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Article

Probabilistic Tort Law: Extending the Loss-of-Chance Doctrine's Partial-Damages Framework to All Tort Cases (and Beyond)

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Tort law's loss-of-chance doctrine ("LOCD") is employed in many jurisdictions to resolve a problem arising in certain medical malpractice cases. In the paradigmatic case, the patient presents with a greater-than-50% chance of dying from a condition, the doctor's negligence increases that chance, and the patient dies. Traditionally, the plaintiff would never recover because he cannot show by a preponderance that he would have survived absent the negligence. The LOCD, however, allows for partial damages reflecting the portion of the risk attributable to the negligence. As most commentators agree, the LOCD furthers both fairness and efficiency, and all jurisdictions should employ it.

But this Article argues that we should go much further. The rationales underlying the LOCD apply not only in the typical LOCD context, but in all tort cases. Accordingly, this Article advocates for two reforms: first, employing the LOCD not only in medical malpractice cases that call for its use, but also in cases raising relevantly similar issues in any other area of tort (most notably, in toxic torts and products liability); and second, employing LOCD-like partial damages to take into account underlying risk even in cases in which the underlying risk is not large enough to create the insurmountable hurdle. The first reform increases recoveries (awarding partial damages instead of no damages); the second decreases recoveries (awarding partial damages instead of full damages).

These proposals are important for three reasons: First: Both further both fairness and efficiency, and their practical effects are significant for parties affected by them. Second: Although the general rationale for the LOCD is clear, and despite commentators agreeing that it should be limited to typical LOCD cases, there is no plausible account of (or consensus on) why it should be limited to these cases—which is why many courts have rejected the LOCD. This Article solves this problem: Not only do we not need to limit the LOCD, but we should not. Accordingly, this Article provides a broad foundational account of the LOCD that, unlike past accounts, is plausible—thus also providing reasons for courts to employ it even in typical LOCD cases. Third: While the Article's reforms constitute a crucial step for tort doctrine in taking chance seriously, they will also serve as a blueprint for analogous reforms in other areas of the law.

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Probabilistic Tort Law: Extending the Loss-of-Chance Doctrine's Partial-Damages Framework to All Tort Cases (and Beyond)

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INTRODUCTION

Tort law's loss-of-chance doctrine ("LOCD") is used in many jurisdictions to resolve a problem that arises in certain medical malpractice cases.[1] In the paradigmatic LOCD case, a patient who has a greater-than-50% chance of dying from an underlying condition is negligently treated or misdiagnosed by a doctor, and this negligence increases the patient's chance of dying. The patient dies, and the patient's family sues the doctor for malpractice.[2] If not for the LOCD, the family would not be able to recover. Why? Because even if it is established that the doctor's negligence increased the patient's chance of dying, the standard of proof presents the plaintiff with an insurmountable hurdle in proving that the doctor's negligence actually caused the patient's death.[3] In accordance with traditional tort rules,

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[1] For a broad survey of the LOCD's implementation nationwide, see Lauren Guest, David Schap & Thi Tran, *The "Loss of Chance" Rule as a Special Category of Damages in Medical Malpractice: A State-by-State Analysis*, 21 J. LEGAL ECON. 53, 55 (2015) (reporting that "24 states have adopted some version of the 'loss of chance' rule, 17 have rejected it, four have deferred ruling on the doctrine, and five have yet to address the matter"). Of the five jurisdictions that had not yet addressed the matter by 2015, two of them now have. *See* Parkes v. Hermann, 852 S.E.2d 322, 325–26 (N.C. 2020) (stating that the adoption of the LOCD should be determined by the legislature); Est. of Frey v. Mastroianni, 463 P.3d 1197, 1200 (Haw. 2020) (holding that there was no need to adopt the LOCD as the concept could be incorporated into the already-existing substantial-factor test for establishing causation).

[2] *See, e.g.*, Matsuyama v. Birnbaum, 890 N.E.2d 819, 823–28, 830 (Mass. 2008) (involving negligent misdiagnosis that ultimately led to patient's death), *overruled on other grounds by* Doull v. Foster, 163 N.E.3d 976, 990–92 (Mass. 2021); Herskovits v. Grp. Health Coop. of Puget Sound, 664 P.2d 474, 475–77 (Wash. 1983) (finding compensable negligence for failure to timely diagnose).

[3] *See, e.g.*, Matsuyama, 890 N.E.2d at 829–30; Herskovits, 664 P.2d at 476–77, 479; Mark A. Geistfeld, *Duty-Preserving Tort Rules as an "Old Category" for Justifying the Loss-of-Chance Doctrine*

causation must be shown by a preponderance of the evidence. This requires the plaintiff to show that it is more likely than not that, had the doctor not negligently treated or misdiagnosed the patient, the plaintiff would not have died.[4] However, this requirement cannot be met if there was a greater-than-50% chance that the patient would have died even without the negligence. This creates both a whole category of plaintiffs who cannot recover and a whole category of defendants who are immune from liability.[5]

This is a bad result. First, because of the lack of compensation for plaintiffs and the lack of liability for defendants, this result fails to meet important fairness and corrective justice goals. Second, the immunity it creates for defendants is inefficient because it under-deters their negligent behavior.[6] The LOCD, however, offers a remedy for this problem by allowing the plaintiff to recover partial damages reflecting the portion of the risk attributable to the negligence. For example, and to use facts based loosely on *Matsuyama v. Birnbaum*,[7] a 2008 Massachusetts case: If death is worth $1 million, the underlying chance of death is 60%, the negligence raises that risk to 100%, and the patient dies, then the plaintiff could use the LOCD to recover $400,000 ($1M * (1 – 0.6) = $400,000).[8] As most commentators agree,[9] the LOCD furthers both fairness and efficiency, and all jurisdictions should employ it.[10]

But this Article argues that we should go much further than this, enacting reforms that, thus far, have not been advocated for in the literature.

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in Medical Malpractice Cases, 73 DEPAUL L. REV. 427, 428 (2024); Kenneth W. Simons, *Lost Chance of a Better Medical Outcome: New Tort, New Type of Compensable Injury, or New Causation Rule?*, 73 DEPAUL L. REV. 547, 549–50 (2024).

[4] *See, e.g.*, Matsuyama, 890 N.E.2d at 829, 831; Herskovits, 664 P.2d at 476; Saul Levmore, *Probabilistic Recoveries, Restitution, and Recurring Wrongs*, 19 J. LEGAL STUDS. 691, 692 (1990); Daniel A. Farber, *Recurring Misses*, 19 J. LEGAL STUDS. 727, 729 (1990).

[5] *See, e.g.*, Geistfeld, *supra* note 3, at 428–29; Simons, *supra* note 3, at 550–51.

[6] *See, e.g.*, Geistfeld, *supra* note 3, at 429; Simons, *supra* note 3, at 555.

[7] Matsuyama, 890 N.E.2d at 824–25.

[8] *See, e.g.*, *id.* at 838–41.

[9] *See, e.g.*, Joseph H. King, Jr., *Causation, Valuation, and Chance in Personal Injury Torts Involving Preexisting Conditions and Future Consequences*, 90 YALE L.J. 1353, 1354, 1394 (1981) [hereinafter King 1]; Joseph H. King, Jr., *"Reduction of Likelihood" Reformulation and Other Retrofitting of the Loss-of-a-Chance Doctrine*, 28 U. MEM. L. REV. 491, 492–94 (1998) [hereinafter King 2]; Levmore, *supra* note 4, at 692–93, 718–19; Farber, *supra* note 4, at 727; Ariel Porat, *Misalignments in Tort Law*, 121 YALE L.J. 82, 108–09, 111–12 (2011); David A. Fischer, *Tort Recovery for Loss of a Chance*, 36 WAKE FOREST L. REV. 605, 627, 640 (2001); Geistfeld, *supra* note 3, at 428–29; Simons, *supra* note 3, at 551, 555; Robert J. Rhee, *Loss of Chance, Probabilistic Cause, and Damage Calculations: The Error in* Matsuyama v. Birnbaum *and the Majority Rule of Damages in Many Jurisdictions More Generally*, 1 SUFFOLK U. L. REV. ONLINE 39, 43–44 (2013) [hereinafter Rhee 1]; Robert J. Rhee, *Probabilistic Causation in the Loss of Chance Doctrine: A Comment on Efficiency and Error Mitigation*, 55 SUFFOLK U. L. REV. 513, 513, 526 (2022) [hereinafter Rhee 2].

[10] Twenty-four states currently employ some version of the LOCD: Arizona, Delaware, Illinois, Indiana, Iowa, Kansas, Louisiana, Massachusetts, Minnesota, Missouri, Montana, Nevada, New Jersey, New Mexico, New York, North Dakota, Ohio, Oklahoma, Pennsylvania, Utah, Washington, West Virginia, Wisconsin, and Wyoming. Guest, Schap & Tran, *supra* note 1, at 59 tbl.1.

Thus far, it has been argued or assumed that the LOCD should be limited,[11] as it currently is, to cases that both (a) involve medical malpractice and (b) create an insurmountable hurdle for the plaintiff in establishing causation by a preponderance. But the use of the LOCD should *not* be limited in either of these ways. The rationales underlying the LOCD apply not only in the typical LOCD context, but in *all tort cases*. Thus, in order to further both fairness and efficiency, this Article argues that the LOCD should be expanded to extend *to all tort cases*. Accordingly, this Article advocates for two reforms: first, employing the LOCD not only in medical malpractice cases that call for its use, but also in cases raising relevantly similar issues in any other area of tort law (most notably, in toxic torts and products liability); and second, employing LOCD-like partial damages to take into account underlying risk even in cases in which the underlying risk is not large enough to create the insurmountable hurdle (i.e., cases in which the plaintiff thus *is* able to meet the preponderance standard and would typically recover in full).[12]

Note that the two reforms have opposing effects on recoveries. The first increases them (awarding partial damages instead of no damages); the second decreases them (awarding partial damages instead of full damages). Whether implementing both reforms will cause a net increase or decrease in recoveries remains to be seen. The key point, however, is that in the same way (and for the same reasons) that the LOCD brings about results that are better from both fairness and efficiency perspectives, so too will the two reforms.

To illustrate, consider the following examples. Although these cases are treated very differently, they are the same in relevant respects, so the identical rule should be used in all of them.

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[11] *See, e.g.*, Simons, *supra* note 3, at 558.

[12] *See, e.g.*, Bradshaw v. Daniel, 854 S.W.2d 865, 867, 872–73 (Tenn. 1993); McBride v. United States, 462 F.2d 72, 73–75 (9th Cir. 1972); Levmore, *supra* note 4, at 717–18; Fischer, *supra* note 9, at 627; Geistfeld, *supra* note 3, at 445–47; Simons, *supra* note 3, at 602–03.

	Insurmountable hurdle in establishing causation	No insurmountable hurdle in establishing causation
Medical Malpractice	**1A. Case type:** Medical malpractice, insurmountable hurdle in establishing causation (with underlying risk over 50%). **Example:** In *Herskovits v. Group Health Cooperative of Puget Sound*, [13] the underlying risk of harm was 61%, the doctor's negligence raised it to 75%, the harm was incurred, and the plaintiff received partial damages under the LOCD. **Current result: Preponderance standard not met. Plaintiff receives partial damages under the LOCD.** **1B. Case type:** Medical malpractice, insurmountable hurdle in establishing causation (with underlying risk under 50% but with plaintiff still unable to meet preponderance standard[14]). **Example:** In *Renzi v. Paredes*,[15] the underlying risk of harm was 42%, the doctor's negligence raised it to 70%, the harm was incurred, and the plaintiff received partial damages under the LOCD. **Current result: Preponderance standard not met. Plaintiff receives partial damages under the LOCD.**	**2. Case type:** Medical malpractice, no insurmountable hurdle in establishing causation. **Example:** In *McBride v. United States*,[16] the underlying risk of harm was 15%, the doctor's negligence raised it to 30–35%, the harm was incurred, and the plaintiff received full damages. **Current result: Preponderance standard is met and plaintiff receives full damages.**
Non-Medical Malpractice	**3. Case type:** Non-medical malpractice (products liability), insurmountable hurdle in establishing causation (with underlying risk under 50% but with plaintiff still unable to meet preponderance standard[17]). **Example:** In *Marder v. G.D. Searle and Co.*,[18] the underlying risk of harm (pelvic inflammatory disease) was 3%, the defendant's intrauterine device was responsible for raising it to between 3.9% to 5.7%, the harm was incurred, and the plaintiff received no damages because she failed to meet the preponderance standard and the LOCD was not employed. **Current result: Preponderance standard not met. Court does not employ the LOCD. Plaintiff receives no damages.**	**4. Case type:** Non-medical malpractice (products liability), no insurmountable hurdle in establishing causation. **Example:** In *Manko v. United States*,[19] the defendant's swine flu vaccine increased the risk of harm (Guillain-Barre Syndrome) to 3.396 times the underlying risk, the harm was incurred, and the plaintiff received full damages. **Current result: Preponderance standard is met and plaintiff receives full damages.**

What all of these cases have in common is the following: (1) there is an underlying risk of harm, (2) a defendant's negligence increases the risk of harm, and (3) the harm comes to fruition. However, the cases are not all treated in the same way: Some plaintiffs receive full damages, some partial

[13] Herskovits v. Grp. Health Coop. of Puget Sound, 664 P.2d 474, 475, 479 (Wash. 1983).

[14] For an explanation of why this case (Case 1B) and Case 2 involve the same insurmountable hurdle in showing causation that plaintiffs confront when the underlying chance of the harm is greater than 50% (as in Case 1A), see *infra* Part I.A.3.

[15] Renzi v. Paredes, 890 N.E.2d 806, 811–14 (Mass. 2008).

[16] McBride v. United States, 462 F.2d 72, 74–75 (9th Cir. 1972).

[17] *See supra* note 14 and accompanying text.

[18] Marder v. G.D. Searle & Co., 630 F. Supp. 1087, 1092–93, 1095 (D. Md. 1986).

[19] Manko v. United States, 636 F. Supp. 1419, 1437–38, 1451–52 (W.D. Mo. 1986), *aff'd in relevant part*, 830 F.2d 831 (8th Cir. 1987).

damages, and some none. These outcomes depend on whether it is a medical malpractice case and whether the percentages of risk are such that the negligence more-than-doubles or less-than-doubles the underlying risk (in other words, whether or not there is an insurmountable hurdle in showing causation).[20] But all of these cases should employ the same rule, and they should be treated identically. And, more specifically, in all of these cases, the plaintiff should receive partial damages—not full damages and not zero damages.

Why are the proposals presented here important?

First: The practical effects are significant for the parties in cases in which the proposals prescribe different results. In the same way that the LOCD brings about superior results from both fairness and efficiency perspectives, so too will its proposed extensions. This is not inconsequential. Just as it is an indefensible miscarriage of justice for there to be no recovery or liability when a doctor's negligence increases a patient's chance of death from 60% to 100%, so too are the current results indefensible miscarriages of justice in the cases to which the proposals would bring reform.[21]

Second: Although the general rationale for the LOCD is clear, and despite commentators agreeing that it should be limited to typical LOCD cases, LOCD doctrine and scholarship is in turmoil because when it comes to providing a more precise account of the doctrine's operation and justification, there is no consensus, and, even worse, none of the accounts offered are plausible.[22] First, regarding what courts are (or should be) doing when they depart from traditional tort principles and employ the LOCD:[23] Most courts (as well as the relevant restatements[24]) take the approach of redefining the legal injury as not the bad medical result itself (death), but rather the *loss of chance of avoiding the bad result (death)*;[25] other courts instead take the approach of making an exception to the typical standard of proof by relaxing the requirement that the plaintiff establish causation by a preponderance and awarding partial damages reflecting the likelihood that

[20] For a detailed explanation of when and why an insurmountable hurdle arises, see *infra* Part I.A.3.

[21] *See, e.g.*, Brianna Abbott & Zaydee Sanchez, *They Believe Pesticides Caused Their Cancers. Proving It Is Almost Impossible: Farmworkers in California's Salinas Valley Work with Pesticides Tied to Illnesses, Including Some Cancers*, WALL ST. J. (Nov. 19, 2023, 7:00 AM), https://www.wsj.com/us-news/cancer-risk-pesticide-california-farmworkers-864174b2 (discussing some of the current challenges of proving causation in toxic tort cases and some of the many gross injustices that result that afflict those who are harmed but unable to recover).

[22] *See, e.g.*, Geistfeld, *supra* note 3, at 428–29; Simons, *supra* note 3, at 550–51.

[23] *See, e.g.*, Geistfeld, *supra* note 3, at 431; Simons, *supra* note 3, at 550.

[24] RESTATEMENT (THIRD) OF TORTS: MEDICAL MALPRACTICE § 8 (AM. L. INST., Tentative Draft No. 2, 2024); RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL AND EMOTIONAL HARM § 26, cmt. n (AM. L. INST. 2010); RESTATEMENT (THIRD) OF TORTS: REMEDIES § 11 (AM. L. INST., Tentative. Draft No. 3, 2024).

[25] *See, e.g.*, Perez v. Las Vegas Med. Ctr., 805 P.2d 589, 592 (Nev. 1991) ("By defining the injury as the loss of chance . . ., the traditional rule of preponderance is fully satisfied."); RESTATEMENT (THIRD) OF TORTS: MEDICAL MALPRACTICE § 8, Reporters' Note cmt. g (AM. L. INST., Tentative Draft No. 2, 2024); Simons, *supra* note 3, at 556.

the defendant caused the harm.[26] Other accounts have also recently been provided by Mark Geistfeld[27] and Ken Simons.[28] Each account, however, is afflicted by difficulties. Second, regarding how to justify departing from traditional tort principles in typical LOCD cases, but not in other, arguably similar, cases (a result that commentators and courts alike think is undesirable and to be avoided[29]), attempts are made to articulate a plausible limiting principle, but there is no consensus and there is no plausible account offered of what it should be. Furthermore, this turmoil surrounding the LOCD is not merely theoretical; it is the lack of a plausible account of the LOCD and lack of a plausible limiting principle that have arguably been the reasons for which many courts have completely rejected using the LOCD,[30] and why treatment of the LOCD has been troublingly inconsistent.

This Article solves these problems. Regarding limiting principles: Not only do we not *need* to limit the LOCD, but we *should* not. Regarding what courts should be doing when employing the LOCD: Once we see that we do not need and should not have limiting principles, difficulties afflicting the relaxing-the-burden-of-proof approach disappear, and we need not turn to the problematic redefining-the-injury approach. Accordingly, this Article provides a broad foundational account of the LOCD that, unlike past accounts, is plausible—thus also providing reasons for courts to employ it even in typical LOCD cases.

Third, and related to the second point: This Article shows that the LOCD, rather than constituting a narrow exception to how tort law functions, actually provides insight into how tort law *should always function*. The LOCD, as it currently exists, doesn't suggest the need to redefine what tort law is about (e.g., making it about harms *risked*). Nor does it suggest the need for ad hoc patches to reflect our intuitions about justice in certain cases. Rather, it gives us a glimpse of a different comprehensive

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[26] *See* RESTATEMENT (THIRD) OF TORTS: MEDICAL MALPRACTICE § 8, Reporters' Note cmt. g (AM. L. INST., Tentative Draft No. 2, 2024) (stating that the LOCD initially operated by employing the second of these two justifications, but that the first is the one that is now almost exclusively employed, and, as a result, it is the first justification that the current Restatement drafts adopt); Simons, *supra* note 3, at 593.

[27] *See* Geistfeld, *supra* note 3, at 431–32. Geistfeld points out that many courts are not persuaded by the existing rationales for the LOCD and may only adopt the doctrine if it can be rooted in traditional tort principles. He attempts to offer such an account, and his account aims to justify the LOCD by appealing to a "duty-preserving rule" that justifies a special evidentiary rule excluding the "exculpatory causal evidence [of the underlying condition] . . . from the liability phase of the case." *Id.* at 431–32, 440; *see also infra* Part I.B.2.i (discussing Geistfeld's approach in greater detail).

[28] *See* Simons, *supra* note 3, at 557, 593. Simons provides an account that, like the first main account, operates by relaxing the preponderance standard for proving causation. But Simons's account more openly suggests that rather than attempting to articulate a cogent principle grounded in law that could constitute a limiting principle, we should instead more explicitly announce that the LOCD is an exception that is being made for policy reasons. *See id.*; *see also infra* Part I.B.2.ii (discussing Simons's approach in greater detail).

[29] *See, e.g.*, Geistfeld, *supra* note 3, at 429–30; Simons, *supra* note 3, at 603–05; Parkes v. Hermann, 852 S.E.2d 322, 325 (N.C. 2020).

[30] *See, e.g.*, Geistfeld, *supra* note 3, at 429; Simons, *supra* note 3, at 556–57.

way of implementing how we go about proving what tort law is about (i.e., harms *caused*)—a way that truly faces up to our epistemic predicament when it comes to figuring out what causes what. The best we can do, after all, is assign probabilities or credences to the claims that our actions causally contribute to the harms others suffer. Coming to terms with this should involve us in a wholesale rethinking of the preponderance standard. We should implement tort law by *always* asking a plaintiff to prove causation of harm to the degree of confidence that is possible in the case and adjust the damages sum accordingly. As will be discussed, the Article's proposals can and should be buttressed by already familiar ideas about burdens, presumptions, and other devices, so that sometimes our probabilities or credences are effectively zero or one unless evidence is rebutted or overcome.[31] But the core idea is that we should refocus tort litigation—our effort to implement the familiar principles based on causing harms (and rights against the infliction of harm)—on the chances that the defendant caused the plaintiff's harm. In sum, this Article argues that: (1) typical LOCD cases should be understood not as "*caused loss of chance*" cases, but as "*chance of caused loss*" cases; (2) the same reasons in favor of having partial damages for these cases in the typical LOCD context support adopting a similar system across the board; and (3) as this Article will show, this isn't problematic in ways that one might fear it to be.

Fourth: While the Article's reforms regarding but-for causation constitute a crucial step for tort doctrine in taking chance seriously, they can also serve as a blueprint for analogous reforms for other elements of tort claims and, perhaps, areas of the law other than torts.

