would preserve optimal incentives for victims to take care. *See id.* at 184–85.

[215] *Id.* at 185–86 ("[I]f the courts choose due care to equal the socially optimal level, then injurers will be led to take due care.").

[216] *See* DOBBS & HAYDEN, *supra* note 63, at 222 (noting that the eggshell plaintiff rule does "not impose liability without fault").

[217] *See* SHAVELL, *supra* note 22, at 185–86, 202 (noting that victims exercise optimal levels of care and activity if negligence rules apply). Additionally, the assumption of risk doctrine disincentivizes victims from voluntarily assuming risk. *See* RESTATEMENT (SECOND) OF TORTS § 496A (1965).

[218] For example, an eggshell plaintiff may have a latent condition that arises only when she is injured by a tortfeasor. *See, e.g.*, Reed v. Union Pac. R.R. Co., 185 F.3d 712, 714, 716–17 (7th Cir. 1999) (holding that plaintiff with unknown, preexisting degenerative disk condition was entitled to a jury instruction on the eggshell plaintiff rule). Alternatively,

of eggshell liability has no bearing on victims' ex ante behavior—a liability rule will not affect victims' incentives to take care or self-protect if those victims are ignorant of their vulnerabilities.[219]

Ultimately, however, the eggshell plaintiff rule has an overall negative effect on victims' incentives. Although the rule is neutral when applied in the context of negligence liability or to reasonably ignorant eggshell victims, it has a negative impact when strict liability applies and victims know of or reasonably could discover their vulnerabilities.

IV. A REVOLUTIONARY APPROACH TO EGGSHELL LIABILITY

From an economic standpoint, the eggshell plaintiff rule has the potential to create perverse behavioral incentives and thus be socially sub-optimal.[220] To better align these incentives, we argue that courts should adopt foreseeability as the general rule for accidents involving vulnerable victims, bringing eggshell cases within the traditional rules governing foreseeability and proximate cause.[221] We also argue that the goal of victim compensation can be accomplished through private or social insurance markets, instead of the tort system.[222] Although the use of insurance to compensate eggshell victims gives rise to potential problems,[223] solutions exist.[224] Lastly, if victims continue to be compensated through the tort system (rather than through insurance markets), courts should apply a foreseeability rule not only in eggshell cases, but in "steel skull" cases as well.[225]

A. *Foreseeability as the General Rule*

As discussed above, injurers can only behave based on their expectations of the harm or benefit of their actions; liability for unforeseeable eggshell damages fails to incentivize optimal behavior in many cases.[226] Injurers with imperfect

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perhaps it is cost-prohibitive for the victim to discover her vulnerabilities, or prohibitively expensive for the victim to self-protect against losses.

[219] Stated another way, a victim who does not know she has a thin skull and who cannot reasonably discover that condition will not care one way or another whether the eggshell plaintiff rule exists.

[220] *See supra* Part III.C–D.

[221] *See infra* Part IV.A. In other words, it is time for courts to dispense with the exceptional nature of eggshell cases. *See, e.g.*, Bahr & Graham, *supra* note 13, at 418 (noting that the eggshell plaintiff rule "has remained virtually untouched in the past century while other basic notions of tort law have undergone significant alteration").

[222] *See infra* Part IV.B.

[223] *See infra* Part IV.B.1.

[224] *See infra* Part IV.B.2.

[225] *See infra* Part IV.C.

[226] *See* Jody S. Kraus, *Transparency and Determinacy in Common Law Adjudication: A Philosophical Defense of Explanatory Economic Analysis*, 93 VA. L. REV. 287, 344 (2007)

knowledge of the probability and severity of eggshell injuries will misestimate expected damages, leading them to exercise sub-optimal care and activity levels.[227] Risk aversion, moral hazard, and judgment-proof problems may misalign injurers' incentives even further.[228] And eggshell victims have little or no incentive to discover their vulnerabilities and self-protect under the current rule.[229]

A rule holding injurers liable only for *foreseeable* damages substantially mitigates these problems, and is superior to the current rule, for several reasons.[230] First, a foreseeability rule better aligns victims' incentives by forcing victims to bear any accident losses that result from unforeseeable vulnerabilities.[231] Eggshell victims would have an incentive to discover their vulnerabilities and self-protect in order to minimize these losses.[232]

Second, although injurers would not internalize all the harm they cause under a foreseeability rule (which normally would be a sub-optimal result),[233] such a rule likely would not cause a significant deviation from optimal incentives among injurers. Eggshell plaintiffs are—by definition—extremely

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("If [injuries] are unforeseeable, then there is no reason to believe defendants will be able, correctly and cost-effectively, to determine what behaviors to engage in. The resulting risk is that they will either under- or overestimate the expected costs of these unforeseeable losses.").

[227] *See supra* notes 159–79 and accompanying text.

[228] *See supra* notes 180–97 and accompanying text.

[229] *See supra* notes 198–219 and accompanying text.

[230] *See, e.g.*, Omri Ben-Shahar, *Causation and Foreseeability*, *in* 2 ENCYCLOPEDIA OF LAW & ECONOMICS 644, 645 (Boudewijn Bouckaert & Gerrit De Geest eds., 2000) ("Under the normative economic analysis, the proximate cause doctrine's designated role is to expand or shrink the scope of liability, in order to achieve efficient deterrence.").

As an aside, one should be careful to note that while we have generalized the concept of foreseeability in this paper, it actually arises in three distinct places in traditional tort analysis. *See* W. Jonathan Cardi, *Purging Foreseeability*, 58 VAND. L. REV. 739, 743–67 (2005). First there is the question of whether or not an actor has a "duty" (where the concept of foreseeability is treated as a question of law for the judge to decide). *Id.* at 755–60. Second is the issue of "breach" (where whether the taking of a given action creates foreseeable harm so as to breach a duty of care). *Id.* at 744–47. Third, foreseeability arises when it comes to causation, where we refer to it as "proximate cause." *Id.* at 747–50. Our analysis focuses on the concept of foreseeability in connection with respect to the extent of damages/harm created by negligent tortfeasors.

[231] *Cf.* SHAVELL, *supra* note 22, at 202 (noting that, in the context of negligence liability, victims bear losses when injurers exercise reasonable care).

[232] Victim incentives under our proposed foreseeability rule for eggshell cases would mirror the incentives under negligence rules generally, because negligence law imposes a foreseeability limitation on recovery. *See* Keith N. Hylton, *Litigation Costs and the Economic Theory of Tort Law*, 46 U. MIAMI L. REV. 111, 116 n.17 (1991) ("Under negligence, the injurer and the victim will exercise optimal precaution.").

[233] *See* SHAVELL, *supra* note 22, at 236–37 (noting that if damages fall short of actual harm, incentives to reduce risk will be inadequate, and if expected damages exceed harm, incentives to reduce risk will be too high).

few, making it likely that the cost of injurers' misestimation of expected damages exceeds any eggshell harm prevented by the current eggshell plaintiff rule.[234] Moreover, under a foreseeability rule, the number of eggshell victims would be even smaller because eggshell victims who can self-protect presumably would do so.[235]

A simple example illustrates this point. Under the current rule, drivers are held liable for the full extent of damages caused by rear-end collisions[236]—an extremely common occurrence.[237] And yet the cost of 211 million drivers[238] taking steps to reduce the risk of eggshell damages (e.g., installing extra bumpers on their cars) likely outweighs the cost of self-protection incurred by those eggshell victims who can self-protect, plus the harm caused to the few eggshell plaintiffs who cannot.[239]

Third, a foreseeability rule for eggshell liability would ensure predictable limitations on accident damages, allowing risk-averse individuals to avoid bearing costs associated with uncertainty, and also enabling them to more accurately assess their insurance-purchasing needs.[240] Under the eggshell plaintiff rule, risk-averse injurers face uncertain and unknown liability—there is no way they can know in advance which victims have thin skulls, and what the

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[234] *Cf.* POSNER, *supra* note 22, at 232 (noting, in the context of product liability, that "product failures that cause serious personal injuries are extremely rare, and the cost to the consumer of becoming informed about them is apt to exceed the expected benefit").

[235] This is not to argue for a Darwinian, survival-of-the-fittest society. Rather, the point is that we live in a world of limited resources, and we cannot always prevent every harm. *See* Calandrillo, *supra* note 113, at 1028 (discussing the hard, yet necessary tradeoffs when rationing society's limited resources).

[236] Not surprisingly, cases discussing the eggshell plaintiff rule frequently involve rear-end collisions. *See, e.g.*, Rua v. Kirby, 8 A.3d 1123, 1124–26 (Conn. App. Ct. 2010); Guidry v. State Farm Fire & Cas. Co., 74 So.3d 1276, 1283–84 (La. Ct. App. 2011); Castillo v. Young, 720 N.W.2d 40, 42, 45–46 (Neb. 2006).

[237] Rear-end collisions are the most common type of automobile accident—in the United States, more than 3.5 million rear-end collisions occurred in 2009 alone. NAT'L SAFETY COUNCIL, INJURY FACTS 106 (2011), *available at* http://www.nsc.org/Documents/Injury_Facts/Injury_Facts_2011_w.pdf.

[238] This is the number of licensed drivers in the United States. U.S. CENSUS BUREAU, STATISTICAL ABSTRACT OF THE UNITED STATES: 2012, at 698 tbl.1114 (2011), *available at* http://www.census.gov/prod/2011pubs/12statab/trans.pdf.

[239] Of course, where the injurer could avoid the harm for little or no cost, it is preferable to hold the injurer liable. Still, given the huge disparity between the number of potential injurers and the number of eggshell victims, it seems unlikely that this would be the case.

[240] *See* Thomas R. Foley, Note, *Insurers' Misrepresentation Defense: The Need for a Knowledge Element*, 67 S. CAL. L. REV. 659, 676 (1994) (noting that "insurance buyers prefer certainty and are risk-averse"); *see also* Michael Murray, Note, *The Law of Describing Accidents: A New Proposal for Determining the Number of Occurrences in Insurance*, 118 YALE L.J. 1484, 1491 (2009) ("Demand for insurance arises because individuals are risk averse with regard to losses: they prefer a certain loss to the risk of a greater loss even when the average loss is the same for both.").

full extent of their injury will be.[241] Under our proposed rule, however, liability is limited to foreseeable losses, making it easier for risk-averse injurers to avoid risk, as well as the pitfalls of excessive levels of care and diluted levels of activity.[242]

Of course, "new rules for old problems may help bring on new problems,"[243] and a foreseeability limitation on eggshell liability is no exception. Most notably, limiting liability for unforeseeable injuries may reduce injurers' incentives to consider the full range of injuries that could result from their actions.[244] In addition, awarding average damages to all eggshell plaintiffs may distort victims' behavior (now risk-averse eggshell plaintiffs may be led to take excessive care, while steel skull plaintiffs may have less incentive to take care).[245] Another difficulty in awarding only foreseeable rather than actual damages in every case is the measurement or calculation of such damages—how will courts decide what qualifies as "normal" or "average" injuries stemming from particular actions by injurers?[246]

None of these problems are new to courts, however. For instance, courts already limit damages "to the kind of harm" that is reasonably foreseeable,[247] even though they do not limit damages relating to the magnitude of that

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[241] *See* Klimchuk, *supra* note 107, at 132 (noting that the eggshell plaintiff rule forces injurers to "absorb the costs of some unforeseeable injuries"); Jill Wieber Lens, *Procedural Due Process and Predictable Punitive Damage Awards*, 2012 BYU L. REV. 1, 40 ("The eggshell plaintiff rule famously mandates compensation for damages worsened due to a plaintiff's preexisting condition, even though the extent of the injury is unforeseeable." (footnote omitted)).