Finally: The timeliness of this Article and its proposals cannot be overstated—and for a few reasons. First, debates regarding the specific underlying justifications for, and accounts of, the LOCD are happening at this very moment (in the courts, in scholarship, and in restatement drafts).[32] Notably, the Reporters for the Restatement (Third) of Torts are currently drafting provisions and commentary that are intended to guide courts in analyzing LOCD cases, and, as is clear from these drafts, this area of the law is particularly unsettled and thus subject to change should new (and

[31] And this not only speaks to ways of implementing the Article's proposals, but also to the Article's position that tort law would actually look somewhat like it does today, even if, as this Article posits, it's fundamentally about chances of caused losses.

[32] *See, e.g.*, Geistfeld, *supra* note 3, at 428–29 (published in 2024); Simons, *supra* note 3, at 550–51 (published in 2024); Est. of Frey v. Mastroianni, 463 P.3d 1197, 1210 (Haw. 2020) (stating that redefining the injury as the lost chance is an "incongruous" approach); Dickhoff ex rel. Dickhoff v. Green, 836 N.W.2d 321, 334 (Minn. 2013) ("[The Supreme Court of Minnesota] agree[s] with those courts that treat the reduction of a patient's chance of recovery or survival as a distinct injury."); RESTATEMENT (THIRD) OF TORTS: MEDICAL MALPRACTICE § 8 (AM. L. INST., Tentative Draft No. 2, 2024); RESTATEMENT (THIRD) OF TORTS: REMEDIES § 11 (AM. L. INST., Tentative Draft No. 3, 2024).

plausible) accounts be offered.[33] Second, with cases every year that come out differently regarding the LOCD, the courts are in desperate need of newfound clarity.[34] And third, each day that passes without implementing the Article's proposals results in additional cases in which parties are subjected to indefensibly unfair results.[35] Accordingly, the intended audience of this Article includes courts, scholars, Reporters for the Restatement, and, possibly, legislators.

The Article proceeds as follows. Part I presents a doctrinal overview of the LOCD, including how and when it is used by courts. This is followed by an analysis of four approaches to its justification and application: the two main approaches and the two new approaches recently proposed by Geistfeld and Simons. Part II then provides a principled reconstruction of how loss of chance should be treated in all torts cases, and it provides prima facie arguments for the adoption of the Article's two reform proposals. Part III then examines why the proposals have not yet been implemented or even advocated for, and it considers and responds to the various arguments that are made—in cases, restatements, and scholarship—against the proposals. Last, Part IV contemplates the wide-ranging theoretical and practical implications of incorporating both of these proposals.

I. LOSS OF CHANCE: DOCTRINE AND THEORY

This Part begins by describing the problem the LOCD aims to solve and providing an overview of LOCD doctrine. It then discusses the workings of the doctrine in greater depth—where and how it is employed, specifics regarding what gives rise to LOCD cases, and how damages are calculated for these cases. Next, it provides a discussion of the difficulties that have arisen, both in the judiciary and academia, in articulating a plausible account of the LOCD that justifies its use. It concludes by explaining that these difficulties remain to this day, and that it is these difficulties that have caused the lack of uniformity regarding whether, and if so how, jurisdictions employ the LOCD.

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[33] RESTATEMENT (THIRD) OF TORTS: MEDICAL MALPRACTICE § 8 (AM. L. INST., Tentative Draft No. 2, 2024); RESTATEMENT (THIRD) OF TORTS: REMEDIES § 11 (AM. L. INST., Tentative Draft No. 3, 2024).

[34] *See, e.g.*, Wadsworth v. Sharma, 278 A.3d 1269, 1284 (Md. 2022) (affirming the court's previous decision to reject the LOCD, reasoning that rejecting the LOCD is not "'clearly wrong and contrary to established principles' nor has there been 'a showing that the precedent has been superseded by significant changes in the law or facts'"); Parkes, 852 S.E.2d at 322–23 (stating that the adoption of the LOCD should be determined by the legislature); Est. of Frey, 463 P.3d at 1200 (holding that there was no need to adopt the LOCD as the concept could be incorporated into the already-existing substantial-factor test for establishing causation); Dickhoff, 836 N.W.2d at 334 ("[The Supreme Court of Minnesota] agree[s] with those courts that treat the reduction of a patient's chance of recovery or survival as a distinct injury.").

[35] *See, e.g.*, Abbott & Sanchez, *supra* note 21.

A. *Doctrine*

1. *Introduction to the Doctrine*

In medical malpractice cases, courts frequently encounter a challenging problem regarding causation. Assume the following scenario: (1) A doctor misdiagnoses a patient's late-stage cancer. If the patient had been diagnosed and treated correctly, his chance of death would have been 60%. However, given the negligence, the patient's chance of death increases to 100%; (2) the patient dies; (3) the patient's family sues the doctor for medical malpractice, but, because of causation's preponderance standard, which requires a showing that there was a greater-than-50% chance that the doctor's negligence caused the death (and thus that absent the negligence, there was a greater-than-50% chance that the patient would have survived), the family is unable to establish causation; and (4) the family fails to recover, and the doctor avoids liability. As a result of the traditional evidentiary standard, which prevents recovery for plaintiffs in cases like this, a whole category of ill patients is essentially rendered unprotected by the tort duty that protects against a doctor's malpractice.[36]

This result is arguably both unfair and inefficient. In this case, it seems inequitable for the plaintiff to not be compensated; even if the patient might have died anyway, the chance of survival is clearly something of value (and, indeed, utmost value) to the patient and his family,[37] regardless of how slim the chance of survival might have been. It seems to also be an inequitable result in relation to the doctor, who escapes liability. In addition, this outcome arguably is inefficient: Failing to hold negligent doctors liable under these circumstances effectively grants them immunity from facing legal consequences, which is undesirable if a goal[38] of tort law is to deter medical professionals from committing malpractice.[39] Further, leaving aside the fairness and efficiency considerations on a case-by-case basis, it is particularly notable that these apparent inequities and inefficiencies categorically afflict a whole class of plaintiffs and defendants—as there is

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[36] *See supra* notes 1–6 and accompanying text.

[37] And, accordingly, something that one would, indeed, pay for and that would thus have market value. *See, e.g.*, Fischer, *supra* note 9, at 618 ("[E]ven a less than 50 percent chance of a cure from a fatal disease . . . is a thing of value for which a person would be willing to pay.").

[38] Or, at the very least, a collateral benefit. Even most who view the sole purpose of tort law as being corrective justice—or something focused on the parties at bar—would likely still view greater efficiency as a collateral benefit. *See, e.g.*, Ernest J. Weinrib, *Corrective Justice*, 77 IOWA L. REV. 403, 403–04 (1992); Jules L. Coleman, *Tort Law and the Demands of Corrective Justice*, 67 IND. L.J. 349, 358–59 (1992); Stephen R. Perry, *The Moral Foundations of Tort Law*, 77 IOWA L. REV. 449, 449 (1992); Arthur Ripstein, *As If It Had Never Happened*, 48 WM. & MARY L. REV. 1957, 1973 (2007); JOHN GARDNER, TORTS AND OTHER WRONGS 48 (2019); John Gardner, *What Is Tort Law For? Part 1. The Place of Corrective Justice*, 30 L. & PHIL. 1, 24–25 (2011).

[39] *See, e.g.*, Geistfeld, *supra* note 3, at 429, 438–39; Simons, *supra* note 3, at 551, 585; Levmore, *supra* note 4, at 712–13; Rhee 1, *supra* note 9, at 39–40; Rhee 2, *supra* note 9, at 513–14.

never compensation/liability in these cases.[40] Although these simplified claims regarding fairness and efficiency will be explored in greater depth below,[41] it seems plausible to assert that these outcomes fail to comport with the goals of tort law.

In response, many courts have sought to remedy these seemingly inequitable and inefficient results by employing the LOCD.[42] For example, the Supreme Judicial Court of Massachusetts allowed a plaintiff's award to stand in a case with facts similar to those in the above example where the trial court permitted the use of the LOCD to determine the award amount. In that case, *Matsuyama v. Birnbaum*,[43] the jury found that the doctor's negligence increased the patient's chance of dying of gastric cancer from 62.5% to 95–100%. In calculating the award, the jury determined that the doctor was liable for a proportional amount of the "'full' wrongful death damages" in accordance with the percentage attributable to his negligence.[44]

The bottom line is that in states employing the LOCD, the LOCD (assuming other elements of the claim are met) allows a plaintiff to recover partial damages reflecting the portion of the risk attributable to the negligence. If a patient had a 60% chance of death before the doctor's negligence, the negligence raised that chance to 100%, the patient died, and the patient's death was worth $10 million, then the plaintiff can recover $4 million ($10M * (1 – 0.6) = $4M).

2. *Where and How the LOCD Is Employed*

Courts across the country have been divided on whether to allow plaintiffs to recover partial damages under the LOCD.[45] A recent survey found "that 24 states have adopted some version of the 'loss of chance' rule, 17 have rejected it, four have deferred ruling on the doctrine, and five have

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[40] *See, e.g.*, Geistfeld, *supra* note 3, at 432; Levmore, *supra* note 4, at 692; Farber, *supra* note 4, at 727; Porat, *supra* note 9, at 108–09.

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

[42] The LOCD's use in the common law is generally traced to Chaplin v. Hicks (1911) 2 KB 786, 786–93 (Eng.) (discussing a failure to notify the plaintiff that she had been chosen as a beauty-contest semi-finalist in time for plaintiff to participate in the selection of the twelve winners). The American common law followed *Chaplin*'s lead, recognizing recovery for loss of chance in cases involving both contracts and failure to rescue. *See, e.g.*, Kansas City, M & O. Ry. Co. v. Bell, 197 S.W. 322, 323 (Tex. Civ. App. 1917) ("[T]he chance which a competitor has of being awarded a prize . . . is a right which may be of value, and that one wrongfully impairing or destroying such right ought to be held liable therefor in damages."); Gardner v. Nat'l Bulk Carriers, Inc., 310 F.2d 284, 286–87 (4th Cir. 1962), *cert. denied*, 872 U.S. 913 (1963) (imposing liability on a ship's master for failing to rescue a seaman who had fallen overboard and for whom a "reasonable possibility of rescue" existed). Recovery for loss of chance in medical malpractice actions, however, was uncommon. It is frequently traced to dicta in Hicks v. United States, 368 F.2d 626, 633 (4th Cir. 1966) (ruling that physician's negligent misdiagnosis "nullified whatever chance of recovery" patient might have had otherwise). Recovery did not begin in earnest until the 1970s, and the redefining-the-injury approach did not garner much support until the 1980s.

[43] Matsuyama v. Birnbaum, 890 N.E.2d 819, 828, 845 (Mass. 2008) (allowing recovery when the doctor's malpractice reduced the patient's chance of survival from 37.5% to 0–5%).

[44] *Id.* at 828.

[45] *See* Guest, Schap & Tran, *supra* note 1, at 55 (describing a variety of stances toward the LOCD).

yet to address the matter."[46] As the Supreme Court of Hawaii recently stated: "Although nearly all the states have now considered the loss of chance doctrine, there is not a clear consensus on its merit; nor, among those states that have adopted it, is there agreement on what form it should take."[47]

There are four categories of courts' approaches[48] to the issue of awarding damages in the types of cases being examined here. On the first approach, the LOCD principle is rejected altogether: Courts stick to traditional tort doctrines and do not award damages to a plaintiff who cannot show causation by a preponderance.[49] The other three approaches *do* award damages. The first, and most common, is to award partial damages in accordance with the LOCD: The LOCD "recognizes that the defendant may not have caused death, but he caused the loss of the plaintiff's *chance* to live. . . . The idea is that the plaintiff's chance of survival itself has value for which compensation is due."[50] The second and third approaches to awarding damages are not commonly used. In the second, "courts permit[] the jury to find causation and make an award for the whole of the loss, disregarding the fact that the patient was likely to die even if the physician had not been negligent."[51] The third approach involves leaving it to the jury to determine damages, providing minimal direction on how to calculate them; this approach has often involved reliance on a "substantial-factor test" of but-for causation.[52]

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[46] *Id.*

[47] Est. of Frey v. Mastroianni, 463 P.3d 1197, 1209 (Haw. 2020). *See generally* Geistfeld, *supra* note 3, at 427–31 (outlining variations of and justifications for the LOCD). For a comprehensive review of decisions and theories, see Delaney v. Cade, 873 P.2d 175, 178–87 (Kan. 1994) (analyzing the development of the LOCD and approaches taken to it); John D. Hodson, Annotation, *Medical Malpractice: "Loss of Chance" Causality*, 54 A.L.R.4th 10 (1987) (listing LOCD cases). In one LOCD case, the court permitted this theory to go to the jury despite the patient having had, at most, a 10% chance of survival. Wendland v. Sparks, 574 N.W.2d 327, 329–30 (Iowa 1998). The court in Williams v. Spring Hill Mem'l Hosp., 646 So.2d 1373, 1374–75 (Ala. 1994), on the other hand, treated these issues in a contrary fashion. Another position, between the position of these two courts, has been to allow compensation for an increased risk of harm, but contingent upon the existence of a "reasonable degree of medical certainty" regarding the defendant's negligence causing the increased risk. Holton v. Mem'l Hosp., 679 N.E.2d 1202, 1206 (Ill. 1997). For analysis, see Margaret A. Berger & Aaron D. Twerski, *Uncertainty and Informed Choice: Unmasking* Daubert, 104 MICH. L. REV. 257, 281–82 (2005); Fischer, *supra* note 9; Todd S. Aagaard, Note, *Identifying and Valuing the Injury in Lost Chance Cases*, 96 MICH. L. REV. 1335, 1337, 1348–49 (1998).

[48] Note that there are also different sub-versions of these categories of responses.

[49] *See, e.g.*, Parkes v. Hermann, 852 S.E.2d 322, 325 (N.C. 2020) (rejecting the LOCD); Wadsworth v. Sharma, 278 A.3d 1269, 1273 (Md. 2022) (same).

[50] DAN B. DOBBS, PAUL T. HAYDEN & ELLEN M. BUBLICK, THE LAW OF TORTS § 196 (2d ed., April 2025 update). *See, e.g.*, Matsuyama v. Birnbaum, 890 N.E.2d 819, 838–41 (Mass. 2008) (recognizing loss of chance at survival as cause of action and detailing how to calculate damages).

[51] DOBBS, HAYDEN & BUBLICK, *supra* note 50, at § 196.

[52] *See, e.g.*, *Est. of Frey*, 463 P.3d at 1200, 1210–12. The court stated: "[W]e do not have a tradition of requiring plaintiffs to prove that their harm was more likely than not the result of negligence by the defendant. Rather, since the earliest days of statehood, we have required plaintiffs to prove that the defendant's negligence was a substantial factor in bringing about their harm." *Id.* at 1210; *see also*

3. *When Do LOCD Cases Arise?*

Thus far, the discussion has involved situations in which the chance of the bad result occurring, absent the doctor's negligence, is greater than 50%. In *Matsuyama*, for example, the patient was determined to have had a 62.5% chance of death *even without* the doctor's negligence. A case like this presents the plaintiff with an insurmountable hurdle in meeting the preponderance standard for establishing causation, which requires showing that the defendant's negligence more likely than not caused the harm. Even if the negligence raises the chance of harm to 100%, the chance that the negligence caused the harm can never be greater than 50% because there was a greater than 50% chance that the harm would have occurred even if not for the negligence.

This, however, is an over-simplified way to describe LOCD fact patterns, and other fact patterns can give rise to the same problematic results. The feature of the fact patterns that gives rise to the problematic result is not specifically that the underlying chance of harm is greater than 50%, but rather the plaintiff's inability to show that it is more likely that the doctor's negligence caused the harm than that the underlying condition caused the harm. And the plaintiff is unable to establish this when the chance of harm due to the underlying condition is greater than the chance of harm that the doctor's negligence adds. Said differently, the plaintiff will confront the insurmountable hurdle if the doctor's negligence increases the chance of harm by an amount that *less-than-doubles it*. When the underlying risk of harm is greater than 50%, the plaintiff will thus always confront the insurmountable hurdle because even if the chance is increased all the way to 100%, it still will never be able to increase the harm by more than doubling it. But while having an underlying risk of greater than 50% ensures that the

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Ehlinger v. Sipes, 454 N.W.2d 754, 763 (Wis. 1990) (holding that in a medical malpractice LOCD case, the plaintiff's burden of production is merely to demonstrate that the harm could have been mitigated or prevented by reasonable care). The *Ehlinger* court stated: "In a case such as this, the plaintiff need not show that proper treatment more probably than not *would* have been successful in lessening or avoiding the plaintiff's injuries as a prerequisite to satisfying his or her burden of production on the issue of causation . . . . [A]ll that is required is that the plaintiff establish that proper treatment *could* have lessened or avoided the plaintiff's harm . . . . If the defendant's negligence is found to have been a substantial factor in causing the harm, the trier of fact may also consider evidence of the likelihood of success of proper treatment in determining the amount of damages to be awarded." *Id.* (emphasis in original). *See generally* Simons, *supra* note 3, at 550–53 (explaining methods of damages calculations in such cases).

The RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL AND EMOTIONAL HARM § 26 cmt. j (AM. L. INST. 2010) rejects the substantial-factor test, and it does so for good reason, as it is a problematic standard for factual cause. And, in addition, in the specific context of LOCD cases, this standard, unless elaborated upon, provides scant direction to juries regarding the calculation of damages, as illustrated by the passage from the *Ehlinger* opinion above. Likewise, the *Frey* court dismisses as an "incongruous approach" the notion that the legal injury could be the loss of a chance, yet proceeds to offer no clear direction regarding how damages determinations should be made. *Frey*, 463 P.3d at 1210.

Note, though, that the more general issue of whether courts should utilize a "substantial-factor" test instead of a but-for test for factual causation is distinct from the question of whether courts should employ partial damages in LOCD cases. *See generally* Simons, *supra* note 3, at 558 (treating whether partial damages should be employed and what test to use for determining causation as separate questions).

plaintiff will confront the insurmountable hurdle, the plaintiff can also still confront the insurmountable hurdle in cases where his underlying risk of harm is less than 50%.

Consider the following scenario: (1) the underlying risk of harm is 30%, (2) the doctor's negligence raises it to 55%, and (3) the harm then comes to fruition. In this case, the plaintiff cannot establish causation because the portion of the risk due to the underlying condition (30%) is greater than the portion attributable to the negligence (25%). Therefore, the plaintiff cannot prove that the risk that caused the harm to occur was more likely than not caused by the negligence. In a case with these facts, and without the LOCD, the plaintiff would fail to meet the preponderance standard for showing causation and would receive zero damages. Cases like this, therefore, need the LOCD.[53]

Now consider a second scenario, which will illustrate a corresponding rule: (1) the underlying risk of harm is 10%, (2) the doctor's negligence raises it to 35%, and (3) the harm then comes to fruition. It is a widely accepted rule that, if there is not causal evidence to the contrary, the preponderance test *is met* if the doctor's negligence more-than-doubles the underlying risk of the harm that the plaintiff incurred, which happens here when the risk goes from 10% to 35%.[54] Accordingly, in cases like this, *full damages* are generally permitted because the defendant's negligence more-than-doubles the plaintiff's risk, even where, as here, the probabilities of harm are low in absolute terms.[55]

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[53] The RESTATEMENT (THIRD) OF TORTS: REMEDIES § 11 cmt. c (AM. L. INST., Tentative Draft No. 3, 2024) acknowledges and articulates these points clearly. Thus, even in scenarios where the underlying risk is below 50%, partial compensation may be justified if the negligence increases but less-than-doubles the risk. *See* Alberts v. Schultz, 975 P.2d 1279, 1282–83 (N.M. 1999) (articulating the same sentiment); Renzi v. Paredes, 890 N.E.2d 806, 813 (Mass. 2008) ("It would defy logic, to say nothing of fairness, to absolve a physician from liability when his or her malpractice reduces a plaintiff's chances of survival form greater than even to less than even."); *see also* DOBBS, HAYDEN & BUBLICK, *supra* note 50, at § 197 (asserting that it is indefensible and arbitrary to make it a requirement for partial recovery under the LOCD that the lost chance was "improbable to begin with"). For discussion of how courts often have been confused about these points, see Elissa Philip Gentry, *Damned Causation*, 54 ARIZ. ST. L.J. 419, 432–37 (2022). *See generally* Simons, *supra* note 3, at 570–72 (explaining how courts have misunderstood the LOCD).

[54] *See, e.g.*, Theofanis v. Sarrafi, 791 N.E.2d 38, 48–49 (Ill. App. 2003) ("Several courts have concluded that a plaintiff meets the burden of proving causation by presenting evidence that the relative risk due to the defendant's acts or omissions exceeds two."); *see also* RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL AND EMOTIONAL HARM § 28 cmt. c(4) (AM. L. INST. 2010) (addressing the significance of a twofold increase in risk to both specific causation and general causation).

[55] *See, e.g.*, Bradshaw v. Daniel, 854 S.W.2d 865, 867 (Tenn. 1993) (holding that the preponderance test for causation was able to be satisfied when evidence indicated negligent failure to treat disease early raised mortality risk from 4% to 40%); McBride v. United States, 462 F.2d 72, 75 (9th Cir. 1972) (holding that the preponderance test for causation was able to be satisfied when evidence indicated that negligent failure to treat patient inside hospital rather than outside raised mortality risk for coronary patients from 15% to 30–35%); *see also* Gentry, *supra* note 53, at 430; Aagaard, *supra* note 47, at 1336 (explaining that the comparison between the risk caused by a pre-existing condition and the risk caused by the defendant's negligence determines whether a plaintiff may recover); Lars Noah, *An Inventory of Mathematical Blunders in Applying the Loss-of-a-Chance Doctrine*, 24 REV. LITIG. 369, 397 (2005)

In sum, cases like the second scenario involve no insurmountable hurdle to meeting the preponderance standard, and, as usual, full damages are provided when the preponderance standard is met. Cases like the first scenario, however, are cases where there *is* an insurmountable hurdle—just like cases where the underlying chance of death is greater than 50%. Thus, cases like this are just as much in need of the LOCD as are cases confronting the insurmountable hurdle where the underlying risk is greater than 50%. Accordingly, courts that employ the LOCD generally do so in cases of "less-than-doubling," regardless of whether the underlying chance of harm is greater than or less than 50%.[56]

Notably, however, some confusion exists with respect to these points. Some courts and commentators mistakenly believe that the LOCD should only be used when the underlying risk of harm is greater than 50%. This is due to an incorrect assumption that it is only in these cases that the plaintiff's insurmountable hurdle arises.[57] This mistaken assumption likely gets made because discussions about the LOCD often provide a simplified example of a case in which the underlying chance of harm is greater than 50%.[58] It is easy, therefore, to mistakenly assume that the need for using the LOCD only arises when the underlying chance of harm is greater than 50%, which is not

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(stating that epidemiological evidence that is sufficient to establish causation by a preponderance in product liability and toxic tort cases may frequently involve absolute percentages low enough that they would not be sufficient to establish cause under what Simons and Rhee call the "subtraction test").