[242] *See* POSNER, *supra* note 22, at 235 (discussing foreseeability, and noting that "debilitating uncertainty" makes it difficult for injurers to take appropriate care and insure against losses).

[243] Richard A. Epstein & M. Todd Henderson, *Do Accounting Rules Matter? The Dangerous Allure of Mark to Market*, 36 J. CORP. L. 513, 518 (2011).

[244] *See* SHAVELL, *supra* note 22, at 239.

[245] *See* POSNER, *supra* note 22, at 238. We also acknowledge the reality that eggshell victims may not know of their own preexisting conditions, and—even if they do—it may often be impractical or impossible to warn injurers in advance. For instance, how could an eggshell pedestrian let a driver know of her unusual condition immediately preceding a car accident? She likely could not, and one can imagine a variety of other situations where this is also true. In these circumstances, it would not be reasonable to expect ex ante communication between the parties or to expect that injurers could alter their care or activity levels to compensate for the greater risk their actions posed on potential victims.

[246] *Id.* (arguing that an "average" damages approach would "create severe measurement problems").

[247] RESTATEMENT (SECOND) OF TORTS § 519 (1977) (within the strict liability context); *see also* RESTATEMENT (THIRD) OF TORTS: LIAB. FOR PHYSICAL & EMOTIONAL HARM § 29 (2010) (limiting liability to the harms resulting from the "risks that made the actor's conduct tortious").

harm.[248] As such, courts regularly decide the limits of foreseeable harm;[249] all of the above critiques could be waged as general arguments against the modern tort system, independent of our proposed foreseeability limitation. Additionally, even if these criticisms have some merit, the benefits of limiting eggshell liability likely outweigh the costs.[250]

B. *Eggshell Insurance for Victims*

Victims still must be compensated for their losses.[251] Given the wide availability of insurance, however, tort liability is not nearly as necessary for victim compensation as it was in years past.[252] Further, the tort system is not a cost-effective mechanism for making victims whole—for every dollar compensated to victims through the tort system, the system generates more than a dollar in administrative costs.[253] Thus, some kind of victim insurance likely would be a cost-effective alternative to the compensatory function served by the current eggshell plaintiff rule.[254]

If courts adopt a foreseeability limitation on eggshell liability, private or public insurance markets could emerge to provide full compensation to eggshell

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[248] DIAMOND ET AL., *supra* note 65, at 221; EMERGING ISSUES IN TORT LAW, *supra* note 65, at 126; ROBERTSON ET AL., *supra* note 65, at 180.

[249] Martha Chamallas & Linda K. Kerber, *Women, Mothers, and the Law of Fright: A History*, 88 MICH. L. REV. 814, 822 (1990) (noting that "courts commonly apply tests of foreseeability in negligence cases").

[250] Assuming that the number of eggshell plaintiffs is exceedingly small (which is almost certainly the case for most types of injuries), it is likely that any benefits from the existing eggshell plaintiff rule are vastly outweighed by the rule's costs—namely, the misalignment of injurers' and victims' incentives in the vast majority of cases.

[251] *See* DAN B. DOBBS, THE LAW OF TORTS 17 (2000) ("Compensation of injured persons is one of the generally accepted aims of tort law.").

[252] *See* SHAVELL, *supra* note 22, at 268–69.

[253] These costs include lawyers' fees, court fees, time, effort, emotional strain, and other legal and nonlegal investments in the tort litigation process. *See id.* at 280–81; *see also* LANDES & POSNER, *supra* note 17, at 57–58 (arguing that the tort system is "an exceedingly costly insurance mechanism" due to its high administrative costs); TILLINGHAST-TOWERS PERRIN, U.S. TORT COSTS: 2003 UPDATE 17 (2003), *available at* https://www.towersperrin.com/tillinghast/publications/reports/2003_tort_costs_update/tort_costs_trends_2003_update.pdf (noting that tort victims receive forty-six cents of each judgment or settlement dollar).

[254] *See* LANDES & POSNER, *supra* note 17, at 57 ("If people who want insurance and are willing to pay for it can obtain it in the insurance market or in some informal substitute, there is no apparent reason to use the tort system to provide insurance also."); SHAVELL, *supra* note 22, at 268 ("[I]n the absence of the liability system, compensation of victims would probably be about as well accomplished through private and social accident insurance as it is today.").

victims.[255] Eggshell victims would bear risk associated with their own vulnerabilities; if victims are risk averse, they would seek "eggshell insurance" coverage against that risk.[256] Theoretically, the insurance markets would be capable of providing victim compensation without incurring many of the disadvantages of the current eggshell plaintiff rule—namely, the imposition of excessive liability upon injurers and the distortion of behavioral incentives described above.[257]

We explore the idea of using insurance markets to compensate eggshell victims by describing several potential problems of doing so (including moral hazard, adverse selection, and optimism bias).[258] We then argue that these problems can be addressed by either mandating the purchase of private insurance or by providing social insurance for eggshell victims.[259]

1. *Potential Problems with Eggshell Insurance*

There are several potential problems associated with using insurance to compensate eggshell victims. First, the availability of insurance may produce a moral hazard effect.[260] Ideally, the insurer can observe a victim's level of care and can reduce premiums when victims self-protect in order to incentivize eggshell victims to take optimal care.[261] In reality, however, insurers might

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[255] *See, e.g.*, INS. INFO. INST., http://www.iii.org (last visited July 21, 2012) (indicating that insurance is offered in a wide variety of contexts, including automobiles, disabilities, health, life, business, property, and natural disasters).

[256] *See, e.g.*, Gilles, *supra* note 184, at 669; Siegelman, *supra* note 184, at 1265. Of course, one could argue that *injurers* should be required to take out insurance for harm caused to eggshell plaintiffs rather than placing this burden on victims. Although this alternative approach might mitigate the problem of risk aversion among injurers, it would not encourage victims to self-protect. Placing the insurance burden on victims solves this problem. It also better coincides with the traditional corrective justice rationale underlying tort law because it avoids situations in which injurers would be forced to pay higher insurance premiums in order to compensate for unforeseeable harm.

[257] *See supra* Part III.C.

[258] *See infra* Part IV.B.1.

[259] *See infra* Part IV.B.2.

[260] The following discussion mirrors the moral hazard effect described above in the context of injurers' incentives under the existing eggshell plaintiff rule. *See supra* notes 190–93 and accompanying text. Because a foreseeability rule would shift the risk of eggshell losses from injurers to victims (inducing victims to purchase insurance), the potential for moral hazard shifts to victims as well.

[261] *See* SHAVELL, *supra* note 22, at 262–63. For example, if the insurer knew that a particular eggshell plaintiff took precautions such as wearing a helmet or alerting potential injurers to his fragile condition, the insurer could lower the premium to reflect the reduction in risk that would result.

have difficulty observing the level of care taken by eggshell victims,[262] in which case they will not be able to lower premiums to reflect victims' behavior, and victims will not have a pecuniary incentive to take care.[263]

Second, adverse selection might occur.[264] Adverse selection problems arise when the unhealthiest and riskiest segment of the market has a disproportionate incentive to insure.[265] Victims aware of their eggshell condition would be more likely to buy insurance than "normal" victims with average vulnerabilities.[266] Normal victims' foreseeable injuries would be fully compensated by the tort system under our proposed rule,[267] reducing their need to enter into a secondary insurance market.[268] Normal victims also would refrain from purchasing insurance due to the perception that they, with merely average risks, would be subsidizing eggshell victims with above-average risks.[269]

If only eggshell victims purchase insurance, the insurer will raise the policy price to account for the fact that the insurance pool has a high degree of risk.[270] Premiums will skyrocket, and additional individuals will choose not to insure.[271] As a result of both moral hazard and adverse selection, full coverage

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[262] For example, insurers may not be able to observe how carefully a victim with eggshell vulnerabilities crosses the street, whether she wears a helmet on every occasion, or how diligently she informs injurers of her condition.

[263] *See* SHAVELL, *supra* note 22, at 262–63.

[264] For discussion on adverse selection, see generally JONATHAN GRUBER, PUBLIC FINANCE AND PUBLIC POLICY 329–33 (2011); George A. Akerlof, *The Market for "Lemons": Quality Uncertainty and the Market Mechanism*, 84 Q.J. ECON. 488 (1970); Michael Rothschild & Joseph Stiglitz, *Equilibrium in Competitive Insurance Markets: An Essay on the Economics of Imperfect Information*, 90 Q.J. ECON. 629 (1976); Siegelman, *supra* note 184.

[265] POSNER, *supra* note 22, at 137.

[266] *See* Kenneth S. Abraham, *Cleaning up the Environmental Liability Insurance Mess*, 27 VAL. U. L. REV. 601, 608 (1993) (describing adverse selection as "the tendency of any potential policyholder posing an above-average risk to find insurance more attractive than a policyholder posing an average or below-average risk").

[267] *See supra* Part IV.A.

[268] This reluctance to buy insurance would not be limited to normal victims with average vulnerabilities; conceivably, eggshell victims who are *unaware* of their vulnerabilities would wrongly assume that they run no risk of large losses and would be reluctant to insure as well.

[269] Dana L. Kaersvang, Note, *The Fair Housing Act and Disparate Impact in Homeowners Insurance*, 104 MICH. L. REV. 1993, 2010 (2006) ("If risk levels were not similar among members of [an insurance] pool, those whose risk levels were less than average for the pool would drop out rather than subsidize higher-risk members.").

[270] POSNER, *supra* note 22, at 137.

[271] Explained in more detail:

> When adverse selection occurs, the average expected cost of people in a plan is higher than the insurer planned. The insurer loses money. If the insurer then raises the premium, the higher premium causes relatively lower cost people to drop the policy, which pushes up the average cost of those remaining. The insurer loses money again and raises the premium again. Again, this forces lower cost people to drop out. This

could be prohibitively expensive, leading many eggshell victims to forgo insurance or to purchase only partial coverage against risk.[272]

Finally, a related problem to adverse selection is the tendency for victims to systematically misperceive risk and underestimate the occurrence of low-probability events.[273] If potential eggshell victims suffer from optimism bias[274] and (wrongly) believe that they are unlikely to suffer extensive injuries due to the action of a tortfeasor, they would be less likely to purchase insurance against catastrophic injuries.[275] If that is the case, eggshell victims could be forced to bear potentially ruinous costs.