Yet there have been instances where courts have failed to acknowledge the principle that if the defendant's negligence increases the underlying risk by more than twofold, the traditional preponderance standard for factual cause can be met and supports recovery. *See, e.g.*, Cohan v. Med. Imaging Consultants, 900 N.W.2d 732, 739–42 (Neb. 2017). In *Cohan*, evidence was provided that the defendant's negligence raised the risk of cancer recurrence from 30% to 75%. *Id.* at 739. This should have been sufficient to allow the jury to find cause under the preponderance test because if there were a recurrence, the chance that this was attributable to the negligence was greater than the chance that it was attributable to the underlying risk. However, the court ruled that due to Nebraska's lack of recognition of the LOCD, there was no liability. *Id.* at 742–43. The court also stated, though, that the cancer had not yet recurred, and that there was no evidence that spoke to the plaintiff's survival chances if it did recur. *Id.* at 741. *See generally* Simons, *supra* note 3, at 573 (explaining that the traditional preponderance test can be satisfied when negligence more-than-doubles the risk of harm).

[56] *See supra* note 55 and accompanying text.

[57] In other words, those confused in this way *do not* seem to be of the view that the insurmountable hurdle does also arise in some cases with an underlying chance of harm that is less than 50% but that the LOCD should still only apply in the cases of the insurmountable hurdle where the underlying chance of harm is greater than 50%.

[58] Courts and commentators frequently highlight that LOCD liability is justified in cases where the baseline risk of death is greater than 50%. They rightly highlight that in such scenarios, it is never possible for a plaintiff to meet the preponderance standard for establishing causation—irrespective of whether the defendant's negligence elevates the risk of death even all the way to 100%. *See, e.g.*, Herskovits v. Grp. Health Coop. of Puget Sound, 664 P.2d 474, 475–77 (Wash. 1983) (describing the inquiry as being about whether a plaintiff with a survival chance of less than 50% can assert a loss-of-chance claim, and responding affirmatively, saying that "[t]o decide otherwise would be a blanket release from liability for doctors and hospitals any time there was less than a 50 percent chance of survival, regardless of how flagrant the negligence"); Mayhue v. Sparkman, 653 N.E.2d 1384, 1387 (Ind. 1995) ("Where a patient's illness or injury already results in a probability of dying greater than 50 percent, an obvious problem appears. No matter how negligent the doctor's performance, it can never be the proximate cause of the patient's death."); Steven R. Koch, *Whose Loss Is It Anyway? Effects of the Lost-Chance Doctrine on Civil Litigation and Medical Malpractice Insurance*, 88 N.C. L. REV. 595, 604 (2010).

true. Accordingly, to the extent that a jurisdiction employs the LOCD at all, it certainly should apply to both types of cases.

* * *

Subsequently in this Article, the term "LOCD cases" refers to all fact patterns in which the plaintiff confronts an insurmountable hurdle in meeting the preponderance standard for showing causation, regardless of whether the underlying chance of harm is greater than or less than 50%. Furthermore, these fact patterns will be referred to as "LOCD cases" regardless of whether the doctrine is actually used to determine damages in the case, and regardless of whether the fact pattern even became the subject of an actual litigated case. Similarly, "non-LOCD cases" refers to all fact patterns in which the plaintiff does not confront this insurmountable hurdle.

4. *Damages Calculations for LOCD Cases*

There are also other features of the LOCD that reflect a lack of uniformity among, and even within, jurisdictions that employ the doctrine. Some of these differences pertain to which account is used to apply the LOCD: regarding which specific exception is being made to traditional legal principles or which specific legal maneuver is being carried out by courts that employ the LOCD.[59] A second, narrower type of difference among and within jurisdictions relates to the method that should be used to calculate damages in LOCD cases. This latter topic will be examined here.

If the chance of avoiding a harm is fully extinguished by the negligence, such as when the chance of harm is increased from 60% to 100%, and the harm occurs, the majority of courts that apply the LOCD would, in this case, provide a recovery of 40% of the full harm incurred, which represents the value of the lost chance of avoiding the harm. This type of case is fairly straightforward. However, determining how the LOCD should be used to calculate damages is trickier when the chance of avoiding a harm is *not* fully extinguished by the negligence. The facts of the well-known *Herskovits* case[60] demonstrate this. There, the chance of harm was increased from 61% to 75% by the negligence, and the patient then incurred the harm (despite there being only a 75% chance of the risk coming to fruition).

In a case like this, there are at least three ways in which one might think that we should calculate the partial-damages damages sum. The first approach, which is uncommon, is for the plaintiff to receive 39% (100% minus 61%) of the full value of the harm. The idea behind this approach is that we should subtract the underlying chance of harm but that, despite the negligence raising the harm only to 75%, the subtraction should still be made from 100% (and not 75%) because the harm came to fruition. According to

[59] These two topics will be examined below. *See infra* Part I.B.

[60] Herskovits, 664 P.2d at 475.

the second, most typical approach—the "subtraction" approach[61]—the plaintiff would receive 14% (75% minus 61%) of the value of the full harm. A third approach, argued for in the literature by Robert Rhee and Kenneth Simons, is known as the "ratio" approach.[62] This has been adopted by very few courts. Using this approach, the damages would be calculated as the increase in chance of harm attributable to the negligence (75% – 61% = 14%) divided by the total chance of harm given the existence of negligence (75%), which thus equals 19% (14% divided by 75%) of the value of the full harm.[63] All three of these approaches offer the same prescriptions in cases in which the negligence fully extinguishes the patient's chance of avoiding the harm, but they diverge in cases where the chance of avoiding the harm is not fully eliminated by the negligence.[64]

The "subtraction" approach is the one that is employed by almost all courts, and, for this reason, is endorsed by the Restatement (Third) of Torts—despite its acknowledgment that Rhee and Simons argue for the ratio approach.[65] Rhee and Simons, however, provide strong reasons, on the grounds of both fairness and efficiency, for why the ratio approach is a superior[66] method for calculating damages in LOCD cases.[67] In light of this, the proposals offered in Part II of this Article incorporate the ratio

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[61] For the use of the term "subtraction" to describe this approach, see Simons, *supra* note 3, at 552; Rhee 1, *supra* note 9, at 41; Rhee 2, *supra* note 9, at 516–17.

[62] *See* Simons, *supra* note 3, at 553 (detailing the approach); Rhee 1, *supra* note 9, at 43–45 (advocating for his "corrected formula"); Rhee 2, *supra* note 9, at 517–18 (same).

[63] Simons, *supra* note 3, at 553; Rhee 1, *supra* note 9, at 43–45; Rhee 2, *supra* note 9, at 517–18.

[64] Simons, *supra* note 3, at 553; Rhee 1, *supra* note 9, at 43–45; Rhee 2, *supra* note 9, at 517–18.

[65] *See* RESTATEMENT (THIRD) OF TORTS: REMEDIES § 11 cmt. f (AM. L. INST., Tentative Draft No. 3, 2024) ("Whoever has the better of this argument on the underlying merits, this Restatement adopts the ["subtraction" method] because that conforms to how the courts have understood the injury and how Restatement Third, Torts: Medical Malpractice § 8 understands the injury.").

[66] Note that if one thinks that the ratio approach is superior to the subtraction approach in cases where the chance of avoiding harm isn't extinguished, one also will advocate that the ratio be employed in all LOCD cases, including those in which the chance of avoiding harm is extinguished. That is because each of the three measures mentioned here will prescribe the same results for the cases where the chance of avoiding harm is extinguished. (Suppose negligence increases the chance of harm from 61% to 100%. The first measure would prescribe 100% minus 61% = 39% of total harm, the second ("subtraction") measure would also prescribe 100% minus 61% = 39% of total harm, and the third ("ratio") method would prescribe 39% divided by 100% = 39% of total harm.)

[67] *See* Simons, *supra* note 3, at 553–55; Rhee 1, *supra* note 9, at 45; Rhee 2, *supra* note 9. Simons also takes it a step further, asking why courts have endorsed the subtraction method rather than the ratio method in calculating partial damages. Simons, *supra* note 3, at 583. In response, he argues that "courts have not focused on the difference between these methods," and contends that, if they did, they would use the ratio method instead. *Id.* He offers several reasons for this observation. Not only has his research yielded "no cases that explicitly compare the two methods," but he also points out that some of the primary and secondary sources that "have had an enormous impact on subsequent case law . . . [do not discuss] the ratio method." *Id.* (citing Herskovits v. Grp. Heath Coop. of Puget Sound, 664 P.2d 474 (Wash. 1983); King 1, *supra* note 9). Additionally, he observes that "the subtraction method is quite easy to use and seems intuitively correct," whereas "[t]he ratio method requires a bit more explanation," especially if there is a failure to frame the issue as an "increased risk of death." *Id.* at 583–84.

approach.[68] In any event, the debate over this issue is a timely one. It is currently taking place not only in court opinions, but also among the Reporters for the Restatement (Third) of Torts, who are currently writing provisions intended to guide courts in analyzing LOCD cases.[69]

B. *Theory*

Not only is there disagreement among courts about whether, and if so, how, to employ the LOCD, but there is also disagreement among proponents of the LOCD (i.e., the courts that employ it, and academics (who typically endorse it[70])) when it comes to providing a more precise account of the doctrine's operation and justification. Although the general rationale for the LOCD is clear, and despite its proponents agreeing that it should be limited to typical LOCD cases, LOCD doctrine and scholarship are in turmoil: When it comes to providing a more precise account of the doctrine's operation and justification, there is no consensus, and, even worse, none of the accounts offered are plausible.[71] Furthermore, this turmoil surrounding the LOCD is not merely theoretical; it is the lack of a plausible account of the LOCD and a lack of plausible limiting principles that have arguably been the reason many courts have completely rejected using the LOCD,[72] and why its treatment has been troublingly inconsistent. This sub-Part examines and analyzes the accounts that have been offered.

1. *The Two Standard Justification Approaches and Their Difficulties*

The courts that employ the LOCD do so in order to bring about results that are better on both fairness and efficiency grounds in these cases. Courts

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[68] Interestingly, it is important to note that that the question of which *damages measure to use in LOCD cases* and the question of which theory of *justifying LOCD liability* is most plausible (e.g., the relaxing-the-preponderance-standard approach versus the redefinition-of-the-injury approach, *see infra* Part I.B) are connected to each other—with the redefinition-of-the-injury approach supporting the subtraction approach and the relaxing-the-preponderance-standard approach supporting the ratio approach. *See* RESTATEMENT (THIRD) OF TORTS: REMEDIES § 11 cmt. d (AM. L. INST., Tentative Draft No. 3, 2024) ("Sometimes this criticism [of the subtraction approach by the proponents of the ratio approach] has appeared as a disagreement about damages. But when fully explored, it turns out to be a disagreement about the theory of liability. [The proponents of the ratio approach] would fundamentally reconceptualize the loss-of-chance cases [as cases not of redefining the legal injury but as relaxing the preponderance standard in showing causation].").

[69] *See* RESTATEMENT (THIRD) OF TORTS: REMEDIES § 11 cmts. a–b (AM. L. INST., Tentative Draft No. 3, 2024) (outlining different approaches to calculating damages in LOCD cases); *see also* RESTATEMENT (THIRD) OF TORTS: MEDICAL MALPRACTICE § 8 (AM. L. INST., Tentative Draft No. 2, 2024) ("address[ing] and resolv[ing]" the LOCD question by adopting the subtraction method).

[70] *See, e.g.*, Geistfeld, *supra* note 3, at 431; Simons, *supra* note 3, at 551.

[71] *See, e.g.*, Geistfeld, *supra* note 3, at 428–30 (discussing the deficiencies with the various rationales for and approaches to the LOCD); Simons, *supra* note 3, at 550–51, 555–57 (describing the different justifications for the LOCD and different methods of applying it).

[72] *See infra* note 94 and accompanying text; *see also, e.g.*, Geistfeld, *supra* note 3, at 429 (suggesting the lack of a limiting principle has led courts to reject the LOCD); Simons, *supra* note 3, at 584–93 (articulating a variety of LOCD accounts and explaining the pitfalls of each).

have developed two accounts of the LOCD that are considered standard approaches to justifying the use of the doctrine:

> (1) Addressing the epistemic problem of uncertainty regarding causation in these cases by making an exception to the traditional preponderance requirement and relaxing the standard of proof in these cases.
>
> (2) Addressing the problems (of fairness and efficiency) that arise in LOCD cases by fundamentally changing the characterization of the injury suffered by the plaintiff: Rather than the injury being the bad medical result itself (death), this approach redefines the injury as the *loss of chance of avoiding the bad result (death)*.

As discussed in a recent draft of the Restatement (Third) of Torts, the LOCD, which "arose to reduce the harsh results of applying standard but-for causation rules to certain medical negligence cases," initially operated by employing the first of these two justifications, but the second is the one that is now almost exclusively employed, and, as a result, it is the second justification that the current Restatement drafts adopt:[73]

> Initially, courts ameliorated these harsh results by softening causation requirements . . . . Subsequent cases, however, tend to favor the conceptual approach this Section adopts: retaining conventional injury-causation standards that require proof by a preponderance of the evidence, while recognizing as legally compensable harm the patient's "loss of a chance" interest, rather than the ultimate medical injury that the patient sustains.[74]

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[73] RESTATEMENT (THIRD) OF TORTS: MEDICAL MALPRACTICE § 8 cmts. a, g (AM. L. INST., Tentative Draft No. 2, 2024). A section of another torts Restatement, RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL AND EMOTIONAL HARM § 26, cmt. n (AM. L. INST. 2010), which is less recent than the RESTATEMENT (THIRD) OF TORTS: MEDICAL MALPRACTICE, also characterizes the harm as the lost chance itself, though it ultimately does not take a position on whether the claim should be recognized. In addition, recent drafts of the RESTATEMENT (THIRD) OF TORTS: REMEDIES § 11 (AM. L. INST., Tentative. Draft No. 3, 2024) also characterize the harm in LOCD cases as the lost chance itself.

[74] RESTATEMENT (THIRD) OF TORTS: MEDICAL MALPRACTICE § 8 (AM. L. INST., Tentative Draft No. 2, 2024). Reporters' Note Comment g of this section of the Restatement continues:

> About half the states that have adopted a lost-chance theory do so by reconceptualizing the injury as the lost chance, rather than by relaxing conventional causation standards. *See* Smith v. Providence Health, 393 P.3d 1106, 1114-1115 (Or. 2017) (reviewing relevant case law). Among the other half of lost-chance states, most do not explicitly reject the injury-reconceptualization position; instead, most courts that have adopted a relaxed-causation approach have done so without explicitly considering the alternative conception. A plausible explanation for that default is that most relaxed-causation states were among the earliest jurisdictions to adopt lost chance and thus many of these

This Section discusses each of these accounts in turn.

i. Approach One: Making an Exception to the Preponderance Standard

A court can justify using the LOCD to calculate damages by (1) explicitly stating that it is making an exception to the rule requiring that a plaintiff meet the preponderance standard (and instead relaxing the standard for the case at bar), and then (2) explaining why this exception is warranted in the case. The common justification that is cited are the "policy considerations"[75] of fairness and efficiency that arise in cases of this type due to the epistemic problem of uncertainty regarding causation (as described above).[76]

That said, courts and commentators alike have found it difficult to provide a plausible justification for this account of the LOCD.[77] Specifically, it is difficult to develop a limiting principle explaining why the exception should be made in the context of typical LOCD cases but not also in other contexts that arguably confront and raise relevantly similar issues—such as non-medical-malpractice cases, or medical malpractice cases that raise other types of factual uncertainty.[78] And this difficulty is problematic because commentators and courts alike think that the LOCD should be limited to the context of typical LOCD cases.[79] In light of these difficulties, the majority of courts and the majority of scholars have instead endorsed a second approach to the LOCD,[80] to which this Article now turns.

> cases were decided prior to the emergence of a clearly articulated alternative version of the theory. Since about the mid-1990s, most states recognizing lost chance have adopted the version recognized here . . . . Even more telling, among high courts that have explicitly considered both versions, almost all have rejected a relaxed-causation approach in favor of recognizing lost chance as the injury. See [*id.*] at 1113.

Id.

[75] *See, e.g.*, Matsuyama v. Birnbaum, 890 N.E.2d 819, 838 (Mass. 2008) ("[I]n light of the strong public policy favoring compensation for victims of medical malpractice and the deterrence of deviations from appropriate standards of care, loss of chance of survival rightly assumes a place in our common law of wrongful death, and we so hold.").

[76] *See id.* at 830 (highlighting these concerns with the "all or nothing" rule rooted in the preponderance standard, and citing numerous courts and commentators who have articulated these concerns).

[77] *See* Geistfeld, *supra* note 3, at 429–30 (articulating difficulties in relaxing the standard of proof); Simons, *supra* note 3, at 556 (describing the "slippery slope" that can follow from relaxing the standard).

[78] One court, unable to identify a plausible limiting principle, rejected the LOCD, stating that "[i]t would . . . reduce the standard of causation to a mere possibility rather than a preponderance of the evidence," which "would create unwarranted liability in other cases and other medical contexts." Cohan v. Med. Imaging Consultants, 900 N.W.2d 732, 741 (Neb. 2017).

[79] *See, e.g.*, Geistfeld, *supra* note 3, at 429 (expressing the importance and difficulty of limiting the LOCD's reach); Simons, *supra* note 3, at 556–57 (discussing how to limit the LOCD's reach); Parkes v. Hermann, 852 S.E.2d 322, 325 (N.C. 2020) (rejecting the LOCD as a departure from common law).

[80] RESTATEMENT (THIRD) OF TORTS: MEDICAL MALPRACTICE § 8 cmt. g (AM. L. INST., Tentative Draft No. 2, 2024).

ii. Approach Two: Redefining the Legal Injury as the Lost Chance Itself

Making an exception to the preponderance standard is something that many are hesitant to do, and especially when there seems to be no clear principled way to allow particular exceptions without opening the door for exceptions that are so numerous and wide-ranging that they likely would swallow the rule. As a result, most courts that choose to award partial damages take a different approach. Simons describes it as "a novel doctrinal strategy" in which courts "redefine the legal injury that plaintiffs have suffered in [LOCD] cases."[81] Courts that use this approach say that the legal injury (the harm the plaintiff incurred) is not the bad medical result itself (death), but rather the *loss of chance of avoiding the bad result (death)*. According to this approach, the defendant did cause the injury (the lost chance), and the plaintiff is required (and able) to establish by a preponderance that the defendant was the cause-in-fact of this injury.[82]

While this approach appears to successfully avoid (at least some of) the problems afflicting the first account of the LOCD, and despite it being endorsed by the vast majority of courts that employ the LOCD, the Restatement, and scholars,[83] it has problems of its own that render it an unsatisfactory account of the LOCD as well. As Simons, in assessing this approach, observes, it "relies on an ad hoc, unnecessary, and problematic redefinition of the legal injury suffered in loss of chance cases."[84] This would be especially problematic, Simons contends, if it were taken to the kind of extreme that "would permit everyone endangered by a speeding driver to obtain partial damages for that risk exposure, even if the driver caused physical harm to none of those she endangered."[85]

In other words, this second approach to the LOCD moves us toward a system in which merely being *exposed* to a risk is the relevant harm in a tort. Because this raises numerous difficulties, we as a society have opted instead for a system that typically requires not only that a tort plaintiff have been exposed to the risk that, say, a speeding driver creates for other drivers, but also that the harm that that activity risked was actually suffered.[86]

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[81] Simons, *supra* note 3, at 556.

[82] *See id.*; *see, e.g.*, Perez v. Las Vegas Med. Ctr., 805 P.2d 589, 592 (Nev. 1991) ("By defining the injury as the loss of chance . . ., the traditional rule of preponderance is fully satisfied.").

[83] RESTATEMENT (THIRD) OF TORTS: MEDICAL MALPRACTICE § 8 cmt. g (AM. L. INST., Tentative Draft No. 2, 2024).

[84] Simons, *supra* note 3, at 557.

[85] *Id.*

[86] *See, e.g.*, John C.P. Goldberg, *What Clients Are Owed: Cautionary Observations on Lawyers and Loss of a Chance*, 52 EMORY L.J. 1201, 1202 (2003); ARIEL PORAT & ALEX STEIN, TORT LIABILITY UNDER UNCERTAINTY 7 (2001) (exploring a "risk-based liability" rule, according to which the damages awards would be for expected harm and not actual harm, and concluding that this alternative is in most cases much more difficult to enforce than an actual-loss (harm-based) damages alternative, and it would

One of the problems with a mere-risk-exposure system is that if two individuals are exposed to a risk, but only one suffers harm, they would both be similarly situated as plaintiffs and would each receive a small recovery. This outcome is undesirable for two reasons: (1) the plaintiff who didn't suffer physical harm arguably is *over*-compensated, and (2) the plaintiff who did suffer physical harm arguably is dramatically *under*-compensated.[87] Further, another enormous problem raised by a risk-based account is the difficulty of knowing that one was exposed to a risk—as compared to the ease of knowing that one was physically harmed by the risk. In a risk-based system, there would likely often be great difficulty proving whether or not a plaintiff was exposed to a risk, and, further, in such a system, the vast majority of individuals exposed to risks are not likely, in most situations, to know that they have been exposed to the risk if it doesn't come to fruition.

We could tweak this second approach by stating that while the injury is the risk itself, the plaintiff must also experience the ultimate harm to have a valid claim. However, this position also involves tensions and

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thus not be able to be implemented). For further discussion of a potential expected-loss regime, see Robert Cooter, *Hand Rule Damages for Incompensable Losses*, 40 SAN DIEGO L. REV. 1097, 1113 (2003); Christopher H. Schroeder, *Corrective Justice and Liability for Increasing Risks*, 37 UCLA L. REV. 439, 460–62, 465–67 (1990); Kenneth W. Simons, *Corrective Justice and Liability for Risk-Creation: A Comment*, 38 UCLA L. REV. 113, 114, 122–25 (1990). *See generally* Robert Cooter, *Towards a Market in Unmatured Tort Claims*, 75 VA. L. REV. 383, 399 (1989) (demonstrating that a market for unmatured claims encourages safe behavior by making potential injurers pay prices reflecting expected harm). For seminal discussions of the closely related topic of moral luck, see Jeremy Waldron, *Moments of Carelessness and Massive Loss*, *in* PHILOSOPHICAL FOUNDATIONS OF TORT LAW 387, 397, 406–07 (David G. Owen ed., 1995); DANIEL STATMAN, MORAL LUCK (Daniel Statman ed., 1993); John C.P. Goldberg & Benjamin C. Zipursky, *Tort Law and Moral Luck*, 92 CORNELL L. REV. 1123 (2007).

[87] The concerns just discussed were about a system where the risk itself is the relevant harm addressed by tort law—regardless of whether the ultimate harm that the risk risks were to ever come to fruition. But there is also another related difficulty that a risk-based account raises: regarding risks of harm where it's not yet clear whether or not the ultimate harm will come to fruition. Comment g to the Restatement section on loss of chance (despite the Restatement section coming out in favor of this risk-based approach) states:

> [T]his conceptual approach raises the issue of whether a patient may, or indeed *must* (because of a statute of limitations), state a lost-chance claim prior to knowing whether the adverse medical outcome occurred—for instance, at a point when a negligently delayed diagnosis has diminished, but not eliminated, a patient's chance for five-year survival or full recovery. Courts have not yet resolved that vexing question, and so this Restatement takes no position on it.

RESTATEMENT (THIRD) OF TORTS: MEDICAL MALPRACTICE § 8 cmt. g (AM. L. INST., Tentative Draft No. 2, 2024). A Reporters' Note to Comment g to the Restatement section on loss of chance elaborates on these issues as follows:

> For the [redefining the legal injury approach], [a] primary challenge is whether a claim for diminished chance may (or must) be filed before knowing the ultimate medical outcome. Although logic points toward permitting suit before the ultimate medical outcome is known, there are competing reasons not to require, and perhaps not even to allow, these arguably premature suits. Problems of proof are greater prior to knowing the ultimate outcome. In addition, if courts recognize earlier actions, that recognition can pose challenges for when the statute of limitations accrues. Courts' resolution of these timing and ripeness issues also complicate damage calculations, see Restatement Third, Torts: Remedies § 11, Comment *c* (AM. L. INST., Tentative Draft No. 2, 2023), and whether or not states' wrongful-death and survival-act statutes are implicated.

Id.

implausibility. Not only would there be a seemingly ad-hoc additional requirement that would be in tension with the rationale of the underlying account, but positions of this sort also arguably are still subject to some key objections that afflict the risk-based account that the revision is aiming to fend off.

Further, there is an additional problem with the second approach to the LOCD: In addition to arguably transforming our system—at least in the context of these medical malpractice cases—into an unpalatable system where the harm is the mere *risk* of harm, making it irrelevant whether one experiences the actual physical harm, it also appears that, to the extent we would say that we only want this approach in LOCD cases in medical malpractice, we would then face a similar limiting problem to the one afflicting the first LOCD account: If we limit this approach to these types of cases, "how does an appellate court avoid the application of the loss-of-chance doctrine in other areas of the law, beyond medical malpractice?"[88]

* * *

In light of these difficulties afflicting the two standard approaches, the approval, implementation, and development of the LOCD have, according to the Reporters responsible for the Restatement (Third) of Torts, "been halting, as courts have sought to find appropriate limits for this reconceptualization of legally cognizable harm. Without limits, this reform is of potentially enormous scope, implicating a large swath of tortious conduct in which there is uncertainty about factual cause . . . ."[89] Accordingly, many courts have rejected the LOCD, and among the courts that have employed it, there has been disagreement about how and why they should do so. Without a persuasive justification for the LOCD, it is unclear both whether and how it should be employed.

2. *Two New Approaches Offered by Geistfeld and Simons*

Recently, Geistfeld and Simons have made attempts to provide more persuasive justifications for the LOCD.

i. Geistfeld's Approach

According to Geistfeld, by framing the doctrinal debate in terms of whether we should make an exception to the preponderance standard or redefine the injury in terms of a lost chance itself, "courts and scholars have not seriously considered whether there is a more traditional way to justify

[88] Cohan v. Med. Imaging Consultants, 900 N.W.2d 732, 741–42 (Neb. 2017).

[89] RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL AND EMOTIONAL HARM § 26 cmt. n (AM. L. INST. 2010).

the loss-of-chance doctrine."[90] Using a phrase of Judge Guido Calabresi's, Geistfeld asks: "Can loss of chance be 'fit into old categories'?"[91]

Geistfeld believes that using this approach could be fruitful, in that it could lead to a persuasive justification of the LOCD that has not yet been articulated.[92] Further, Geistfeld argues, since some courts have issued opinions rejecting the LOCD on the grounds that it constitutes a departure from the common law, this framing may encourage them to reconsider it.[93] Geistfeld writes: "If the doctrine does not necessarily entail a substantial (radical?) departure from traditional tort doctrines involving either the burden of proof or the nature of compensable harm, courts that have rejected the doctrine may be more amenable to adopting it."[94] As Geistfeld points out, many of these courts are not persuaded by the existing rationales for the LOCD, and may only adopt the doctrine if it can be rooted in traditional tort principles.[95] "Courts of this type—those that have either rejected, deferred, or not yet considered the doctrine—could represent nearly half of the states according to one count," Geistfeld argues.[96] "Hence," he continues, "[t]he future of the loss-of-chance doctrine may critically depend upon whether it can be 'fit into old categories' as Calabresi put it."[97]

How does Geistfeld envision this to work? His account centers on the traditional tort principle that a doctor has a duty to not harm patients.[98] He writes:

> [T]he substantive nature of a physician's tort obligation is to provide patients—no matter how sick—with professionally competent treatment for the health condition in question. If a negligent physician could [use] the patient's preexisting condition [as exculpatory causal evidence in the loss-of-chance cases,] that type of proof would necessarily have the

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[90] Geistfeld, *supra* note 3, at 431.

[91] *Id.* (citing McCarthy v. Olin Corp., 119 F.3d 148, 161 (2d Cir. 1997) (Calabresi, J., dissenting)).

[92] Geistfeld, *supra* note 3, at 431.

[93] *Id.*

[94] *Id.* As an illustration, the North Carolina Supreme Court recently ruled that only the legislature had the authority to adopt the LOCD because it "would require a departure from our common law on proximate causation and damages." *Id.* (citing Parkes v. Hermann, 852 S.E.2d 322, 325 (N.C. 2020)). In a similar vein, the Maryland Court of Appeals recently affirmed its previous decision to reject the LOCD, reasoning that rejecting the LOCD is not "clearly wrong and contrary to established principles nor has there been a showing that the precedent has been superseded by significant changes in the law or facts." *Id.* (citing Wadsworth v. Sharma, 278 A.3d 1269, 1284 (Md. 2022)) (internal quotation marks omitted).

[95] Geistfeld, *supra* note 3, at 431.

[96] *Id.*

[97] *Id.* As Geistfeld says, as of 2015, 26 states had either rejected, deferred, or not yet considered the doctrine. *See also* Guest, Schap & Tran, *supra* note 1, at 53 (reporting that "24 states have adopted some version of the 'loss of chance' rule, 17 have rejected it, four have deferred ruling on the doctrine, and five have yet to address the matter").

[98] Geistfeld, *supra* note 3, at 431–32.

> effect of negating liability in *all* cases the duty governs, thereby negating the duty itself.[99]

Thus, as he explains, his account of the LOCD would eliminate a negligent doctor's option of using "the patient's preexisting condition as exculpatory causal evidence,"[100] since using that evidence in that way would "necessarily have the effect of negating liability in *all* cases the duty governs, thereby negating the duty itself."[101] Accordingly, Geistfeld argues that the presence of this duty can "justif[y] a special evidentiary rule" under which a negligent doctor would not be permitted to "invok[e] their patients' preexisting conditions [as the only reason for] avoid[ing] legal responsibility for their incompetent treatment of those conditions . . . ."[102] This would allow the plaintiff to "show [with the remaining evidence] that the physician's malpractice, more likely than not, caused the bodily injury in question, such as wrongful death."[103] Once the doctor's liability is established, Geistfeld explains, the amount of compensatory damages can be calculated by using the patient's preexisting condition as a "relevant factor."[104]

Geistfeld states that "[n]one of [his] reasoning shows that [his account] of the doctrine is more justifiable than the alternatives,"[105] but he says that unlike the alternatives, it may make the use of the LOCD more palatable to courts because it is "based on traditional tort principles applied to the substantive nature of the tort duty in medical malpractice cases."[106]

ii. Simons's Approach

Observing the two main approaches taken to justifying the LOCD by courts and in the literature, and recognizing that neither is persuasive because they both are afflicted by substantial problems, Simons, like Geistfeld, offers a new approach. Simons describes his proposal as an alternative to the two main approaches, but it might be better described as a version of the first approach (in which the preponderance standard is relaxed for these types of cases, and with a limiting principle explaining why it is not widely applicable). Simons, however, argues that the limiting principle he uses is both somewhat different from and more plausible than the one employed by the first approach[107] Further, he states that his approach, like the first approach, avoids the second approach's mistaken strategy of redefining the injury.[108]

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[99] *Id.* at 432 (emphasis in original).
[100] *Id.*
[101] *Id.* (emphasis in original).
[102] *Id.*
[103] *Id.*
[104] *Id.*
[105] *Id.* at 433.
[106] *Id.*
[107] Simons, *supra* note 3, at 606.
[108] *Id.* at 606–07.

According to Simons, "[c]ourts should not rely on the fiction of redefining the nature of the legal injury. They should instead invoke the types of arguments of policy and principle that justify departures from the strict preponderance rule in other exceptional categories of factual cause cases."[109] This is because "courts are fully justified in creating an exception here to the usual preponderance requirement for factual cause—just as they are justified in modifying that requirement in other special situations that courts widely recognize . . . ."[110] Other than within "the context of loss of chance, courts have already widely embraced [this type of option in] a limited but important set of causation doctrines in which applying the traditional proof requirements for factual causation would be unjust or would produce troublesome consequences."[111]

As Simons points out, "when multiple sufficient concurrent tortious actions," each committed by a separate tortfeasor, "contribute to a harm, the plaintiff does not need to prove that each cause was a but-for cause of the harm."[112] Instead, when a plaintiff cannot establish which of multiple tortious defendants was the sole factual cause, each defendant must individually demonstrate that they were *not* the cause. Failure to do so renders them jointly and severally liable.[113] In addition, as Simons explains, "[s]ome cases ease the plaintiff's burden on factual causation by employing a presumption of causation in negligence per se cases."[114] For example, "if it is unclear whether a plaintiff would have heeded a legally adequate warning on a product," Simons says, "many courts adopt a heeding presumption, making it easier for the plaintiff to satisfy the factual cause

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[109] *Id.* at 557.

[110] *Id.*

[111] *Id.* at 594.

[112] *Id.*

[113] *See id.* at 594 n.90 ("Suppose *A* negligently causes a forest fire, and, independently, *B* negligently does the same; each fire arrives at *P*'s building at the same time; the building is destroyed; and each fire is sufficient to have caused the loss. Neither is a but-for cause, yet courts hold *A* and *B* jointly and severally liable . . . . Whether understood as an exception or a supplement to but-for cause, this is a special causation rule that departs from the usual but-for cause requirement, a rule that is quite justifiable for reasons of fairness and perhaps efficiency.") (internal citation omitted); RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL AND EMOTIONAL HARM § 27 (AM. L. INST. 2010) (stating that if multiple acts occur, each of which alone would have caused the harm, each is considered a factual cause of the harm); Summers v. Tice, 199 P.2d 1, 3–5 (Cal. 1948) (holding that a plaintiff's burden should be relaxed when multiple independent forces cause an injury, making it impossible to determine which defendant's actions caused the harm, thus placing the burden on defendants to absolve themselves).

[114] RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL AND EMOTIONAL HARM § 28 cmt. b (AM. L. INST. 2010); Haft v. Lone Palm Hotel, 478 P.2d 465, 475–76 (Cal. 1970) (shifting the burden of proof on negligence to a defendant who had violated a statute mandating hotels with swimming pools to either employ a lifeguard or display a sign indicating the absence of one). As Simons says, "Under a strict application of the but-for cause test, the plaintiff would have failed in their negligence per se claim, because under the facts of the case, satisfying the statute by providing a sign warning that no lifeguard was present was quite unlikely to have prevented the drownings . . . . The court instead adopted a more flexible approach to factual cause, in light of the legislative policy to protect swimmers in hotel swimming pools from danger." Simons, *supra* note 3, at 594 n.92 (citation omitted).

requirement, in order to avoid a pocket of legal immunity."[115] Simons also points to market-share liability as another example of courts endorsing an exception to the typical requirements of proving but-for cause—albeit a "more controversial example," as only a minority of courts have endorsed this approach.[116] Those courts that have endorsed this exception, however, "have permitted plaintiffs to obtain partial compensation from manufacturers [of DES],[117] in order to ensure that the defendants pay compensation in an amount roughly commensurate with the harm that they have caused."[118] As Simons says, this is precisely the rationale that courts use when espousing partial damages in LOCD cases.[119]

Simons continues as follows, describing all of these cases in which courts chose to make exceptions to the preponderance requirement for factual causation on policy grounds, rather than redefining the injury: "In these cases, courts could have redefined the nature of the legal injury, thus avoiding a departure from the general rule requiring proof of factual cause by a preponderance. But that would simply be an unhelpful legal fiction. Instead, courts have taken a more sensible course: offering persuasive policy reasons for the particular exceptions to that general rule."[120]

Like the first account of the LOCD, Simons's approach states that what is and should be understood to be going on when the LOCD is employed is that an exception is being made to the traditional preponderance

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[115] Simons, *supra* note 3, at 594; *see also* Aaron D. Twerski & Neil B. Cohen, *Resolving the Dilemma of Nonjusticiable Causation in Failure-to-Warn Litigation*, 84 S. CAL. L. REV. 125, 129 (2010) (discussing the heeding presumption).

[116] Simons, *supra* note 3, at 594.

[117] DES (diethylstilbestrol) was the first synthetic estrogen to be created.

[118] Simons, *supra* note 3, at 594–95. *See generally* RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL AND EMOTIONAL HARM § 28, Reporters' Note cmt. p (AM. L. INST. 2010) (explaining that courts have allowed plaintiffs exposed to DES, despite being unable to prove which manufacturer produced the drug they consumed decades earlier, to recover damages apportioned according to each manufacturer's share of the market).

[119] Simons, *supra* note 3, at 594–95.

[120] *Id.* at 595; RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL AND EMOTIONAL HARM § 28(b) cmt. g (AM. L. INST. 2010); *see also* RESTATEMENT (SECOND) OF TORTS § 433B(3) (AM. L. INST. 1965) (stating when multiple actors behave tortiously and it is known that the plaintiff's injury resulted from only one of them, but their individual responsibility cannot be identified, each actor bears the burden of demonstrating that they were not the cause of the harm). Andrew Gold has recently argued that there are many kinds of justice at work in private law, and not merely corrective justice, and resolutions of cases involving epistemic uncertainty regarding causation (e.g., with market share liability, alternative liability, or the LOCD) might reflect one of these additional notions of justice—even if they don't involve corrective justice. Andrew Gold, *The Many Kinds of Justice in Private La*w (unpublished manuscript), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5794222. Benjamin Zipursky and Arthur Ripstein, however, might be of the view that the relaxation-of-the-preponderance-standard approach to the LOCD does effectuate corrective justice, as they argue that market share liability, despite appearances perhaps being to the contrary, can reasonably be understood as effectuating corrective justice—and market share liability and LOCD cases similarly confront the epistemic problem of uncertainty regarding causation. *See* Arthur Ripstein & Benjamin C. Zipursky, *Corrective Justice in an Age of Mass Torts*, *in* PHILOSOPHY AND THE LAW OF TORTS 214, 231–32, 234, 237 (Gerald J. Postema ed., 2001) (arguing that market share liability reflects corrective justice principles despite causal uncertainty).

requirement. The slight difference between his account and the typical version of the first account, though, is that Simons more openly suggests that there is no problem regarding a need to articulate a limiting principle for the usage of the LOCD, and, rather than attempting to extract a principle from the law and articulate a cogent principle grounded in law that could constitute a limiting principle, we should just explicitly and honestly announce that the LOCD is an exception that is being made for policy reasons.

3. *The Difficulties Afflicting Geistfeld's and Simons's Approaches*

i. Geistfeld's Approach

Geistfeld's account is unique and innovative. Ultimately, however, it does not seem to be any less ad hoc than the principle that is currently used to restrict the use of the LOCD. Even though it provides a limiting principle that technically might work, it does not explain the use of the exception in a way that truly speaks to the core concerns underlying the lack-of-limiting-principle objection. Recall, however, that Geistfeld does not purport to have shown that his account is *more justifiable than* the two main accounts.[121] Instead, he seeks to offer one that is at least *equally as justifiable* as the two main approaches, but that is also, unlike the other two, "based on traditional tort principles"[122]—and it seems that he has indeed articulated an account that is equally as justifiable and that, unlike the other two, is based on traditional tort principles. However, if Geistfeld's account turns out to be no *more* justifiable or plausible than the other accounts, then it still seems that there is something left to be desired in articulating a plausible account of the LOCD.

Geistfeld does provide a limiting principle that technically limits the use of his proposed method of carrying out the LOCD to these specific cases while technically avoiding relaxing the evidentiary standard or moving to an account where the injury is redefined as the loss of chance. But, ultimately, his approach simply pushes up one level the questions of how to justify certain exceptions, without truly providing a non-arbitrary explanation.

One concern pertains to the question of how to define the class of cases in which there are "no instances" of plaintiffs having a remedy. It seems arbitrary to define the class with the particular level of specificity/generality that he does. If the class of plaintiffs he considered were defined somewhat more expansively, for example, then recovery would be possible for some plaintiffs in the class. Furthermore, we similarly could carve out types of plaintiffs or cases in other areas of tort law in which, for whatever the reason might be in that context, no plaintiff will end up being able to recover. Under

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[121] *See* Geistfeld, *supra* note 3, at 433 (emphasizing that although the duty-preserving formulation is not more justifiable than the alternatives, it rests on traditional tort principles).

[122] *Id.*; *see also supra* notes 90–104 and accompanying text.

those circumstances as well, Geistfeld would have to say that the duty is negated and that an exception would be needed.[123] This is perhaps true, but the decision of when to patch or not patch a pocket of a problem seems arbitrary, and these patches appear to be all over the law. And, more generally, it is precisely in all of these other types of cases or types of situations where a plaintiff might be unable to recover[124] that we are seeking a limiting principle to help us explain why the LOCD should apply to LOCD cases in medical malpractice but not also to all of these other cases. Geistfeld's account, unfortunately, does not explain how it is decided when to patch, or not patch, a particular pocket of a potential problem[125]—i.e., he does not provide a limiting principle for determining whether to patch a particular segment of a potential problem.[126]

There is also another way in which Geistfeld's account, though innovative, remains *no more plausible than* the other accounts. If there is a class of plaintiffs that will never be able to recover, he explains, and therefore there is no actual tort duty that applies to them if there is no possible remedy, then something must be done to change this result. The solution he offers is one in which a preexisting condition cannot be considered when proving cause in the liability stage of the case, thus leaving only the negligent cause to be considered, unopposed, by the factfinder. This solution, however, seems no more satisfactory than the underlying LOCD justification for which he is proposing an alternative. His proposed mechanism is technically different from the relaxing of the preponderance standard employed by the first version of the LOCD. However, it seems that his strategy is also a form of a relaxation of the preponderance standard for these cases, albeit in a slightly different form. Specifically, he suggests

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[123] Although Geistfeld believes that his formulation fits medical malpractice well, he also does not rule out the possibility that this approach has other applications. But even these, he says, are limited circumstances involving the negation of duty. Thus, while he is amenable to his approach applying more broadly than to only medical malpractice, he does not believe that these additional applications signal that there would be general and wide-ranging applications and thus threaten the account's overall plausibility. Geistfeld, *supra* note 3, at 430–32, 445–48, 455–59.

[124] For example, LOCD cases in a non-medical-malpractice area, other situations in the medical malpractice context of plaintiffs having difficulty meeting the preponderance standard for causation (but for reasons typically not thought to invoke the LOCD), or situations like the latter but also in a non-medical-malpractice area.

[125] Another point related to the points I make in this paragraph (and, perhaps, a way to describe some of the points in this paragraph) is that it is unclear why it should be relevant that a whole class of similarly situated people would be unable to recover. It seems that what should actually be relevant is identifying all individuals who we think should be able to recover and then enabling them to recover—regardless of whether or not there are certain ways to describe their situations that render them similarly situated in certain ways to other individuals. And the actual goal is to identify who should be recovering but is not recovering, and if one focuses on addressing this, then one is confronted by the same question that confronts the first account of the LOCD: how to articulate a plausible limiting principle.

[126] And, even if Geistfeld *had* offered a limiting principle—and a plausible one—explaining when to and when not to conduct this patchwork, it still is far from clear that patching up the law for these types of cases in this way is what we want.

removing from consideration the evidence that makes the preponderance standard unmeetable, and then still applying the preponderance standard. While Geistfeld says that what he's doing is different from a relaxation of the preponderance standard, it seems that his approach is functionally the same. We still have the question this Article raised in the first objection in this Section: Why are we making the exception for these types of cases and not others? We are lacking a limiting principle, and this is the same problem that the first account of the LOCD confronts.

In sum, this Article's objection to Geistfeld's account is that, ultimately, if we dig into the proposal, we end up with an account that is still confronted with the same difficult task: (1) seeking to make an exception to the typical requirement of proving factual cause by a preponderance, while (2) articulating a limiting principle that explains why we make this exception in a particular category of cases and not others. Although Geistfeld articulates a different procedure and account, the bottom line is that we still have the same goal and an analogous approach, but with no more plausible of a justification for the exception being made than we had with the first account of the LOCD.

ii. Simons's Approach

Simons's position amounts simply to a version of the first account of the LOCD that is afflicted by the same problems and does not do any better at solving them. Simons does, however, articulate more clearly that the exception to the preponderance rule in these cases should be supported by "offering persuasive policy reasons for the particular exception to that general rule,"[127] rather than by appealing to a limiting principle that is less explicitly grounded in policy, and described, perhaps in an underhanded way, in doctrinal terms. Additionally, Simons points to other areas where these types of explicitly policy-based maneuvers are made.