2. *Solving Insurance Problems*

Fortunately, many of these problems can be ameliorated by mandating the purchase of private insurance, using methods that share risk with the insured, or by providing social insurance for eggshell victims. First, states could require

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vicious cycle (sometimes called the "Premium Death Spiral") continues until only the highest cost people are left in the policy. Most people have then dropped out and are uninsured.

Adverse Selection and Cream Skimming, HEALTHINSURANCE.INFO, http://www.healthinsurance.info/HISEL.HTM (last visited Aug. 1, 2012); *see also* Loshin, *supra* note 191, at 506 (discussing the consequences of adverse selection for both insureds and insurers).

[272] *See* SHAVELL, *supra* note 22, at 263; Kenneth S. Reinker & David Rosenberg, *Unlimited Subrogation: Improving Medical Malpractice Liability by Allowing Insurers to Take Charge*, 36 J. LEGAL STUD. S261, S283 n.23 (2007). Under this scenario, eggshell victims will be exposed to some risk and will have some incentive to take care to avoid losses not covered by their insurance policies. *See* SHAVELL, *supra* note 22, at 263. Precautions will not always be optimal under policies with partial coverage, however. *Id.*

[273] *See* VISCUSI ET AL., *supra* note 175, at 661–63 (arguing that public misperception of risk generates irrational market decisions); *see also* Louis Kaplow, *An Economic Analysis of Legal Transitions*, 99 HARV. L. REV. 509, 602–03 (1986) (discussing, in the takings context, the potential for insurance markets to fail where potential victims face low probability risks and may therefore underestimate the probability of such risks).

[274] "Optimism bias refers to the propensity of individuals to consistently underestimate personal risk in the decision-making context." Amy B. Monahan, *Federalism, Federal Regulation, or Free Market? An Examination of Mandated Health Benefit Reform*, 2007 U. ILL. L. REV. 1361, 1382. Such bias is most likely to occur when individuals perceive a hazard as having a low probability, and when they have had little personal experience with the risk. *Id.* at 1382–83. Optimism bias can result in sub-optimal levels of insurance. *Id.*

[275] *See id.* at 1382–83 (describing the effects of optimism bias on insurance purchases); *see also* Tom Baker & Peter Siegelman, *Tontines for the Invincibles: Enticing Low Risks into the Health-Insurance Pool with an Idea from Insurance History and Behavioral Economics*, 2010 WIS. L. REV. 79, 95–97 (noting that optimism bias may contribute to underinsurance among young individuals).

purchase of eggshell insurance by all citizens.[276] Mandating such coverage would ensure full compensation for eggshell victims, while protecting against adverse selection[277] and optimism bias.[278] Insurance mandates are commonplace. For example, the vast majority of states require drivers to purchase automobile liability insurance.[279] Similarly, states generally require employers and employees to participate in workers compensation, regardless of whether the parties would have voluntarily negotiated for it on their own.[280] And most recently, the Patient Protection and Affordable Care Act requires that all Americans have health insurance or face a tax "penalty" instead.[281] These mandates reflect society's judgment that the sharing of extraordinary risks is preferable to exposing a few individuals to potentially catastrophic losses.[282] We submit that eggshell injuries are no different.[283]

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[276] Along the same lines as our proposal for eggshell insurance, commentators have devoted much attention in recent years to the prospect of an individual mandate for health insurance. *See, e.g.*, LINDA J. BLUMBERG & JOHN HOLAHAN, URBAN INST., DO INDIVIDUAL MANDATES MATTER? 1–3 (2008), *available at* www.urban.org/publications/411603.html; Jonathan Gruber, *Covering the Uninsured in the United States*, 46 J. ECON. LITERATURE 571, 601 (2008); Jonathan Cohn, *Mandate Overboard*, NEW REPUBLIC (Dec. 7, 2007, 12:00 AM), http://www.tnr.com/article/ politics/mandate-overboard.

[277] *See* Russell Korobkin, *Determining Health Care Rights from Behind a Veil of Ignorance*, 1998 U. ILL. L. REV. 801, 826 (arguing that "the obvious response" to adverse selection "is to mandate participation, just as many states mandate that drivers maintain automobile insurance"); *see also* Norman Daniels, *The Ethics of Health Reform: Why We Should Care About Who Is Missing Coverage*, 44 CONN. L. REV. 1057, 1066–67 (2012).

[278] *See* Kyle D. Logue, *Legal Transitions, Rational Expectations, and Legal Progress*, 13 J. CONTEMP. LEGAL ISSUES 211, 226 (2003) (suggesting that compulsory disaster insurance may be a potential solution to optimism bias in the context of house construction in disaster-prone areas).

[279] Susan Randall, *Freedom of Contract in Insurance*, 14 CONN. INS. L.J. 107, 125 (2008) ("Forty-seven states and the District of Columbia require automobile liability insurance covering bodily injury and property damage in specified amounts.").

[280] *See* Anthony J. Barkume & John W. Ruser, *Deregulating Property-Casualty Insurance Pricing: The Case of Workers' Compensation*, 44 J.L. & ECON. 37, 43 (2001).

[281] Patient Protection and Affordable Care Act, Pub. L. No. 111-148, 124 Stat. 119 (2010) (codified as amended in scattered sections of 26 and 42 U.S.C.). The Supreme Court upheld the major provisions of the Act in the summer of 2012 in *National Federation of Independent Business v. Sebelius*, 132 S. Ct. 2566 (2012).