There is value in being explicit and honest about this justification. However, even if policy grounds are used to justify the exception to the preponderance rule, we still are left with our underlying problem in these cases: the lack of a limiting principle *regarding which types of cases are captured by the policy justification and why it does not similarly apply to other types of tort cases*, including and especially those for which there is uncertainty about factual cause.

Geistfeld discusses the difficulty of articulating a limiting principle to rein in possible exceptions to the preponderance standard for LOCD cases in the medical malpractice context: "Why don't these same compensation and deterrence concerns justify relaxing the burden of proof for other cases in which a negligent actor might have caused the injury, but the plaintiff

[127] Simons, *supra* note 3, at 595.

cannot prove as much under the ordinary evidentiary standard?"[128] He continues: "Unable to discern a defensible limiting principle, one court rejected the loss-of-chance doctrine, reasoning that '[i]t would . . . reduce the standard of causation to a mere possibility rather than a preponderance of the evidence,' which 'would create unwarranted liability in other cases and other medical contexts.'"[129] And while these comments focus on ways in which a lack of a limiting principle could result in the LOCD applying to other situations in the medical malpractice context of plaintiffs having difficulty meeting the preponderance standard for causation (but for reasons typically not thought to invoke the LOCD), the lack of a limiting principle could also result in the LOCD applying in non-medical-malpractice cases.

Ultimately, the problem with Simons's approach is that the rationale underlying the proposed explicit policy grounds that Simons offers appears to apply more broadly than to just the cases that he aims for them to capture (which are LOCD cases in the medical malpractice context). While we could just stipulate that this exception exists for these cases only, doing so leaves us no better off than where we were when we started. This is because the very thing that we are seeking is an articulation of a reason for why the exception should be made in this particular context but not also in others.

4. *Summary*

There is significant confusion and debate existing among courts and among commentators regarding the justification for the LOCD. Even those in favor of employing it cannot come to a consensus regarding which account of the LOCD should be endorsed. Furthermore, each of the two main accounts are afflicted by substantial problems, and the Geistfeld and Simons alternatives are no better at avoiding these problems.

Additionally, as courts have stated, they are declining to employ the LOCD for these very reasons.[130] Furthermore, even courts that do use it, because of the confusion and lack of consensus regarding its justification, are often left uncertain about which damages measures should be used. This causes uncertainty for litigants and also a lack of horizontal equity. Thus, in addition to there being a need for a plausible account of the LOCD from a theoretical perspective, a plausible account of the LOCD would also have substantial and important practical effects—and if one thinks that the LOCD is justified, then these developments would be positive ones. Thus, it is crucial to articulate a more plausible account of the LOCD.

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[128] Geistfeld, *supra* note 3, at 429–30.

[129] *Id.* at 430 (quoting Cohan v. Med. Imaging Consultants, 900 N.W.2d 732, 741 (Neb. 2017)) (alteration in original).

[130] *See supra* note 94 and accompanying text.

II. LOSS OF CHANCE: A PRINCIPLED RECONSTRUCTION

In light of the substantial problems afflicting all four accounts of the LOCD, what are we to do? This Part offers the solution that has been eluding courts and scholars writing about the LOCD. In so doing, it provides a principled reconstruction of the LOCD. This reconstruction explains how typical LOCD cases should be understood, and it also explains that two key extensions of the LOCD are warranted (and how and why the LOCD should be extended in these ways). Part II.A provides this reconstruction, with Part II.A.1 focusing on typical LOCD cases and Part II.A.2 focusing on the two proposed extensions. Next, Part II.B provides a prima facie argument for why we should adopt the proposed extensions. Last, Part II.C takes a more in-depth look at arguments for the LOCD (in typical cases and in the two extensions), and it provides a more nuanced prima facie argument. The combination of Part II's prima facie arguments and Part III's consideration of counterarguments will then, together, constitute the full argument.

A. *Reconstructing the LOCD*

1. *Overview*

As discussed in Part I,[131] the standard approach to the LOCD of redefining the injury in LOCD cases is problematic in various ways. At its core, it moves us toward a system in which merely being *exposed* to a risk is the relevant harm in a tort, rather than the ultimate harm that the risk is a risk of. We do not employ a system of this sort for both theoretical and practical reasons. Although the theoretical reasons could perhaps be debated—and perhaps grasping arguments could be made in favor of a risk-based position—even if we did want a system of this sort, the practical hurdles would be extraordinary and insurmountable due to the difficulties of knowing, and then proving, in particular cases the existence of harms that individuals have been exposed to but that have not come to fruition.[132] In the attempt to provide a plausible account of LOCD cases, we need not and should not take an approach that redefines what tort law is about in this way: Tort law should not be about harms *risked*; it should be about harms *caused.*

Similarly, and as argued in Part I,[133] not only does Geistfeld's approach fail to provide plausible limiting principles explaining why it applies only to typical LOCD cases, but even if it had, it is an ad hoc patch for the problem. We need not and should not take this type of approach.

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[131] *See supra* Part I.B.1.ii.

[132] The redefining-the-injury approach to the LOCD attempts to resist a broad move to a risk-based system like this by requiring that the harm come to fruition for a plaintiff to have a claim, but, as this Article has argued, *see supra* Part I.B.1.ii, this is an implausible hybrid with various difficulties afflicting it. It also attempts to limit its scope to medical malpractice, but as already argued and as will be argued in further detail later, this limitation lacks plausibility. *See supra* Part I.B.1.ii; *infra* Parts II.A–B, III.A.

[133] *See supra* Part I.B.3.i.

This leaves us with the other two approaches: (1) making exceptions to the preponderance standard in certain cases by relaxing the standard of proof and awarding partial damages reflecting the likelihood that the defendant caused the harm; and (2) Simons's variant of this approach. The problem with these approaches, as argued in Part I,[134] is that they lack plausible and non-ad-hoc limiting principles. But what is positive about these approaches is that (1) they maintain a key feature of our tort system that there are good reasons for wanting to keep—that tort is about harms *caused*—and (2) they correctly point to the feature of LOCD cases that creates problems: the epistemic problem of uncertainty about causation (when combined with our use of the preponderance standard). But is there an approach to the LOCD that can maintain what is appealing about these two approaches while avoiding their difficulties (the inability to articulate non-ad-hoc limiting principles combined with the belief that we need limiting principles because we do not similarly want a relaxed standard of proof and partial damages across the board)?

Yes. This is because we *do* similarly want a relaxed standard of proof and partial damages across the board, and for two reasons. First, the very same reasons for why this approach is appealing in typical LOCD cases also apply much more broadly, and second, the concerns associated with implementing such a broad approach are either mistaken or over-stated. Accordingly, if a case for such an account can be articulated, we will then have a plausible account of the LOCD. It will maintain what is plausible about the first standard approach and the Simons approach, and it will avoid the problems that afflict them. It will be an account that relaxes the standard of proof and awards partial damages, and an account that does this across the board—*with no limiting principles*.

Further, in addition to this constituting a plausible account of the LOCD and constituting the solution that has been eluding courts and scholars, this broad approach shows that the LOCD, instead of being a narrow exception to how tort law operates, actually offers valuable insight into how tort law *should always operate*. The LOCD doesn't suggest the need to redefine what tort law is about (e.g., making it about harms *risked*) or to make ad hoc patches to reflect our intuitions about justice in certain cases. Rather, it gives us a window into a different comprehensive approach to attending to what tort law is about (i.e., harms *caused*)—an approach that truly acknowledges the challenges we face in determining causal relationships. The best we can do, after all, is assign probabilities to the claims that our actions causally contribute to the harms others suffer. Acknowledging this should involve us in a full rethinking of the preponderance standard. We should implement tort law by *always* asking a plaintiff to prove causation of harm to the degree possible in the case and adjust the damages sum accordingly. As will be

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[134] *See supra* Parts I.B.1, I.B.2–3.

discussed,[135] this proposal can and should be supported by already familiar ideas about burdens, presumptions, and other tools, so that sometimes our probabilities are effectively zero or one unless evidence is rebutted or overcome.[136] But the key idea is that we should refocus tort litigation—our implementation of familiar principles based on causing harms (and rights against the infliction of harm)—on the chances that the defendant caused the plaintiff's harm.

In sum: (1) *Typical LOCD cases should be understood not as "caused loss of chance" cases, but as "chance of caused loss" cases*; (2) the same reasons in favor of having partial damages for these cases in the typical LOCD context support adopting a similar system across the board; and (3) as this Article will show, this isn't problematic in ways that one might fear it to be.

2. *Extensions of the LOCD: Expansion and Symmetry*

i. The Proposals, How They Work, and Examples of Cases for Which They Prescribe Different Results

This Article proposes making two reforms to the use of the LOCD:

- *Expansion*: The LOCD should not be limited to LOCD cases[137] that call for its use in the context of medical malpractice; it should also be employed in cases raising relevantly similar issues in any other area of tort (most notably, in toxic torts and products liability); and
- *Symmetry*: The LOCD should not be limited to only those cases in which the plaintiff has an insurmountable hurdle in meeting the preponderance standard for showing causation (LOCD cases); LOCD-like partial damages taking into account underlying risk should be employed even in cases in which the underlying risk is not large enough to create the insurmountable hurdle (non-LOCD cases[138]).[139]

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

[136] This not only speaks to ways of implementing the Article's proposals, but also to the Article's position that tort law would actually look somewhat like it does today, even if, as this Article posits, it's fundamentally about chances of caused losses.

[137] As a reminder, throughout this Article, the term "LOCD cases" refers to all fact patterns in which the plaintiff cannot meet the preponderance standard and show causation, whether the underlying chance of harm is greater than or less than 50%, and regardless of whether the doctrine was used to calculate damages and whether the fact pattern comes from a litigated case. Similarly, "non-LOCD cases" refers to all fact patterns in which the potential plaintiff does not confront this insurmountable hurdle.

[138] *See supra* note 132 and accompanying text.

[139] Note that in addition to this Article advocating for the adoption of Expansion and Symmetry, there are also two additional proposals implied by this Article's advocacy for Expansion and Symmetry that this Article endorses as well: (1) expanding the LOCD to cases covered by *both Expansion and*

Expansion is straightforward, but Symmetry could benefit from elaboration. The traditional rule is that causation must be showed by a preponderance, and the preponderance standard is an all-or-nothing rule: If the plaintiff is unable to meet the preponderance standard, then the plaintiff recovers nothing, and if the plaintiff is able to meet it, then the plaintiff recovers in full.[140] How does the LOCD impact these results? It changes one of two ways in which the law otherwise would have been all-or-nothing: When the plaintiff is unable to meet the preponderance standard, the LOCD awards partial damages rather than employing the all-or-nothing rule—specifically, it awards an amount reflecting the proportion of the total risk that was attributable to the negligence. However, even in jurisdictions that do employ the LOCD, the rule still remains all-or-nothing in cases in which the patient *can* meet the preponderance standard, with the plaintiff thus being awarded *full* damages.[141] According to Symmetry, however, we should award partial damages *even when* the plaintiff is able to meet the preponderance standard—with the plaintiff receiving an amount reflecting the proportion of the total risk that was brought about by the negligence. Accordingly, Symmetry would bring about a symmetrical rule: one which, appropriately, employs partial damages on both sides of the preponderance threshold.

As discussed, the "ratio" measure, as offered by Rhee and Simons, is the best option for calculating damages in typical LOCD cases, rather than the typically-used "subtraction" method—despite courts almost exclusively employing the subtraction method and the Restatement (Third) of Torts: Remedies endorsing the subtraction method.[142] Further, the same points in favor of the ratio measure in the context of LOCD cases apply equally forcefully to cases covered by Expansion and Symmetry. Thus, the ratio method of damages calculation should also be used in these contexts.

To both refresh the reader's recollection about how the ratio measure operates and simultaneously illustrate how the Symmetry damages measure is calculated, the following describes how the ratio measure operates in a Symmetry case. Consider a case where the underlying risk is 2%, the

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Symmetry (i.e., to non-LOCD cases in areas other than medical malpractice); and (2) employing the LOCD in LOCD cases in medical malpractice in *all* jurisdictions—not only the current subset of jurisdictions that do so.

[140] *See, e.g.*, Matsuyama v. Birnbaum, 890 N.E.2d 819, 829 (Mass. 2008) (recounting definition of the traditional all-or-nothing rule); Levmore, *supra* note 4, at 692; Fischer, *supra* note 9, at 605–06; Geistfeld, *supra* note 3, at 428; Simons, *supra* note 3, at 551.

[141] *See, e.g.*, Bradshaw v. Daniel, 854 S.W.2d 865, 867–68 (Tenn. 1993); McBride v. United States, 462 F.2d 72, 75 (9th Cir. 1972); Levmore, *supra* note 4, at 718; Fischer, *supra* note 9, at 635; Geistfeld, *supra* note 3, at 430, 444; Simons, *supra* note 3, at 572.

[142] *See supra* Part I.A.4 (explaining the subtraction and ratio approaches). Recall that it is important to note that the question of which *damages measure to use in LOCD cases* and the question of which theory of *justifying LOCD liability* is most plausible are connected to each other—with the redefinition-of-the-injury approach supporting the subtraction approach and the relaxing-the-preponderance-standard approach supporting the ratio approach. *See supra* note 68 and accompanying text.

negligence raises the risk to 10%, and the plaintiff incurs the harm, the value of which is $200. This is a non-LOCD case and thus a case for which Symmetry prescribes a reform. According to the ratio measure, we look at the total harm amount and determine what the probability is that the harm was caused by the negligence, rather than by the underlying condition. Here, the negligence increased the chance of harm from 2% to 10%, so 8/10 (80%) of that 10% total chance of harm was attributable to the negligence. Therefore, because there is an 80% chance that the harm was caused by the negligence, the damages sum is equal to 80% of $200—that is, $160.[143]

Note that Expansion and Symmetry will have opposing effects on recoveries. Expansion will increase them by awarding partial damages in cases where plaintiffs would otherwise not have received an award. Symmetry, on the other hand, will decrease recoveries by awarding only partial damages in cases in which plaintiffs would otherwise have recovered in full. Whether implementing both Expansion and Symmetry will cause a net increase or decrease in recoveries remains to be seen. The key point, however, is that in the same way (and for the same reasons) that the LOCD brings about results that are better from both fairness and efficiency perspectives, so too will Expansion and Symmetry.

To illustrate, consider the examples in the chart in the Introduction.[144] Although these cases are treated very differently, they are the same in relevant respects, so the identical rule should be used in all of them. What all of these cases have in common is the following: (1) there is an underlying risk of harm, (2) a defendant's negligence increases the risk of harm, and (3) the harm comes to fruition. However, the cases are not all treated in the same way: Some plaintiffs receive full damages, some partial damages, and some none. These outcomes depend on whether it is a medical malpractice case, and whether the percentages of risk were such that the negligence more-

[143] This approach is called the ratio approach because it operates by identifying the ratio between (1) the risk increase caused by the negligence, and (2) the total risk when there is negligence (the sum of the baseline risk and the increase in risk increase caused by the negligence), and then determining the damages sum by having that ratio be the same as the ratio between (1) the damages sum, and (2) the total harm incurred by the plaintiff. The ratio method, therefore, allows us to determine the probability that the harm was caused by the negligence, rather than the underlying condition. In their articles, both Rhee and Simons discuss not only this general point, but also (a) the plausibility of the ratio account over other possible LOCD damages measures from a fairness perspective (*see* Simons, *supra* note 3, at 553, 555; Rhee 1, *supra* note 9, at 39–40, 46; Rhee 2, *supra* note 9, at 528–29) and (b) efficiency considerations that support using this LOCD damages measure, rather than others (*see* Simons, *supra* note 3, at 555; Rhee 1, *supra* note 9, at 46; Rhee 2, *supra* note 9, at 517, 520). Regarding efficiency considerations, these can be illustrated by examining how the damages calculations operate when aggregated in a population. (Note also that fairness considerations can be illustrated well in the aggregate context too, but the efficiency considerations benefit especially from being described in the aggregate context.) In short, in aggregate, the ratio method provides damages sums that require the defendant to pay a total sum in damages, to the benefit of multiple injured plaintiffs, that accurately tracks the amount of harm caused by the negligence in the aggregate. Not only does this ensure that plaintiffs are justly compensated and that defendants are held appropriately liable given their actions, but it also results in damages sums that are efficient because they force injurers to fully (i.e., accurately) internalize the externalities they have imposed.

[144] *See supra* Introduction.

than-doubles or less-than-doubles the underlying risk (in other words, whether or not there is an insurmountable hurdle in showing causation). But all of these cases should employ the same rule, and they should be treated identically. And, more specifically, in all of these cases, the plaintiff should receive partial damages—not full damages and not zero damages.[145]

B. *The Prima Facie Argument for Adopting Expansion and Symmetry*

1. *If We Adopt the LOCD in Typical Cases, We Should Then Adopt Expansion and Symmetry*

Strong reasons have been provided for why we should employ the LOCD in typical cases. One reason that we should adopt Expansion and Symmetry is that they are supported by the same intuitions as is the LOCD in typical cases, so if we espouse the LOCD in typical cases, we should also espouse Expansion and Symmetry.

The first intuition underlying the LOCD is that the traditional system results in inequities for the plaintiff, who should be able to recover for the increased chance of harm that was attributable to the negligence, even if the increase in chance of harm attributable to the negligence did not increase the underlying chance of harm by a factor of two or greater.[146] The LOCD allows for a plaintiff to recover even if the negligence did not double the chance of harm. This intuition underlying the LOCD similarly underlies Expansion. The second (related) intuition underlying the LOCD is that a

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[145] Note that one might think that even if Symmetry purports to be a new reform, its functional equivalent already exists in the law. As Geistfeld says, ordinary damage rules already discount for risk: "Once the loss-of-chance doctrine is reframed as a damages question . . . traditional measures of valuing tort damages yield the same recovery the lost-chance doctrine provides." *See* Geistfeld, *supra* note 3, at 440–41 (citing Doll v. Brown, 75 F.3d 1200, 1205–06 (7th Cir. 1996) (analyzing the loss-of-chance doctrine as "an extension of the routine practice in tort cases involving disabling injuries of discounting lost future earnings by the probability that the plaintiff would have been alive and working in each of the years for which damages are sought")). But it appears as though, while courts sometimes take this approach, they very frequently do not. *See, e.g.*, McBride, 462 F.2d at 75 (awarding full damages when the underlying risk of harm was 15%, the doctor's negligence raised it to 30–35%, and the harm was incurred). Further, the court in *Fennell v. Southern Maryland Hospital Center, Inc.*, described Symmetry not as the functional equivalent of the status quo, but rather as a change that we "perhaps ought" to make if we continue to have the LOCD in LOCD cases. 580 A.2d 206, 214 (Md. 1990). For further discussion, see *infra* Part III.B.

[146] The LOCD addresses situations in which there is an underlying risk of harm (absent the defendant's negligence) that is not caused by the defendant, but there is an interesting and important question of whether intuitions in favor of the LOCD would support an analogous damages measure in a related context: cases that are similar but where the underlying risk is still caused by the defendant, but non-negligently. I examine this question elsewhere (in a work in progress) and argue for an LOCD-like subtraction in these cases. Steven Shavell has recently examined similar issues, and he argues that as long as the injurer acts negligently when his acts cause harm, he should be liable for the *full* harm that he causes when acting, even if the *full* harm would have been caused by the non-negligent aspect of his acts. *See* Steven Shavell, *An Alternative to the Basic Causal Requirement for Liability Under the Negligence Rule*, 17 J. TORT L. 61, 63 (2024). Thus, Shavell's approach to these cases is in a sense a hybrid of traditional accounts of negligence and strict liability.

defendant should be liable *only for* the portion of the harm attributable to his negligence, as evidenced by the LOCD providing only partial damages reflecting not the full harm but the portion of the harm attributable to the doctor's negligence and not the underlying condition.[147] This intuition underlying the LOCD is the same intuition underlying Symmetry.

Because the intuitions underlying the LOCD are the same as those underlying Expansion and Symmetry, employing the LOCD in typical LOCD cases and employing Expansion and Symmetry are part of a broader single reform. As it stands today, our implementation of LOCD principles has not gone far enough. In addition to these principles being employed in typical LOCD cases, we must also implement them by adopting Expansion and Symmetry.

2. *Independent Reasons of Fairness and Efficiency to Espouse Expansion and Symmetry*

i. Expansion

The identical fairness and efficiency considerations that apply in the typical LOCD case apply, at least prima facie, in the Expansion case.

Fairness. A system employing Expansion is fairer than one that does not, because without Expansion, the plaintiff would not recover and thus the plaintiff would be compensated less than is fair and the defendant would pay less than is fair, whereas Expansion's partial damages sum would reflect a fair amount because it would reflect the likelihood that the defendant caused the harm.

Efficiency.[148] A system employing Expansion is also more efficient than

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[147] As I have mentioned, however, there are various—at least three—approaches taken to attempting to determine how to carry out the calculation to arrive at this sum.

[148] An adequate examination of efficiency questions is a complex endeavor involving a multitude of factors, many of which would likely require empirical investigation. Therefore, a comprehensive efficiency analysis is beyond the scope of this Article. Instead, a preliminary discussion of efficiency-related considerations pertaining to the LOCD is offered here (and similar comments apply with respect to the discussion of efficiency in the context of Expansion and Symmetry below, as well). But a preliminary investigation into the efficiency issue is important. If there is reason to think that a damages measure (be it in typical LOCD cases or cases covered by Expansion or Symmetry) is inefficient, this would cast substantial doubt on its plausibility from the outset. Conversely, if this assessment leads to the conclusion that, on efficiency grounds, a measure not only is not inferior to the standard measure, but is *actually superior* to it, this would provide a strong endorsement for the damages measure.