[282] Jeffrey M. Gaba, *Taking "Justice and Fairness" Seriously: Distributive Justice and the Takings Clause*, 40 CREIGHTON L. REV. 569, 586 (2007) ("Insurance involves the sharing of risk with others to minimize loss, but, in most economic views, insurance is appropriately employed only to avoid catastrophic loss from unusual and unpredictable events.").

[283] It is worth noting that a mandate for private eggshell insurance at the *state* level would not incur the type of constitutional challenges recently faced by the Patient Protection and Affordable Care Act, a *federal* law. *See* Dan T. Coenen, *Originalism and the "Individual Mandate": Rounding Out the Government's Case for Constitutionality*, 107 NW. U. L. REV. COLLOQUY 55, 62 (2012), http://www.law.northwestern.edu/lawreview/ colloquy/2012/10/ (noting that the parties challenging President Obama's health care law

Second, insurers can employ specific methods to reduce both moral hazard and adverse selection problems in the absence of a mandate.[284] Insurers can use deductibles, coverage limits and exclusions, and co-insurance to share risk with the insured.[285] They also can use other strategies, such as excluding coverage of losses that the insured could easily prevent and, to the extent that the insurer has information about the risk levels of insureds, charging different prices to insureds based on their levels of risk.[286]

Finally, if mandating private insurance fails to solve some of the problems described above, policymakers could consider the option of state-based social insurance.[287] Political aversion to the concept aside,[288] government could step in to reimburse eggshell victims for their extraordinary losses, rather than allowing the tort system to impose exorbitant damages on unsuspecting tortfeasors in lottery-like fashion.[289]

Social insurance for eggshell victims would be comparable to today's government-run welfare, unemployment, food-assistance, and disability insurance systems.[290] Under a social insurance scheme, general taxes would fund victim compensation, and thus all of society would share the burden of

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"do not argue that the states somehow lack authority to enact individual health insurance 'mandates' pursuant to their general police powers").

[284] POSNER, *supra* note 22, at 136–37.

[285] *See* Loshin, *supra* note 191, at 506–07 (discussing various methods used by insurers to combat the moral hazard and adverse selection problems created by insurance).

[286] *See* POSNER, *supra* note 22, at 136–37.

[287] For a general discussion on social insurance, see, for example, GEORGE E. REJDA, SOCIAL INSURANCE AND ECONOMIC SECURITY (7th ed. 2012); W.G. Friedmann, *Social Insurance and the Principles of Tort Liability*, 63 HARV. L. REV. 241 (1949).

[288] *See, e.g.*, Dalia Sussman, *Poll: 47 Percent Disapprove of Health Care Law*, N.Y. TIMES: THE CAUCUS BLOG (Mar. 26, 2012, 7:39 AM), http://thecaucus.blogs.nytimes.com/2012/03/26/poll-47-disapprove-of-health-care-law. *But see* Kevin Sack & Marjorie Connelly, *In Poll, Wide Support for Government-Run Health*, N.Y. TIMES (June 20, 2009), http://www.nytimes.com/2009/06/21/health/policy/21poll.html?r=1. American skepticism about state-based insurance is not new. More than a century ago, Oliver Wendell Holmes asserted that "[s]tate interference is an evil," and argued that "[u]niversal insurance, if desired, can be better and more cheaply accomplished by private enterprise." O. W. HOLMES, JR., THE COMMON LAW 96 (1881).

[289] Unlike premium-funded private insurance, tax dollars would fund social insurance for eggshell victims. *See* Brian Galle & Jonathan Klick, *Recessions and the Social Safety Net: The Alternative Minimum Tax as a Countercyclical Fiscal Stabilizer*, 63 STAN. L. REV. 187, 193 (2010) ("In the social insurance context, the government body taxes individuals in relatively good financial condition to provide transfers to individuals who have suffered some economic loss.").

[290] For background on these social insurance programs, see *Welfare*, LEGAL INFO. INST., http://www.law.cornell.edu/wex/welfare (last visited Aug. 1, 2012).

reimbursing vulnerable victims.[291] This would accomplish the compensation function previously served by tort law's eggshell plaintiff rule, but without the accompanying distortionary impact on injurers' and victims' behavioral incentives.[292]

Social insurance also can resolve the moral hazard and adverse selection problems described above. The government can use methods similar to those used by private insurers to incentivize optimal care and avoid moral hazard issues—namely, methods that ensure that the beneficiaries of social insurance internalize some of the social costs of their decisions and actions.[293] Indeed, Judge Posner points out that "[g]overnment has powers that a private insurance company lacks that can alleviate these problems," such as the ability to incentivize optimal behavior through the tax code.[294] Further, adverse selection would not be an issue "because no one is permitted to withdraw from the insurance pool."[295]

In sum, private insurance markets could arise in response to a reformulated eggshell plaintiff rule to solve the problem of providing compensation to unfortunate victims in our society. Of course, the solution comes with some drawbacks, including the potential for moral hazard, adverse selection, and optimism bias. However, these problems can be substantially mitigated by mandating insurance coverage and by allowing insurers to use certain incentives to calibrate risk and to induce optimal behavior on the part of insureds. Finally, in the event that private insurance is not a viable option, society could choose to adopt a social insurance program in order to ensure that eggshell victims receive full compensation for their injuries.

C. *The Steel Skull Corollary: Foreseeable Damages in All Cases*

Given the likelihood of political opposition to state-run social insurance and even mandated private insurance, courts should consider other solutions as well.[296] One potential alternative is for the tort system to use damages in "steel

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[291] Robert A. Baruch Bush, *Between Two Worlds: The Shift from Individual to Group Responsibility in the Law of Causation of Injury*, 33 UCLA L. REV. 1473, 1505 n.106 (1986).

[292] *See id.* ("For those concerned above all else with compensating victims, the most effective measure to ensure compensation is social insurance.").

[293] *See, e.g.*, Walter Nicholson, *The Evolution of Unemployment Insurance in the United States*, 30 COMP. LAB. L. & POL'Y J. 123, 129 (2008); Robert E. Scott, *Rethinking the Regulation of Coercive Creditor Remedies*, 89 COLUM. L. REV. 730, 787 (1989).

[294] POSNER, *supra* note 22, at 641.

[295] *Id.* The insurance pool would therefore be representative of all levels of risk in society and would not shrink to the point where it contains only high-risk individuals.

[296] It is not our intention to weigh every possible advantage or disadvantage of our proposed foreseeability limitation on eggshell liability in this Article. Certainly, there are dozens of other advantages and disadvantages—beyond those mentioned here—that courts and policymakers could consider. By weighing the primary advantages and disadvantages of

skull" cases to cross-subsidize eggshell victims.[297] Steel skull individuals are those victims who suffer relatively minor injuries compared to the average victim (due to exceptional bone strength, resilience, and so forth).[298] Under the current eggshell plaintiff rule, courts hold the injurer liable for actual damages, even though he reasonably should have expected to pay far more.[299]

If courts were to adopt a foreseeability limitation on eggshell liability, they should hold injurers liable for reasonably foreseeable damages in *all* cases, regardless of whether victims have eggshell skulls or steel skulls. In other words, courts should determine and award the amount of damages that a "normal" or "average" victim would have suffered, regardless of whether the actual victim in question has above-average or below-average vulnerabilities.[300] Courts could order defendants to deposit the excess damages that steel skull victims do not need in a special fund, which then could be used to compensate eggshell victims in other cases.[301]

This foreseeability-plus-cross-subsidizing approach would be superior to the current eggshell approach for several reasons. First, it ties damages to foreseeability in all cases, avoiding costs associated with uncertainty (most notably, the tendency for risk-averse injurers to exercise socially excessive

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a foreseeability rule, we hope to contribute significantly to existing literature on tort law and the eggshell plaintiff rule. We encourage others to contribute meaningfully to the debate by weighing additional advantages and disadvantages of our proposal.

[297] Cross-subsidization (a common effect when insurance is offered at a uniform price) involves the use of low-risk individuals to subsidize high-risk individuals. *See, e.g.*, Allison K. Hoffman, *Oil and Water: Mixing Individual Mandates, Fragmented Markets, and Health Reform*, 36 AM. J.L. & MED. 7, 26–30 (2010) (discussing the cross-subsidizing feature of the Patient Protection and Affordable Care Act).

[298] *See* POSNER, *supra* note 22, at 238 (referring to "rock skull" cases in which "the victim has above-average resistance to damage"); *see also* ROBERTSON ET AL., *supra* note 65, at 162 (describing the steel skull victims as the "flip side" of eggshell victims, and noting that in both steel skull and eggshell skull cases, "the tortfeasor's responsibility is measured by the actual consequences").

[299] ROBERTSON ET AL., *supra* note 65, at 162.

[300] A determination of the "normal" or "average" level of damages is not unlike the inquiries that judges and jurors make in other contexts. *See, e.g.*, Stephen G. Gilles, *On Determining Negligence: Hand Formula Balancing, the Reasonable Person Standard, and the Jury*, 54 VAND. L. REV. 813, 822 (2001) ("For as long [as] there has been a tort of negligence, American courts have defined negligence as conduct in which a reasonable man . . . would not have engaged.").

[301] *See* Rick Swedloff, *Uncompensated Torts*, 28 GA. ST. U. L. REV. 721, 754–58 (2012) (discussing victim compensation funds). The fact that damages are minimal in steel skull cases does not address the problem of incentivizing these plaintiffs to bring suit in the first place. Given that steel skull victims receive minimal damages under both the status quo and our proposal, what incentive do they have to bring suit? Incentives to bring suit may indeed be sub-optimal; to address this problem, the government may have to provide steel skull victims some incentive (e.g., a subsidy or percentage of the total damages) to encourage them to bring suit. *See* SHAVELL, *supra* note 22, at 398 (discussing the ability of states to encourage socially desirable litigation).

levels of care or socially inadequate levels of activity when faced with the unknown extent of eggshell liability).[302] Second, it requires tortfeasors to pay foreseeable (rather than actual) damages in cases with steel skull victims, preserving optimal incentives among injurers.[303] Third, cross-subsidization of eggshell victims by steel skull victims ensures full compensation for all victims,[304] while avoiding unnecessary windfalls for steel skull plaintiffs.[305]

Of course, there are potential problems with this approach as well. First, it might be difficult to locate tortfeasors who struck steel skull plaintiffs, since injuries would be minor and plaintiffs may not report them.[306] Others are skeptical about the ability of courts to accurately determine the "normal" scope of damages.[307] Additionally, cross-subsidization of eggshell victims by steel skull victims would be optimal only if the surplus in damages from steel skull cases (less administrative costs) roughly equals the shortfall in damages in eggshell cases—which will not necessarily be the case.[308] Perhaps most troubling, injurers likely would be required to pay "normal" damages into the special compensation fund even if the steel skull victim in a particular case suffered no damage at all.[309]

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[302] *See* SHAVELL, *supra* note 22, at 260.