A damages measure is efficient if, through the incentives effectuated by the expectation of having to pay the damages in question, it leads to precautions being taken when doing so would be efficient, and to precautions not being taken when doing so would be inefficient. *See e.g.*, Jennifer Arlen, *Tort Damages*, *in* ENCYCLOPEDIA OF LAW AND ECONOMICS VOLUME II: CIVIL LAW AND ECONOMICS 682, 683–84 (Boudewijn Bouckaert & Gerrit De Geest eds., 2000). Accordingly, the efficient damages measure is one that accurately imposes liability for the full harm (but not more than the full harm) that the injurer causes, and this is because it forces the injurer to internalize his externalities. *See, e.g.*, Louis Kaplow & Steven Shavell, *Accuracy in the Assessment of Damages*, 39 J. L. & ECON. 191 (1996). With the injurer bearing the cost he imposes on the victim (and, all else equal, to the rest of society on the whole) by not taking precautions, the injurer will opt to take precautions when the benefits to him of doing so outweigh the costs of doing so (meaning that taking the precautions is efficient), and the injurer

one that does not because, without Expansion, the defendant would not pay compensation and thus the defendant would be under-deterred, whereas the LOCD's partial damages sum would reflect an optimal amount of deterrence because it would reflect the expected harm that the defendant's action would cause.[149]

ii. Symmetry

Fairness. While (1) employing partial damages both when there is an insurmountable hurdle and when there is not, and (2) employing the all-or-nothing preponderance standard both when there is an insurmountable hurdle and when there is not, are both systems that would result in expected damages that are equal to expected harm attributable to the defendant, a system that employs partial damages when there is an insurmountable hurdle but full damages when there is not would result in expected damages that are greater than expected harm attributable to the defendant. This would be unfair. For the system to be fair, there cannot be an asymmetry between the system used where there is an insurmountable hurdle and where there is not. (An implication of this point is that if we were in a system *not* employing partial damages when there is an insurmountable hurdle, it would not be fair to employ Symmetry.) Having established that an asymmetrical system would be unfair, the question then becomes whether it is fairer to have a system that symmetrically employs partial damages or symmetrically employs an all-or-nothing preponderance standard. This question will be addressed below, in Part II.C.

Efficiency. For contexts in which partial damages are employed when there is an insurmountable hurdle in establishing causation, efficiency considerations strongly support implementing Symmetry (i.e., employing partial damages—rather than full damages—in cases of this type but where there is no insurmountable hurdle in establishing causation). In these contexts, the current lack of Symmetry means that there is an asymmetry between cases where there is an insurmountable hurdle and those in which there is not. As a result of this asymmetry, plaintiffs are being over-compensated and defendants are over-paying as compared to the amounts that would accurately reflect the amounts of harm attributable to the defendants' actions. Not only is this bad from a fairness perspective, but, because it causes over-deterrence, it is inefficient as well. In the literature,

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will opt to not take precautions when the benefits to him of opting to not take precautions will outweigh the costs of not taking precautions (meaning that not taking precautions is efficient). Accordingly, on the simplistic model, the efficient measure will be the measure that arguably is also the *fair* measure of compensation (e.g., from a corrective justice standpoint): the one that accurately imposes liability for the amount of harm that the injurer causes (and that the victim incurs). Thus, the all-important question for this simplistic account of efficiency is what the accurate amount of harm caused by the injurer is in a particular case.

[149] *See, e.g.*, Levmore, *supra* note 4, at 718, 720; Fischer, *supra* note 9, at 606; Geistfeld, *supra* note 3, at 429; Simons, *supra* note 3, at 551; King 1, *supra* note 9, at 1354–55; King 2, *supra* note 9, at 545; Rhee 1, *supra* note 9; Rhee 2, *supra* note 9, at 525–26.

those who have considered this issue agree that employing the LOCD in cases where there is no insurmountable hurdle, so as to bring about symmetrical treatment of these cases, would be efficient.[150] (An implication of the points here regarding Symmetry, however, is that if we were in a system *not* employing partial damages when there is an insurmountable hurdle, it would not be efficient to employ Symmetry.)

Having established that an asymmetrical system would be inefficient, the question then becomes whether it is more efficient to have a system that symmetrically employs partial damages or symmetrically employs the preponderance standard. This is the question to which the Article now turns.

C. *A Closer Look at Whether to Employ (1) the LOCD, Expansion, and Symmetry, or (2) None of Them*

Up until this point, this Article has asserted the commonly articulated view that the LOCD (in typical LOCD cases) is desirable because its use brings about results that are better on both fairness and efficiency grounds than the results of a system employing traditional tort principles and not employing the LOCD (and analogous considerations appear to support the LOCD being employed in cases covered by Expansion). But these claims were oversimplified and require a more in-depth analysis—and the above discussion of Symmetry has provided a preview of why this is the case.

1. *Fairness*

The view articulated so far in this Article has been that a system employing the LOCD is fairer than one that does not because in a paradigmatic LOCD case (where, say, the patient presents with a 60% chance of death, the doctor's negligence raises it to 100%, and the patient dies), without the LOCD, the plaintiff would not recover and thus the plaintiff would be compensated less than is fair and the defendant would pay less than is fair, whereas the LOCD's partial damages sum would reflect a fair amount because it would reflect the likelihood that the defendant caused the harm. But this analysis is too quick.

This is because in a different case (a non-LOCD case) (where, say, the patient presents with a 40% chance of death, the doctor's negligence raises it to 100%, and the patient dies), the plaintiff would recover the full amount. Thus, in this non-LOCD case, the plaintiff would arguably be compensated *more* than is fair and the defendant would pay *more* than is fair, whereas

[150] There does not appear to be anyone who truly argues for, develops, or advocates for a proposal like Symmetry so far in the literature, but there have been some very brief comments regarding the potential efficiency of a proposal like Symmetry. *See infra* Part III.B.1.ii; *see also, e.g.*, Levmore, *supra* note 4, at 692; King 1, *supra* note 9, at 1387; King 2, *supra* note 9, at 556–57; Fischer, *supra* note 9, at 619; Simons, *supra* note 3, at 573. Each of these authors suggests that Symmetry would indeed be efficient as compared to a system that does not implement Symmetry.

Symmetry's partial damages sum would arguably reflect a fair amount because it would reflect the likelihood that the defendant caused the harm.

Thus, one might think that, from a fairness perspective, the failure to implement the LOCD (combined with a failure to implement Symmetry), and thus having an all-or-nothing preponderance standard used in both types of case would be neither better nor worse, from a fairness perspective, than having partial damages in both types of case. First of all, if one is a repeat litigant (and if one's types of cases are evenly distributed across the possible cases), then one's aggregate recoveries/payouts would be the same on each rule. Second, if one is a one-time litigant, while an all-or-nothing rule would lead to over- or under-compensation in the litigant's case, if one's possible type of case could appear anywhere in the probabilistic spectrum, one's *expected recovery* would be equal to the partial damages recovery, and one then would get either lucky or unlucky about whether one ends up being over- or under-compensated. But one's expected recovery will be equal given both rules. Third, and relatedly, even if society is made up of one-time litigants who all are either over- or under-compensated, the fact that some people will be over-compensated and some will be under-compensated might lead one to think that the results would be a wash. Thus, for the foregoing reasons, according to some accounts of fairness, a system that symmetrically employs an all-or-nothing preponderance standard might be no less fair than a system that symmetrically employs partial damages.

Despite these accounts being able to stake claims to views about what fairness requires, however, on another—and more plausible—account, the results will be fairer if instead of only one's *expected result* matching one's situation (or actions), one's *actual result* also matches one's situation (or actions). This latter account has strong appeal. As much as is possible, we strive to have legal rules that tailor results to a party's own situation (or actions) and that minimize the amount of luck involved in determining a party's legal outcome. There are countless reasons, based in efficiency and administrability, for why legal rules are at times fashioned to be less than perfectly tailored to a party's situation (or actions) and instead paint with a broader brush, but typically, absent efficiency and administrability reasons militating in favor of less-tailored rules, we strive to have rules be as narrowly tailored to parties as is possible—and this is because we find these rules to be fairer. Thus, it seems that a system will be fairer in an important way if it employs a symmetrical-partial-damages rule rather than a symmetrical-preponderance rule—even if the net over- and under-compensation of the two rules would be the same.[151]

[151] In addition to these considerations for repeat litigants with their types of cases evenly distributed across the possible cases and one-time litigants with their types of cases evenly distributed across the possible cases, there are other considerations in play for repeat litigants whose cases are more likely to be (or will always be) ones where the probabilities are such that the preponderance standard is able to be

Thus, in the face of uncertainty about whether a harm was caused by an underlying condition or by a defendant's negligence, the fairer result is for a plaintiff to recover partial damages reflecting the probability that the harm was caused by the defendant's negligence and not by the underlying condition.

2. *Efficiency*

The view articulated so far in this Article has been that a system employing the LOCD is also more efficient than one that does not because in a paradigmatic LOCD case, the LOCD's measure is the more accurate fair compensatory sum (reflecting more precisely the amount of expected harm to the victim that was attributable to the injurer), whereas absent the LOCD, the injurer would be paying less than the expected harm that is attributable to his actions.[152] Thus, absent the LOCD, the defendant would be under-deterred, whereas the LOCD's partial damages sum would reflect an optimal amount of deterrence amount because it would reflect the expected harm attributable to the defendant's actions.[153] But just as was the case in the fairness discussion, this analysis is too quick—and for similar reasons.

As just discussed in the context of fairness, we must also take into consideration the existence of non-LOCD cases—e.g., ones with symmetrical but opposite percentages—where the all-or-nothing preponderance standard would arguably be *over*-compensating the patient, and in a way that is analogous to the way in which the all-or-nothing preponderance standard is *under*-compensating the plaintiff in the typical LOCD case. It seems that a system with the all-or-nothing preponderance standard in both types of cases and a system with partial damages in both types of cases (i.e., typical LOCD use or Expansion in one case, and Symmetry in the other type of case) would both yield the same expected damages sum payouts for defendants. Thus, although in any particular case, if we have a symmetrical-preponderance-standard rule, the defendant would

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met or those for whom the opposite is true. For these litigants, it wouldn't even be the case that their expected results are the same with an all-or-nothing preponderance rule and with a partial damages rule. With an all-or-nothing rule, these parties would end up always being (or being more likely to be) over- or under-compensated (or pay more or less than appropriate). And the same would be the case if there were a one-time litigant for whom, if he were to be involved in a case, would be more likely to be in a case of one type than the other. For all of these cases considered here, there would be even stronger fairness considerations counseling in favor of a tailored damages measure than would exist for the parties for whom possible cases might be evenly distributed across case types. Further, one could argue that patients with advanced diseases, even if non-repeat litigants individually, could constitute a class that is repeatedly getting unfair results in an all-or-nothing system. But it's unclear if this amounts to an arbitrary grouping for the purpose of overall fairness assessments.

[152] *See supra* Part I.A, Part II.A–B; *see also* King 1, *supra* note 9, at 1354; King 2, *supra* note 9, at 493; Geistfeld, *supra* note 3; Simons, *supra* note 3, at 553, 555, 570; Rhee 1, *supra* note 9, at 39–40; Rhee 2, *supra* note 9, at 513, 520.

[153] *See, e.g.*, Levmore, *supra* note 4, at 692; Fischer, *supra* note 9, at 627; Geistfeld, *supra* note 3, at 432; Simons, *supra* note 3, at 551; King 1, *supra* note 9, at 1377; King 2, *supra* note 9, at 505–06; Rhee 1, *supra* note 9, at 39–40; Rhee 2, *supra* note 9, at 515–16.

pay more or less than the expected harm that he is imposing on the plaintiff in that particular case, the defendant's expected damages payouts would arguably be the optimally efficient amount—just as is the case for a symmetrical-partial-damages rule.

Thus, it seems that, at least painting with a broad stroke, a system employing partial damages in both types of cases is no more efficient than a system employing an all-or-nothing preponderance standard in both types of cases. But it's important to also note that a partial-damages system is also *no less efficient* than a system employing the preponderance standard—at least temporarily leaving aside the possibility that costs of administering a partial-damages system are greater than the costs of administering a system employing the preponderance standard. This, however, is an important question and one that will be examined in Part III.[154]

There is one key exception, however, to the general finding that the two systems would be equally efficient. If a potential injurer has reason to know (or think it likely) that he is confronting a case in one particular camp (e.g., an LOCD case), then this will change the analysis and the preponderance standard would result in under-deterrence, and partial damages would be needed to effectuate optimal deterrence. In contexts like this, which there is reason to think are far from de minimis in number, the LOCD's partial damages award increases efficiency by removing this pocket of immunity for defendants' negligence that would under-deter (and in some cases, completely fail to deter) negligent behavior.

3. *Overall Takeaway*

As discussed,[155] on both fairness and efficiency grounds, we do not want a system that is asymmetrical in its implementation of a partial-damages system and a preponderance-standard system. If we employ the typical LOCD case's or Expansion's partial damages in LOCD cases, we also should employ Symmetry; and if we do not employ the typical LOCD case's or Expansion's partial damages in LOCD cases, then we also should not employ Symmetry. This much is clear.

But as between a system that symmetrically employs a preponderance standard and a system that symmetrically employs partial damages, which should we employ? The preliminary answer here is that we should employ a system that symmetrically employs partial damages. As for fairness: Although an argument could be made that either system can be fair, the fairness considerations in favor of partial damages are stronger. As for efficiency: Although efficiency costs associated with administrability of the systems remain to be examined, it seems preliminarily as though in many cases the two systems will be equally efficient and that there are certain cases

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[154] *See infra* Part III.A–C.

[155] *See supra* Part II.B.

in which a symmetrical partial damages system will be more efficient. Thus, it seems that in some cases fairness and efficiency both counsel in favor of partial damages and in other cases efficiency is neutral but fairness points in favor of partial damages. In light of this, on the whole, the preliminary considerations point in favor of a symmetrical-partial-damages system being the best option.

Note that although this sub-Part's more in-depth look into the fairness and efficiency questions was couched as a closer look at how typical LOCD cases truly fare in terms of fairness and efficiency, the same considerations also apply to cases covered by Expansion. Further, as Symmetry was a key component to making the more in-depth assessments, the conclusions here also apply to Symmetry. Thus, the preliminary conclusions here apply to typical LOCD cases, Expansion, and Symmetry. It will remain to be seen in Part III, however, whether arguments against partial damages apply with different force to these three different contexts, and thus whether there are persuasive reasons for only adopting partial damages in some but not all of the three contexts—or in none at all.

In sum, the foregoing constitutes a prima facie case not only for employing the LOCD in typical LOCD cases, but also for employing it in cases covered by Expansion and Symmetry.[156]

III. RESPONDING TO ARGUMENTS AGAINST EXPANSION AND SYMMETRY, AND FURTHER IMPLEMENTATION DETAILS

If this Article's account and proposals are plausible, what explains the fact that they have not already been advocated for and implemented? In short, though the specific reasons for this in the contexts of Expansion and Symmetry are different, the same two general reasons apply in both contexts: First, for both Expansion and Symmetry, it has not been appreciated—or at least not fully appreciated—that the same rationales

[156] There are various responses that one might have to this Article's arguments (pending, of course, the responses to arguments against Expansion and Symmetry that are considered in Part III). One response is to be persuaded that we should employ the LOCD in typical cases, Expansion, and Symmetry. A second response will be to accept the use of the LOCD but deny that similar considerations call for Expansion and Symmetry being employed if the LOCD is employed in typical cases—and thus either partially or fully reject Expansion and/or Symmetry. A third response will be to accept that if the LOCD is employed in typical cases, similar considerations then call for Expansion and Symmetry being employed, but to then view this as a reductio against employing the LOCD even in typical cases. In other words, one might be persuaded that the LOCD approach should be either instituted across the board or not at all, but view its implementation across the board as untenable, thus leading to the conclusion that it should not be implemented at all. And, after all, this arguably is a conclusion that many of the courts that do not employ the LOCD appear to have come to. *See, e.g.*, *supra* note 87 and accompanying text. As described throughout the Article so far, though, the reasons in favor of employing the LOCD in typical cases are strong and found appealing by many. Thus, there is a significant cost to having this third response to the Article's arguments. And in this author's view, the Article's theses should be fully adopted. But, for those with the reductio concern, it is important to note a "lesser-included" thesis of this Article, which takes an "if-then" form: If we are to employ the LOCD at all, we should adopt it across the board and thus also adopt Expansion and Symmetry. But this Article argues not only for this lesser-included thesis, but also for full, across-the-board, adoption of the LOCD.

underlying the LOCD also counsel in favor of the adoption of similar approaches in these contexts; and second, for both Expansion and Symmetry, even where it is at least somewhat appreciated that rationales underlying the LOCD might counsel in favor of something like Expansion and Symmetry, concerns about obstacles that Expansion and Symmetry would confront are raised as reasons not to adopt them.

Part II has already provided an explanation of why the same rationales underlying the LOCD *do* also counsel in favor of adopting Expansion and Symmetry. This Part will raise and address the main reasons that are given (in case law, restatements, and academic commentary) for why Expansion and Symmetry are not and should not be implemented—some of which are about why the rationales underlying the LOCD do not in fact apply in these contexts, and others of which are about the obstacles that Expansion and Symmetry would confront. This Part will show, one by one, why these reasons to not adopt Expansion and Symmetry either are mistaken or are over-stated, and thus why Expansion and Symmetry should be implemented despite the concerns that are raised. Having carried out these tasks, this Part will conclude by providing certain clarifications regarding these proposals, including the introduction of a "speculativeness" standard that can be used to determine the LOCD's applicability on a case-by-case basis.[157] These clarifications, as well as various aspects of the responses to arguments throughout this Part, will explain that Expansion and Symmetry, despite misconceptions to the contrary, are not problematic in ways that one might have feared them to be.

A. *Responding to Arguments Against Expansion*

There appears to be no advocacy for a proposal like Expansion. What explains this? There are at least five reasons that are frequently given—in case law, restatements, and academic commentary—for why the LOCD should be limited to the context of medical malpractice, and these arguments have been generally accepted. The Massachusetts Supreme Court discusses three of these reasons in *Matsuyama v. Birnbaum* and, in doing so, frequently references the Restatement (Third) of Torts.[158] With *Matsuyama* being one of the better-known LOCD cases, this sub-Part's presentation of the first three arguments tracks the *Matsuyama* court's discussion of them. Following that, two additional arguments will also be considered. Ultimately, however, as this sub-Part will demonstrate, these arguments are not persuasive. Thus, because there is no good reason *not to* extend the LOCD to other areas of tort law, and in light of the positive reasons *in favor of* doing so, the doctrine should be extended.

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

[158] Matsuyama v. Birnbaum, 890 N.E.2d 819, 834–35 (Mass. 2008) (citing RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL HARM § 26 cmt. n (AM. L. INST., Proposed Final Draft No. 1, 2005)).

1. *Argument One: Medical Malpractice Cases Have More Reliable Statistical Probability Evidence*

In *Matsuyama*, the Massachusetts Supreme Court first justifies limiting the use of the LOCD to medical malpractice cases by claiming that "reliable expert evidence establishing loss of chance is more likely to be available in a medical malpractice case than in some other domains of tort law."[159] In support of this contention, the *Matsuyama* court cites the Restatement (Third) of Torts § 26 cmt. n, which states that "courts that have accepted lost opportunity as cognizable harm have almost universally limited its recognition to medical malpractice cases," at least in part because "reasonably good empirical evidence is often available about the general statistical probability of the lost opportunity."[160] Thus, this argument is that there are more available and more reliable probabilistic data in medical malpractice than there are in other areas of tort—such as, for example, the information and data that is contained in "mortality tables."[161]

This argument has been put forward in the scholarly literature as well. As Simons, for example, explains, "It is very often true that reliable proof of the relevant probabilities exists in the lost chance of a better medical outcome cases."[162] Simons posits that stage levels in cancer diagnoses, which effectively "quantify the different survival rates of patients,"[163] are helpful because they allow courts to assign a measurable value to the chance of survival variable in determining causation and calculating damage awards.[164] "Outside medical malpractice," Simons explains, "it is usually extremely difficult to obtain reliable evidence about the probability that if a defendant had not been negligent, the plaintiff would not have suffered

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[159] Matsuyama, 890 N.E.2d at 834–35.

[160] *Id.* at 834; RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL AND EMOTIONAL HARM § 26 cmt. n. (AM. L. INST., 2010); *see also* RESTATEMENT (THIRD) OF TORTS: MEDICAL MALPRACTICE § 8 cmt. d (AM. L. INST., Tentative Draft No. 2, 2024) (incorporating, as "well stated" the rationales articulated in RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL AND EMOTIONAL HARM § 26 cmt. n).

[161] Levmore, *supra* note 4, at 718 ("There are . . . two reasons why probabilistic innovation has begun in the medical malpractice area. The first has to do with the availability of information, such as that contained in mortality tables, and the second returns us to the possibility that the unjust-enrichment principle could be used as a solution to the problem of recurring misses.").

[162] Simons, *supra* note 3, at 586.

[163] *Id.*

[164] *See, e.g.*, Matsuyama v. Birnbaum, 890 N.E.2d 819, 833–34 (Mass. 2008) ("[S]urvival rates are not random guesses. They are estimates based on data obtained and analyzed scientifically and accepted by the relevant medical community as part of the repertoire of diagnosis and treatment, as applied to the specific facts of the plaintiff's case. . . . [A]t least for certain conditions, medical science has progressed to the point that physicians can gauge a patient's chances of survival to a reasonable degree of medical certainty, and indeed routinely use such statistics as a tool of medicine."); *see also* Smith v. Providence Health & Servs., 393 P.3d 1106, 1115–16 (Or. 2017) (noting that medical malpractice cases often use significant scientific and statistical evidence); Dickhoff v. Green, 836 N.W.2d 321, 335 (Minn. 2013) ("[T]he reliability of the evidence that victims of medical malpractice are able to marshal when a physician's negligence reduces a patient's chance of recovery or survival has dramatically improved in recent years—now making it possible to prove causation in a loss of chance case.").

harm."[165] Simons then compares this context to a slip-and-fall context. In the latter, "the fact-finder might conclude that if a store had not over-waxed the floor, it is possible, but not probable, that the plaintiff would not have suffered harm."[166] As Simons says, however, this is a more difficult scenario to assess: "[I]t is quite doubtful that academic studies exist that would permit an expert to assign a credible probability to the increased risk of harm that the store created."[167]

This argument, however, is not persuasive. Even if there *are* more precise data for issues in medical malpractice cases than in all other areas of tort,[168] other areas of tort law *do* have available and reliable data. One example of this is in toxic torts, especially within the context of pesticides and their relationship to cancer.[169] Furthermore, even if reliable data do not *typically* exist in another area of tort law (or exist to the same extent as in medical malpractice), there could still be cases in this domain for which there are, in fact, available and reliable data.