[303] In contrast, under the current rule tortfeasors pay unusually low damages in steel skull cases, due to the resiliency of that category of victims. When that occurs, injurers do not internalize the full cost of behavior that is otherwise dangerous.

[304] This fulfills one of the main purposes of tort law. *See* SCHWARTZ ET AL., *supra* note 106, at 1–2. Of course, the current eggshell plaintiff rule accomplishes this goal as well, albeit with significant disadvantages. *See supra* Part III.C.

[305] *See* Note, *An Economic Analysis of the Plaintiff's Windfall from Punitive Damage Litigation*, 105 HARV. L. REV. 1900, 1903 (1992) (noting that a windfall occurs when "the payment to the plaintiff . . . exceeds the amount necessary for full compensation").

[306] One should be careful to note, though, that this problem is also the case where a person attempts but fails to succeed at committing a serious crime. For example, if an actor shoots to kill an intended target but misses (or the target suffers no harm because he is wearing a bulletproof vest), society does not simply turn its head and allow the perpetrator to go free. Rather, the state seeks out such dangerous actors, charges them with attempted crimes, and sanctions them at a level far greater than the actual harm that the victim sustained. That makes perfect sense from an economic perspective, as dangerous actors need to be incentivized to take greater care; absolving them in the case of steel skull victims would prevent precisely that goal.

[307] *See, e.g.*, Aaron J. Wright, Note, *Rendered Impracticable: Behavioral Economics and the Impracticability Doctrine*, 26 CARDOZO L. REV. 2183, 2206 (2005) (citing various factors that present problems for "rules that require *ex post* determinations of an event's foreseeability").

[308] *See* William P. Kratzke, *Tax Subsidies, Third-Party-Payments, and Cross-Subsidization: America's Distorted Health Care Markets*, 40 U. MEM. L. REV. 279, 294 (2009) (arguing that attempts at cross-subsidization often are "expensive, function unevenly and chaotically, and fail to achieve the objectives their proponents desire").

[309] For example, suppose an injurer hits a steel skull victim with her car, but the victim suffers absolutely no harm. Under the foreseeability-for-all approach, the injurer would

Although these concerns may have merit to some extent, they are not unique to our proposal and should not keep courts from experimenting. First, a judicial assessment of the "normal" scope of damages is no more or less amorphous than assessments of due care, foreseeability, proximate cause, reasonableness, and other determinations already made by judges and juries in tort cases.[310] Second, if damage awards in steel skull cases and eggshell cases do not average out, that would ironically undercut one of the main economic arguments for the eggshell plaintiff rule itself.[311] Third, it is not uncommon for the law to impose punishment or liability for actions that are considered dangerous or wrongful, even if no actual harm occurs.[312]

V. CONCLUSION

An inherent tension underlies the debate over the eggshell plaintiff rule. On one hand, the rule guarantees that victims are fully compensated for their losses—an egalitarian concept rooted in society's desire to make victims whole. On the other hand, the rule conflicts with the fundamental principle that legal liability should be limited to foreseeable harm—a notion essential to society's perception of the fairness of our judicial system.

An economic analysis of the eggshell plaintiff rule shows why courts should resolve the debate in favor of foreseeability. The rule creates perverse behavioral incentives for injurers and victims alike. Exposure to extraordinary losses often leads injurers to take sub-optimal levels of care and activity. And full compensation for extraordinary injuries dulls victims' incentives to take care.

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nonetheless be liable for the amount of damages that would have been suffered by a normal victim in those circumstances.

[310] Joel Levin, *Tort Wars*, 39 TORT TRIAL & INS. PRAC. L.J. 869, 878 (2004) ("Much of tort law rises or falls based on the use of vague concepts like reasonableness, due care, proximate cause, recklessness, intentionality, and foreseeability.").

[311] The most frequent justification offered by law-and-economics scholars for imposing full liability in eggshell plaintiff cases is that "there must be [full] liability in the eggshell skull case to balance nonliability in the 'rock skull' case." POSNER, *supra* note 22, at 238; *see also* JOHNSON & GUNN, *supra* note 17, at 423 ("In a sense, holding injurers liable for all of the harm suffered by unusually sensitive victims makes up for the benefits that some injurers get when their victims turn out to be unusually hardy."); LANDES & POSNER, *supra* note 17, at 250 (describing the economic balancing justification for paying actual damages to eggshell plaintiffs).

[312] *See, e.g.*, Dougherty v. Stepp, 18 N.C. (1 Dev. & Bat.) 371, 372 (1835) (awarding nominal damages for trespass, even though no damage to the land occurred); Commonwealth v. Gruff, 822 A.2d 773, 780 (Pa. Super. Ct. 2003) (finding defendant guilty of assault with a rifle, even though no harm occurred). Moreover, criminal law generally punishes "attempted" crimes that did not actually succeed because our society is concerned about deterring similar conduct that has potentially harmful social consequences. *See, e.g.*, SHAVELL, *supra* note 22, at 556–59.

Courts should take bold action by embracing a foreseeability rule. After all, bold action is a hallmark of the common law of torts.[313] Eggshell liability should be no exception. By adopting a foreseeability rule for eggshell cases, courts can take another significant step in the evolution of tort law, while ensuring that liability rules align private incentives with the greater social good.

[313] *See, e.g.*, Escola v. Coca Cola Bottling Co. of Fresno, 150 P.2d 436, 440–44 (Cal. 1944) (Traynor, J., concurring) (suggesting that strict liability, rather than negligence, should apply in products liability cases); Palsgraf v. Long Island R.R. Co., 162 N.E. 99, 99–101 (N.Y. 1928) (establishing the negligence law concept of proximate cause).