In addition, even if the data were to some degree—*or even to a very high degree*—more available and more reliable in the context of medical malpractice than in other areas of tort, this still would not be a good reason to limit the LOCD to only that area. Instead, it would be preferable, as part of the inquiry about whether to employ the doctrine, to make the determination about whether relevant, available, and reliable data are available on a case-by-case basis.[170] Further, making an assessment of whether data on an issue in a case exist and are reliable is not a task too difficult for courts to handle—this is something that courts *routinely* do. Accordingly, even if relevant and reliable data are available in 99% of medical malpractice cases, and only in 1% of all other torts cases, this still would not be a good reason for a blanket inapplicability of the use of the LOCD in non-medical-malpractice contexts.[171]

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[165] Simons, *supra* note 3, at 586.

[166] *Id.*

[167] *Id.* at 586–87.

[168] Indeed, it is far from clear that this truly is the case. *See, e.g.*, Vincent M. Brannigan, Vicki M. Bier & Christine Berg, *Risk, Statistical Inference, and the Law of Evidence: The Use of Epidemiological Data in Toxic Tort Cases*, 12 RISK ANALYSIS 343, 344–45 (1992).

[169] For example, there can often be very good data about how much higher than normal the prevalence of a certain form of cancer is among populations that are within the range of exposure of a particular pesticide or other toxic substance. *See generally* K.L. Bassil, C. Vakil, M. Sanborn, D.C. Cole, J.S. Kaur & K.J. Kerr, *Cancer Health Effects of Pesticides: Systematic Review*, 53 CAN. FAM. PHYSICIAN 1704, 1706 (2007) (describing data collection on the effects of exposure to toxic chemicals).

[170] While there may be valid arguments as to why a case-by-case assessment of the reliability of data is too difficult to carry out and raises additional problems that employing the LOCD would not solve, those arguments have yet to be made. In any event, making an assessment of whether data on an issue in a case exist and are reliable is, of course, something that courts routinely do.

[171] This 1% figure is likely a gross underestimate. If the percentage of non-medical-malpractice cases that have relevant, available, and reliable data is significantly higher (as I think there is reason to believe), then there is an even stronger reason to not have a rule that artificially limits the LOCD to medical malpractice cases.

Among torts scholars, Geistfeld agrees with this assessment. In some cases, he points out, "the plaintiff has reliable statistical evidence showing that the defendant's negligence increased the risk of harm and therefore reduced the plaintiff's chance of avoiding the bodily injury the plaintiff ultimately suffered."[172] If, in this type of case, the defendant moves to dismiss based on an insufficiency of evidence showing causation, Geistfeld stresses that "the court needs to evaluate the plaintiff's expert testimony as if it were sufficiently reliable . . . ."[173] This leads Geistfeld to wonder "[w]hat, then, would explain why the plaintiff cannot recover under the lost-chance doctrine, even though the case involves ordinary negligence rather than medical malpractice?"[174]

Important clarifications and details about Expansion pertaining to the topic of reliability and availability of data, particularly regarding the use of "speculative" data, will be presented and analyzed in Part III.C.[175]

2. *Argument Two: Physicians Have a Unique Duty*

The *Matsuyama* court offers a second justification for limiting the LOCD to medical malpractice cases. According to the court, there are principled reasons for doing so related to the distinctive nature of the duty doctors owe to patients. Quoting the Restatement, the *Matsuyama* court contends that "medical negligence that harms the patient's chances of a more favorable outcome contravenes the expectation at the heart of the doctor-patient relationship that 'the physician will take every reasonable measure to obtain an optimal outcome for the patient.'"[176] The court also cites

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[172] Geistfeld, *supra* note 3, at 457. *See, e.g.*, Daubert v. Merrell Dow Pharms., Inc., 43 F.3d 1311, 1320 (9th Cir. 1995) ("California tort law requires plaintiffs to show not merely that Bendectin increased the likelihood of injury, but that it more likely than not caused *their* injuries. . . . In terms of statistical proof, this means that plaintiffs must establish not just that their mothers' ingestion of Bendectin increased somewhat the likelihood of birth defects, but that it more than doubled it—only then can it be said that Bendectin is more likely than not the source of their injury. Because the background rate of limb reduction defects is one per thousand births, plaintiffs must show that among children of mothers who took Bendectin the incidence of such defects was more than two per thousand.") (internal citation omitted) (emphasis in original).

[173] Geistfeld, *supra* note 3, at 457.

[174] *Id. Cf. Daubert*, 43 F.3d at 1322 (holding that the expert testimony for the plaintiffs was inadmissible because it was not relevant for proving that the defendant's defective drug Bendectin, more likely than not, caused the plaintiffs' bodily injuries). Geistfeld, although correct on this point, *does not* argue that the LOCD should be extended to areas of tort other than medical malpractice. In fact, he appears to *not* believe that the doctrine should be thus expanded, *see* Geistfeld, *supra* note 3, at 457–59, though his article does not directly speak to this question. Although his goal in his article is something different, *see supra* Part I.B.2.i, we are in agreement that the first rationale for limiting the LOCD to medical malpractice is unpersuasive.

[175] *See infra* Part III.C. This will be crucial, as the discussion related to the availability of reliable data is where the rubber truly meets the road regarding the widespread acceptance and incorporation of Expansion and Symmetry.

[176] Matsuyama v. Birnbaum, 890 N.E.2d 819, 820, 834–35 (Mass. 2008) (quoting RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL AND EMOTIONAL HARM § 26 cmt. n (AM. L. INST. 2010)).

Kenneth Abraham's analysis of the "argument that 'health care providers undertake to maximize a patient's chances of survival, [and so] their failure to do so should be actionable. Ordinary actors who negligently risk causing harm have not undertaken such a duty.'"[177] Versions of this argument are provided elsewhere as well—both in judicial opinions and in the academic literature.[178]

The idea behind this argument is that the care that doctors owe their patients includes taking measures to give them the best chances of a good health outcome. This argument posits that while this may be a plausible description of the substance of a physician's duty of care, it is not, however, a plausible description of the duty of care owed in many other settings—e.g., one might argue that drivers do not owe it to other drivers to take measures to give them the best chances of good health outcomes. Accordingly, at least in the context of doctors, but not in the context of drivers, there might be a reason to treat at least some deprivations of better odds for good health as injuries in their own right—because the distinctive nature of the doctor's duty arguably corresponds to a distinct notion of what can count as a patient injury.

One apparent strength of this argument is that it seems to isolate a principle that can explain why the LOCD fits the medical malpractice context particularly well. But at the same time, however, this argument invites us to consider whether any other actors have comparable duties to provide "best odds," an inquiry that immediately raises the question of whether the LOCD should be available in certain malpractice actions against attorneys—as an attorney representing a client who wishes to bring a breach of contract claim arguably is duty-bound to give the client the best chances of obtaining compensation of some sort.[179] If the answer to that question is

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This passage in the Restatement states that "a contractual relationship exists between patient and physician (or physician's employer), in which the raison d'être of the contract is that the physician will take every reasonable measure to obtain an optimal outcome for the patient." RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL AND EMOTIONAL HARM § 26 cmt. n (AM. L. INST. 2010); *see also* RESTATEMENT (THIRD) OF TORTS: MEDICAL MALPRACTICE § 8 cmt. d (AM. L. INST., Tentative Draft No. 2, 2024) (incorporating, as "well stated" the rationales articulated in the RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL AND EMOTIONAL HARM § 26 cmt. n).

[177] Matsuyama, 890 N.E.2d at 835 (quoting KENNETH S. ABRAHAM, THE FORMS AND FUNCTIONS OF TORT LAW 117–18 (3d ed. 2007)).

[178] *See, e.g.*, DOBBS, HAYDEN & BUBLICK, *supra* note 50, at § 197 nn.8–11 (citing cases); John C.P. Goldberg & Benjamin C. Zipursky, *Unrealized Torts*, 88 VA. L. REV. 1625, 1658–60 (2002); Goldberg, *supra* note 86, at 1209–13.

[179] Note that the Restatement (Third) of Torts: Medical Malpractice states that although "justifications for the [LOCD] are especially strong when the plaintiff alleges harm within the patient-care relationship," "[s]everal of these justifications might equally apply to nonmedical professionals such as attorneys, as noted by the Restatement of the Law Third, The Law Governing Lawyers § 53, Comment *b*, but case-law support for this extension is currently limited." RESTATEMENT (THIRD) OF TORTS: MEDICAL MALPRACTICE § 8 cmt. c (AM. L. INST., Tentative Draft No. 2, 2024). Further, and more generally, fiduciary law might also be an area of the law to which these principles might naturally extend.

no, and courts are not going to apply the LOCD to legal malpractice, then proponents of Argument Two would need to identify some principled basis for distinguishing doctors from attorneys.

But there are also broader reasons not to limit the use of the LOCD to medical malpractice cases on the basis of doctors' arguably unique duties. Analogous considerations are equally present in areas of tort law other than medical malpractice (and other than legal malpractice). It is true that the duty in non-medical-malpractice cases might differ substantively from that in medical malpractice cases, and that the duties in each context can be articulated in ways that seem different, but the underlying rationales for duties in both contexts are essentially the same. While "giving others the best chances of good health outcomes" may particularly describe a doctor's duty, the *rationale* for the duty in all non-medical-malpractice contexts is, similarly, to give others the best chances of good outcomes regarding their health and wellbeing, their property, or, more generally, of avoiding bad results. After all, if the duty in non-medical-malpractice contexts resulted in giving others *worse* chances of these types of good outcomes, this would not be a duty that we would want to have in our tort system.

Accordingly, Argument Two is not persuasive. It is desirable to employ the LOCD not only in medical malpractice, but also in other areas of torts.[180]

But see, *e.g.*, Goldberg, *supra* note 86, at 1201, 1212 (arguing that there might indeed be a principled basis for distinguishing doctors from attorneys for the purposes of whether the LOCD should apply for these reasons to doctors but not to attorneys).

As for the possibility of extending the LOCD beyond these professional realms, the Restatement (Third) of Torts: Medical Malpractice states: "When it comes to expansion of the lost-chance concept *beyond* these professional realms, to negligence actions more generally, there are substantial reasons to exercise caution. As the Restatement Third of Torts: Liability for Physical and Emotional Harm § 26, Comment *n* notes, the lost-chance concept 'is of potentially enormous scope, implicating a large swath of tortious conduct in which there is uncertainty about factual cause, including failures to warn, to provide rescue or safety equipment, and otherwise to take precautions to protect a person from a risk of harm that exists.' Accordingly, as that Comment observes: 'Whether there are appropriate areas beyond the medical malpractice area to which lost opportunity might appropriately be extended is a matter that the Institute leaves to future development.'" RESTATEMENT (THIRD) OF TORTS: MEDICAL MALPRACTICE § 8 cmt. c (AM. L. INST., Tentative Draft No. 2, 2024).

[180] Additionally, despite Simons being of the view that the LOCD *should* be limited to medical malpractice cases (*see supra* notes 162–67 and accompanying text; *supra* Part I.B) (Simons also explicitly states this view in the upcoming quotation), he agrees that this argument regarding the relative duty of different types of defendants is not a persuasive reason to limit the LOCD to medical malpractice cases. He explains this position as follows:

> This argument initially seems plausible, but on reflection, it is not fully persuasive. An actor's voluntary undertaking to improve someone's health does not seem to be categorically different, for purposes of justifying a partial damages award, from other cases in which an actor has a legal duty to protect a plaintiff. A landlord might not voluntarily undertake to protect her tenants from violent attacks, but she nevertheless sometimes has such a duty of protection (especially if prior attacks have occurred). If a tenant suffers such an attack, and if it is quite possible but not probable that a reasonable precaution by the landlord would have prevented the harm, it is at least an open question whether partial damages should be awarded. In the end, I believe that question should be answered in the negative, but for different and more compelling reasons: in this scenario, we lack reliable evidence of probabilities, and there also is a much lesser concern than in the medical malpractice delayed diagnosis cases about a recurring pocket of legal immunity.

Simons, *supra* note 3, at 590.

3. *Argument Three: Cases Requiring the LOCD Are Especially Common in Medical Malpractice*

The *Matsuyama* court next provides a third purported justification for limiting the LOCD to medical malpractice cases. According to the court, "it is not uncommon for patients to have a less-than-even chance of survival or of achieving a better outcome when they present themselves for diagnosis, so the shortcomings of the all or nothing rule are particularly widespread."[181] In other words, the court is saying that (a) because the all-or-nothing preponderance standard prevents recovery for all plaintiffs who present with preexisting conditions that probably can't be cured, and (b) because this subset of all medical malpractice cases is not a de minimis subset, the cases in which the all-or-nothing rule brings about the unfair no-liability and no-compensation result is widespread among all medical malpractice cases. Accordingly, the scenarios in which the LOCD is needed to avoid the wrong result are particularly common in the context of medical malpractice, especially as compared to other areas of tort law.

This argument is unpersuasive as well. Even if there are more cases in which plaintiffs cannot meet the preponderance standard for proving factual causation in medical malpractice than in other areas of tort law,[182] this is not a good reason to disallow the use of the LOCD when plaintiffs meet this same insurmountable hurdle in areas other than medical malpractice. Instead, the LOCD should be employed whenever plaintiffs face this hurdle, whether it's a medical malpractice case or not.[183]

Further, it's not even clear that fact patterns involving the insurmountable hurdle that gives rise to the need for the LOCD are indeed any less widespread in non-medical-malpractice cases than they are in medical malpractice cases. Notably and interestingly, any assumptions that they are might be caused by courts and commentators. They focus primarily on only one of the two ways in which this insurmountable hurdle arises—where the plaintiff has a baseline risk of harm that is greater than 50%. This version may, in fact, be more widespread in medical malpractice cases than

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[181] Matsuyama, 890 N.E.2d at 835; *see also* RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL AND EMOTIONAL HARM § 26 cmt. n (describing the rationale for applying LOCD to medical malpractice cases); RESTATEMENT (THIRD) OF TORTS: MEDICAL MALPRACTICE § 8 cmt. d (AM. L. INST., Tentative Draft No. 2, 2024) (incorporating, as "well stated" the rationales articulated in the Restatement (Third) of Torts: Liability for Physical and Emotional Harm § 26 cmt. n).

[182] Of course, it is not necessarily clear that cases involving the insurmountable hurdle that gives rise to the need for the LOCD are, indeed, any less prevalent in other areas of tort law.

[183] Arguments could be made for why a case-by-case determination of whether to use the LOCD is for some reason too difficult to carry out or raises problems that give us reason to simply have a general rule limiting the LOCD to medical malpractice. But absent such an argument being made and absent plausible support for such an argument, it seems then that nothing should stop us from using the LOCD in non-medical-malpractice cases if the cases in question involve the same type of insurmountable hurdle that exists in the context of medical malpractice cases and that gives us reason to employ the LOCD in medical malpractice cases.

other types of torts. However, there is also the second way in which this situation arises: when the plaintiff has a baseline risk of harm that is less than 50%, but he still cannot establish causation because the negligence raises the risk by an amount that less-than-doubles it, such as it from 1% to 1.8%. This second way certainly seems to be just as widespread in other areas of tort law.[184] One of the many possible situations in which plaintiffs face the latter situation is in toxic torts cases. For example, suppose that there is a 1% underlying chance of cancer among the general population; however, that rate rises to 1.8% among those whom a company negligently exposes to the pesticide it administers. A plaintiff in this category of exposed individuals will not be able to prove causation by a preponderance, since the exposure less-than-doubles the risk (1% to 1.8%).

Proponents of this third argument typically exclusively mention fact patterns where the plaintiff has an underlying risk that is greater than 50%, and they appear to ignore plaintiffs like those in this example. This might explain why people might make this third argument, or find it plausible. Thus, further, mistakenly focusing on the 50%-or-more-underlying-risk cases might explain why the LOCD has been limited to medical malpractice cases.[185] By considering the other LOCD cases as well, however, we see that there are plenty of cases beyond medical malpractice that call for the use of the doctrine.[186]

4. *Argument Four: The LOCD Is Not Desirable for "Ordinary Causation" Cases*

There is a fourth argument against universal application of the LOCD. It was not offered by the *Matsuyama* court, but by Simons.[187] Simons believes that the LOCD should not be used in "ordinary causation" cases. His concern with extending the use of the doctrine to non-medical-malpractice actions is that it would essentially result in a free-for-all that could harm defendants who probably should not face liability.

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[184] *See supra* Part I.A.3 for a discussion of these different versions of cases in which a plaintiff might confront the insurmountable hurdle in establishing causation—and the relationship between them.

[185] Ultimately, I believe that the reason that the LOCD is limited to medical malpractice is likely a combination of two things: (1) the mistake just discussed, and, thus, the mistaken view that Argument Three is plausible; and (2) a belief in the plausibility of Argument One.

[186] If it is true that both (1) the majority of cases in which a person has a greater-than-50% underlying chance of harm are in the medical malpractice context, and (2) most of the LOCD cases in non-medical-malpractice contexts are cases where there is a less-than-50% underlying chance of harm but where there still is an insurmountable hurdle, then it seems that the majority of the cases that Expansion would apply to (and extend the LOCD to) would be cases where the underlying chance of harm is less than 50% but where the insurmountable hurdle exists. Thus, it might well be these types of cases that are the ones where Expansion will most frequently be prescribing changes to the current state of the law. This point will be discussed in further depth in Part III.B.

[187] Simons, *supra* note 3, at 593. In making this argument, Simons actually is aiming to illustrate a different point: about how and why the redefining-the-legal-injury account of the LOCD is problematic.

Simons frames the relevant issue in the form of this question: "Why not conclude, *whenever* defendant's negligence possibly but not probably was a factual cause of plaintiff's harm, that the defendant has deprived the plaintiff of a chance of avoiding injury?"[188] He then provides two examples: one of a speeding driver that caused the death of an unconscious person in the street, and one of over-waxed floors that were slightly more slippery than normal.[189] Simons is skeptical that courts would want to attribute any liability to the defendants in those cases, even if they technically contributed to decreasing the chance that the plaintiff would avoid injury. As he explains, "I very much doubt that courts would extend the loss of a chance doctrine and permit partial damages in ordinary causation cases such as these in which the actor's negligence possibly is, but probably is not, a but-for cause of the harm."[190]

However, this argument is not persuasive, as we may, in fact, want to have the LOCD apply to these types of cases as well. The fact that the amount of the extra chance of harm added by the negligence is small compared to the underlying chance of harm is no reason not to employ the LOCD; indeed, the doctrine is already applied in medical malpractice cases involving similarly small percentages.

To the extent one finds Simons's points regarding these examples persuasive, however, it seems that what is really doing the intuitive work in his examples is not the small percentages of risk added by the negligence, but, rather, something else: that the data in these examples are likely to be unavailable or unreliable. And if the data in these cases indeed are unavailable or unreliable, this could indeed be a reason to not employ the LOCD in cases like these. But the point about availability and reliability of data[191] is a very different point from the one about the relative percentages in these "ordinary causation cases" that Simons purports to be making in this passage.

This fourth argument (when considered without importing help from separate arguments), therefore, is unpersuasive.

5. *Argument Five: There Is No Recurring Pocket of Immunity in Expansion Cases*

The fifth argument against Expansion is also articulated by Simons: He argues that unlike in typical LOCD cases, "in most negligence cases in which it is possible but not probable that the defendant's negligence made the plaintiff worse off, a recurring pocket of immunity does not exist,"

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[188] *Id.*

[189] *Id.*

[190] *Id.*

[191] I flag (again) that in Part III.C, I will be offering important clarifications and details regarding my proposal, and many of these will be about questions pertaining to the topic of reliability and availability of data, thus tying into the points discussed here in Part III.A, and, in particular, the points discussed in the context of Argument One.

which, accordingly, makes "the argument for partial damages for loss of a chance . . . much weaker."[192]

This argument raises the points that were examined in Part II.B regarding whether a system symmetrically employing partial damages in LOCD cases and non-LOCD cases is any fairer or more efficient than a system that symmetrically employs the preponderance standard in LOCD cases and non-LOCD cases.[193] As discussed there, on one account of fairness, the two symmetrical systems might be equally fair as long as a party doesn't always (or isn't more likely to) confront either an LOCD case or a non-LOCD case instead of incurring a random distribution of the two. If one adhered to this account of fairness, one might think that the only situations in which fairness considerations counsel in favor of employing the LOCD (paired with Symmetry) would be when a recurring pocket that Simons describes exists. Similarly, as also discussed in Part II.B, analogous considerations show that a system symmetrically employing the preponderance standard in LOCD and non-LOCD cases would be no more efficient than would a system symmetrically employing the preponderance standard—except for in cases where an injurer has reason to know (or think it likely) that he is in an LOCD case, which would then result in partial damages being needed in these cases to avoid the under-deterrence that the preponderance standard would cause. Further, if it turns out to be true that the administrative costs of employing partial damages are greater than those of employing the preponderance standard, this would suggest that a system employing partial damages would be less efficient than a system employing the preponderance standard in cases where an injurer does not have reason to think he is confronting an LOCD case, and only more efficient in cases where the injurer does have reason to know this. In sum, if someone (1) only cares about efficiency, or (2) cares at least somewhat about fairness but subscribes to the account of fairness just described, then one might think that the LOCD should only be employed (or, more weakly, that there is a stronger case for it to be employed) in these cases where there are recurring pockets where one confronts (and/or has reason to know he confronts) an LOCD case. This sub-Part offers three replies to this argument.

First, even if these considerations about fairness and efficiency of partial damages were true, this argument is relying on the claim that these recurring pockets occur in medical malpractice but not in other areas of tort. This is far from clearly the case. Just as these pockets might occur in medical malpractice contexts, so too could they occur in other tort contexts—e.g.,

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[192] Simons, *supra* note 3, at 585; *see also* WARD FARNSWORTH, THE LEGAL ANALYST 257–61 (2007) (comparing the preponderance standard with the LOCD standard); RESTATEMENT (THIRD) OF TORTS: MEDICAL MALPRACTICE § 8 cmt. d (AM. L. INST., Tentative Draft No. 2, 2024) ("Most compellingly, for medical conditions that typically have a poor prognosis, if a lost-chance approach were not available, a medical provider might never be accountable for incompetent care.").

[193] *See supra* Part II.C.

toxic torts or products liability—and there is no reason to think that they do not. Further, even if they did occur more *frequently* in medical malpractice than other areas of tort (and there similarly seems to be no reason to think that even this is the case), this still would not provide a reason not to employ partial damages in those cases in other tort areas that do involve these pockets.

Second, as argued in Part II.B, the account of fairness just described is not an appealing one, and there are strong reasons to think that the fairer system is one that symmetrically employs partial damages.[194] Many litigants are not repeat litigants, and even if they don't find themselves in a recurring pocket, plausible fairness considerations counsel in favor of tailoring not only the *expected* results of litigation to their situation, but also the *actual* results of litigation to their situation. These fairness benefits do then need to be weighed against any inefficiencies associated with administering a partial damages system, but there is strong reason to think that they could outweigh the efficiency considerations. Even in typical LOCD cases, fairness concerns are front and center and not dwarfed by efficiency considerations—even when efficiency considerations are explicitly and/or implicitly part of the picture.[195] If, contra the claims in the first response, it were true that the pockets only existed in medical malpractice, this second response does not deny that the argument for employing partial damages would be even stronger in the context of pockets of immunity, but the point here is that the argument for employing partial damages in areas without the pockets would still be sufficiently strong that we should employ partial damages in these contexts as well.

Third, though the second response does not require any additional support to be successful, the following adds additional support: It's not clear that there actually would be inefficiencies associated with a system employing partial damages as compared to a system employing the preponderance standard, or, if there are, that they would be more than de minimis.[196] If this is true, this would further weaken an argument that partial damages should not extend past areas that involve pockets of immunity.

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[194] *See supra* Part II.B.

[195] *See, e.g.*, Matsuyama v. Birnbaum, 890 N.E. 2d 819, 830–31, 835 (Mass. 2008) (finding any difficulties to be "far outweighed by strong reasons to adopt"); Herskovits v. Grp. Health Coop., 664 P.2d 474, 476–77 (Wash. 1983) (refusing a "blanket release" of liability for doctors in LOCD cases).

[196] To meet the preponderance standard, one must show that the chance the defendant caused the harm was greater than 50%. It's not immediately clear that additional resources would be needed to show what the particular chance was that the defendant caused the harm, since that information is likely what is used to show that the 50% threshold was met or not met. Further, to the extent that there would indeed be inefficiencies, the "speculativeness" standard offered in this Article would likely also minimize inefficiencies (and concerns that one might have about inefficiencies). *See infra* Part III.C.

In summary, the argument for Expansion has had two parts: (1) The same reasons (grounded in fairness and efficiency) that counsel in favor of employing the LOCD in the context of medical malpractice also apply, and with equal force, to areas of tort other than medical malpractice—thus providing a prima facie case for the adoption of Expansion; and (2) none of the five arguments that are typically made against expanding the use of the doctrine in this way are persuasive.

Accordingly, in light of there being no good reason *not to extend* the LOCD to other areas of tort law, and in light of the positive reasons *in favor of doing so*, we should indeed extend the LOCD to other areas of tort law.

B. *Responding to Arguments Against Symmetry*

Given the clear fairness- and efficiency-related advantages that Symmetry provides, why has this type of system not already been incorporated into our law, and why has there not been advocacy for it in torts scholarship? This sub-Part begins by presenting some of the very few cases in which courts discussed, considered, or used a Symmetry-like system—in some of which positive comments are made about a Symmetry-like system. This is followed by an outline of the treatment of a Symmetry-like system in the scholarly literature. There have been some positive comments about a Symmetry-like system in the scholarly literature, but, despite this, up to this point, this type of proposal has not been offered, developed, or advocated for. After discussing these positive comments, this sub-Part then raises and discusses several arguments against Symmetry, and explains why they are not persuasive. Therefore, because there is no good reason *not to* adopt Symmetry, and in light of the positive reasons *in favor of* adopting Symmetry,[197] Symmetry should be adopted.

1. *The Minimal Treatment of Symmetry in Cases and Academic Literature*

i. The Minimal Treatment of Symmetry in Cases

An extensive review of case law has returned only one case that *explicitly* endorses and implements Symmetry: In *Scafidi v. Seiler*,[198] decided in 1990, the New Jersey Supreme Court extended the LOCD framework to all medical malpractice cases in which the patient had a preexisting condition. The court called it "a self-evident principle of tort law" that "a tortfeasor should be charged only with the value of the interest he destroyed."[199] The court then went on to explain that, "[t]o the extent that a plaintiff's ultimate harm may have occurred solely by virtue of a preexistent condition, without regard to a tortfeasor's intervening

[197] *See supra* Part II.B.

[198] Scafidi v. Seiler, 574 A.2d 398 (N.J. 1990).

[199] *Id.* at 408 (internal quotation marks and citations omitted).

negligence, the defendant's liability for damages should be adjusted to reflect the likelihood of that outcome."[200] Accordingly, the *Scafidi* court is explicitly endorsing and implementing Symmetry. Note, however, that even though this court is explicitly endorsing and implementing Symmetry, it still is not fully endorsing all of the proposals in this Article. This is because the court, in espousing the extension of the LOCD doctrine to cases captured by Symmetry, *still* is explicitly limiting both (1) the LOCD and (2) its extension of the LOCD to non-LOCD cases, to cases in the context of medical malpractice—thus explicitly rejecting Expansion.

Although no other courts have explicitly adopted the position of Symmetry, another court has made statements positively recognizing the fairness rationale for Symmetry: In *Fennell v. Southern Maryland Hospital Center, Inc.* (also in 1990),[201] despite not being confronted with a fact pattern raising the question of whether to espouse Symmetry, the Maryland Supreme Court made the following comments regarding what it thinks is a problem of unfairness that afflicts the LOCD:

> As a class, medical malpractice plaintiffs benefit from the fact that they are entitled to recover 100% of their damages from a defendant whose negligence caused only 51% of their loss because it is more probable than not that the defendant's negligence caused the loss. Reciprocally, a defendant whose negligence caused less than 50% of a plaintiff's loss pays nothing because it is probable that the negligence did not cause the loss. If a plaintiff whose decedent had a 49% chance of survival, which was lost through negligent treatment, is permitted to recover 49% of the value of the decedent's life, *then a plaintiff whose decedent had a 51% chance of survival, which was lost through negligent treatment, perhaps ought to have recovery limited to 51% of the value of the life lost*. The latter result would require a change in our current wrongful death statute.[202]

This change that the *Fennell* court says that we "perhaps ought" to make if we continue to have the LOCD in LOCD cases is precisely the change that Symmetry calls for, and the rationale that the *Fennell* court gives for why we "perhaps ought" to do this is precisely one of the rationales that this Article has articulated for why we should adopt Symmetry.

The result called for by Symmetry also was implemented in two other cases: one decided by the Iowa Supreme Court in 1986, and another coming

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[200] *Id.* Note also that this "self-evident principle of tort law" also is an instantiation of the conjunction of what, in Part II.A, I called the two intuitions underlying the LOCD (which are also the two intuitions underlying my proposed reforms).

[201] Fennell v. S. Md. Hosp. Ctr., Inc., 580 A.2d 206 (Md. 1990).

[202] *Id.* at 214 (emphasis added).

from the Missouri Court of Appeals in 2004, although Symmetry was not explicitly adopted in either case.[203] In addition, in 2012, the Indiana Supreme Court discussed the issue but did not resolve it.[204]

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In sum, aside from the few examples discussed here, Symmetry has not been espoused by courts.

ii. The Minimal Treatment of Symmetry in Academic Literature

Regarding the treatment of this issue by torts scholars, there are generally three camps: (1) some explicitly reject Symmetry and provide reasons for doing so, (2) some explicitly reject Symmetry without offering reasons, and (3) some, while briefly commenting favorably on the idea of it, do not further develop or pursue advocating for such a proposal.

The comment that is typically made by the scholars who make positive comments about Symmetry is that, even though/if they do not espouse Symmetry, they do think that it is a logical extension of the LOCD. Geistfeld and Simons are among those who make comments like this, despite their either explicitly rejecting Symmetry (Simons),[205] or arguing for an account that does not extend the LOCD to non-LOCD cases, thus more implicitly rejecting Symmetry (Geistfeld).[206]

In describing the *Scafidi* court's discussion[207] about how a court that employs the LOCD should also extend it to non-LOCD cases, Geistfeld says: "[T]he court's point is valid. The 'self-evident principle of tort law' pertaining to the measurement of compensatory damages [(i.e., that a tortfeasor should be charged only with the value of the interest he

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[203] In *DeBurkarte v. Louvar*, 393 N.W.2d 131 (Iowa 1986), the court applied the LOCD to allow for partial damages in a case involving a delayed cancer diagnosis. This decision was based on medical evidence indicating that the patient's probability of surviving ten years would have been 50–80% had there been no negligence. By the time of the trial, her chance of surviving ten years had diminished to zero. 393 N.W.2d at 135. The court stated: "From this testimony, the jury could find that the defendant *probably* caused a reduction in her chance of survival. The district court clearly limited damages to this reduction in its instructions. The jury was thus precluded from awarding *all* damages for the underlying injury: the preexisting cancer." *Id.* at 137–38. However, the court did not address the fact that the plaintiff, by demonstrating an increased chance of death from 20–50% to 100%, actually had met the traditional preponderance standard, unless the jury determined her chance of survival to be exactly (and thus not greater than) 50%. And it remains unclear whether the court intended to establish a broad rule stating that probabilities exceeding 50% but falling short of 100% should result in proportional compensation rather than full compensation. In *LaRose v. Washington Univ.*, 154 S.W.3d 365 (Mo. Ct. App. E.D. 2004), evidence indicated that the plaintiff had a 60% preexisting chance of survival, which the defendant's negligence reduced to 3%. 154 S.W.3d at 368. Accordingly, absent the defendant's negligence, it was more probable than not that the plaintiff would have survived, which typically would warrant full damages. However, the trial judge seemingly opted to reduce the recovery to 57% of full damages. *Id.* at 371. For further discussion, see DOBBS, HAYDEN & BUBLICK, *supra* note 50, at § 197.

[204] *See* Indiana Dep't of Ins. v. Everhart, 960 N.E.2d 129, 133–37 (Ind. 2012) (finding it "unnecessary" to decide whether to extend the LOCD to "better-than-even" cases).

[205] *See* Simons, *supra* note 3, at 603.

[206] *See* Geistfeld, *supra* note 3, at 447.

[207] *See supra* Part III.B.1.i (discussing Scafidi v. Seiler, 574 A.2d 398 (1990)).

destroyed)] fully justifies awards based on the decedent's lost chance of survival, even in [non-LOCD cases]."[208] But, despite the fact that Geistfeld states that the "self-evident principle of tort law" fully justifies extending the LOCD to non-LOCD cases, the position that he argues for is still one that explicitly does not extend the LOCD to these non-LOCD cases.[209] He states: "Hence [my proposed account] of the [loss-of-chance] doctrine conforms to the majority rule that limits loss-of-chance claims to cases in which the preexisting condition probably cannot be cured [even with proper treatment (i.e., LOCD cases)]."[210]

Like Geistfeld, Simons also (1) expresses positive comments about Symmetry, while (2) similarly not espousing this type of proposal. Unlike Geistfeld, however, Simons provides a more direct explanation for why he does not endorse Symmetry. Simons's positive comments about Symmetry are as follows:

> [I]f we are trying to ensure that the damage remedy accurately measures the relevant chance (of future harm, or of causation of a past harm), strong arguments favor treating probabilities greater than and less than 50% symmetrically. Once we identify a category of cases in which it is justifiable to depart from the all-or-nothing preponderance test for proof of factual cause, arguably the symmetrical approach is preferable. Among other things, symmetry results in negligent defendants paying an aggregate amount of damages that more closely approximates the harm that those defendants actually caused than an asymmetrical approach achieves. Awarding full damages when the probability of harm is more than 50%, but less than 100%, yet awarding damages in proportion to probability when that probability is 50% or less, will predictably result in negligent defendants paying for more harm than they have actually caused.[211]

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[208] Geistfeld, *supra* note 3, at 447.

[209] *Id.*

[210] *Id.* Geistfeld's article is concerned with justifying the LOCD itself and not, per se, with whether or not it should be extended to non-LOCD cases, so the focus of his article is not identical to the focus of mine, and his discussion is aimed toward the subject and thesis of his article. But despite this, it is notable that he makes the concession regarding Symmetry yet still espouses an account that does not extend the LOCD to non-LOCD cases.

[211] Simons, *supra* note 3, at 603.

Despite these positive comments about Symmetry, Simons explicitly states that we should not adopt Symmetry.[212] His arguments for why will be discussed below.[213]

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In sum, even though no other torts scholars have offered reform proposals like Symmetry, some scholars appear to agree with the reasons in favor of Symmetry. Even though these scholars then either reject Symmetry or fail to advocate for it, these positive comments provide strong additional support for the appeal of Symmetry (as long as persuasive replies can be given to any reasons for rejecting it).

2. *Responses to Arguments Against Symmetry*

Positive comments about Symmetry have been made in the scholarly literature, but, up to this point, this type of proposal has not been offered, developed, or advocated for. This sub-Part discusses the main arguments that are made against Symmetry, and it explains why they are not persuasive.

i. Argument One: Symmetry Would Unduly Burden Courts

The first argument against Symmetry is articulated by Simons. He writes:

> And it is certainly understandable, and indeed commendable, that courts are reluctant to permit widespread exceptions to the [preponderance] rule. Allowing partial compensation remedies in every case where proof of factual causation is uncertain would be a cure worse than the disease, *for it would burden courts and litigants with costly inquiries that would quite often be very difficult to resolve accurately, because of the unreliability of evidence of the relevant probabilities*.[214]

Accordingly, although Simons is in favor of permitting exceptions to the preponderance standard in LOCD cases (by employing the LOCD), he argues that we should not extend the LOCD to non-LOCD cases because we

[212] He says that he is in favor of the LOCD "so long as (1) the negligence at issue occurs in recurring situations *in which injured plaintiffs will quite often be unable to satisfy the preponderance test* and (2) reliable statistical evidence is available that permits the fact-finder to quantify the relevant proportion." *Id.* at 599–600 (emphasis added).

[213] In addition to the authors just mentioned who make what appear to be comments in favor of Symmetry, only before then making clear that they do not espouse it, there also are a few other authors who have similarly made passing comments that appear to favor something like Symmetry and who have *not* then gone on to explicitly reject it. But the comments that these latter authors have made have been extremely brief (e.g., one- or two-paragraphs long), and they do not further develop or pursue advocating for such a proposal. Further, even for these authors, they appear to have only made their in-passing comments in the context of Symmetry, and they have not appeared to simultaneously make comments in favor of something like my Expansion. *See, e.g.*, Levmore, *supra* note 4, at 691–92, 706, 712, 714; King 1, *supra* note 9, at 1387; King 2, *supra* note 9, at 556–57; Fischer, *supra* note 9, at 619.

[214] Simons, *supra* note 3, at 592–93 (emphasis added).

do not want to allow additional (much less, "widespread") exceptions of this same type.[215] Note that this objection has two components: (1) a concern about the ability to accurately resolve the inquiry due to the unreliability of evidence of relevant probabilities, and (2) a concern about burdening courts and litigants with costly inquiries (which, though an independent concern, could be exacerbated by the first). This argument fails to provide persuasive reasons to reject Symmetry. The following offers two responses to this argument.[216]

First, regarding evidentiary concerns, there is no reason to think that the data would be any less available and reliable for a non-LOCD case than for an LOCD case, and regardless of the area of tort involved.[217] The same types of data are involved; only the particular risk percentages differ. Further, even if this were not true, it still would not make sense to disallow the LOCD in non-LOCD cases altogether. Rather, the solution would be to allow for the data to be reviewed on a case-by-case basis to determine whether they are reliable and thus whether the LOCD should be employed.[218]

The second response addresses the idea that applying the LOCD in non-LOCD cases places burdens on courts and litigants. Additional fact-finding may, in fact, be necessary to determine what portion of the chance of harm, given the negligence, would have existed even absent the negligence. But this additional inquiry is the same as the additional inquiry that we need to carry out when we employ the LOCD in LOCD cases. Thus, LOCD and non-LOCD cases confront the very same question: whether obtaining a more accurate damages sum is worth the additional burden to the court and parties. In the context of the LOCD, we seem to think, correctly,[219] that the more accurate result is worth the additional burden. The identical considerations apply in the context of non-LOCD cases—regarding both the benefits and the burdens.

Furthermore, not only do we already need to do this additional inquiry (and deem it worth the additional burden) in the context of typical LOCD cases, but, as discussed,[220] it's also not even clear that we wouldn't already have the facts that are relevant for this additional inquiry in evidence even

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[215] Note that the argument made in the italicized portion of Simons's text is an argument against both Expansion and Symmetry, but for present purposes I consider it only in the context of Symmetry (though below, in Part III.C, I consider this argument in connection with both Expansion and Symmetry).

[216] Both responses are described briefly here; they are explained further in Part III.C, *infra*.

[217] My response to this prong is similar in structure to the response I gave to a similar objection to Expansion. *See supra* Part III.A.1. Furthermore, this is not to say that in every potential LOCD case the data would be reliable and accurate; it's just to say that they can be in some of them.

[218] *See supra* Part III.A.

[219] *See infra* Part III.C, however, for a more detailed discussion of how a determination should be made on a case-by-case basis regarding whether the data in a case (be it a LOCD case or non-LOCD case) are sufficiently available and reliable, and the inquiry not sufficiently burdensome and costly, such that the case should not employ the LOCD.

[220] *See supra* note 195 and accompanying text.

in cases employing the preponderance standard—thus meaning that the additional inquiry might not even create any additional burden or cost.

Accordingly, neither prong of Argument One provides persuasive reasons to reject Symmetry. If we employ the LOCD in LOCD cases, we should also do so in non-LOCD cases.

ii. Argument Two: There Is No Recurring Pocket of Immunity in Non-LOCD Cases

The second argument against Symmetry is also articulated by Simons. He argues that unlike in LOCD cases, "in most negligence cases in which it is possible but not probable that the defendant's negligence made the plaintiff worse off, a recurring pocket of immunity does not exist," which, accordingly, makes "the argument for partial damages for loss of a chance . . . much weaker."[221]

This argument was considered above, in Part III.A.5, as an argument against Expansion, but it is also provided as an argument against Symmetry. The second and third of the three responses provided in Part III.A.5 are the primary responses that are relevant here in the Symmetry context as well.[222] Those two responses explained why, even if there is a recurring pocket of immunity that exclusively occurs in typical LOCD cases, that still would not be a good reason not to extend partial damages to cases covered by Expansion. The same points apply here for Symmetry. The first response in the Expansion context, however, argued that the recurring pocket of immunity did not exclusively (or even more frequently) occur in typical LOCD cases as compared to Expansion cases. The following makes a related argument in the context of Symmetry.

While non-LOCD cases indeed do not share the "recurring pocket of immunity" reason to use the doctrine that LOCD cases do, non-LOCD cases do encounter an analogous problematic situation that calls for partial damages: the possibility of recurring pockets of *over*-compensation. As with recurring pockets of immunity, these pockets of over-compensation are problematic for both fairness and efficiency reasons if the preponderance standard is used (and thus if partial damages are not used). Accordingly, even if pockets of immunity aren't encountered in non-LOCD cases, a broader principle that the LOCD aims to satisfy is equally relevant in both types of cases. As the *Scafìdi* court said, it is a "self-evident principle of tort law" that "a tortfeasor should be charged only with the value of the interest he destroyed."[223] Thus, "[t]o the extent that a plaintiff's ultimate harm may have occurred solely by virtue of a preexistent condition, without regard to

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[221] Simons, *supra* note 3, at 549–50; *see also* FARNSWORTH, *supra* note 192, at 257–61 (discussing the various side effects of choosing a standard of proof, including the number of cases likely to be brought).

[222] *See supra* Part III.A.5.

[223] Scafidi v. Seiler, 574 A.2d 398, 408 (internal quotation marks and citations omitted).

a tortfeasor's intervening negligence, the defendant's liability for damages should be adjusted to reflect the likelihood of that outcome."[224] Accordingly, just as this "fundamental principle of tort law" would be violated in LOCD cases if the LOCD isn't implemented (because the plaintiff would be *under*-compensated), so too would it be violated in non-LOCD cases without the implementation of the doctrine (because the plaintiff would be *over*-compensated).[225]

The main reason for the courts', Restatements', and commentators' broad non-espousal of Symmetry, however, might be something other than Argument One[226] and Argument Two altogether, but something that is related to Argument Two: that the preponderance standard is so engrained in our collective legal consciousness that it is not apparent, or even noticed, that we run afoul of the "fundamental principle of tort law" by not employing the LOCD in non-LOCD cases.[227] Or, if this is noticed, it is probably dismissed as a non-objectionable instance of doing so, because applying the preponderance standard in this way is such a long-standing and foundational feature of our legal system that it is thought to be necessary, even if it does violate this fundamental tort law principle.[228] In LOCD cases on the other hand, there are three features (that are not shared by non-LOCD cases) that make our non-adherence to this fundamental principle more apparent: (1) the preponderance standard creates an insurmountable hurdle in showing causation, (2) the violation of the principle results in under-compensation rather than over-compensation, and (3) plaintiffs not only get the wrong damages sum, but they are completely unable to recover when the right result would be for them to be able to. In sum, the failure to espouse Symmetry likely results from the fact that, unlike in LOCD cases, there is a lack of a realization that there is a problem that needs to be solved—and, much less, that it is a problem of the same type as that which is afflicting LOCD cases and being solved by the LOCD.

C. *A "Speculativeness" Standard for Determining on a Case-by-Case Basis Whether to Employ the LOCD*

Even if both Expansion and Symmetry are adopted, there still remain the key questions of what constraints (if any) there should be regarding whether, when, and how the LOCD *should* be employed in cases where it *could* potentially be employed. The umbrella question regarding possible constraints to apply to the LOCD in all of these areas has multiple sub-

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[224] *Id.*

[225] Assuming of course that it is a non-LOCD case where the underlying chance of harm was greater than zero.

[226] *See supra* Part III.B.2.

[227] Again, making the assumptions in *supra* note 218.

[228] But even more likely than this being found non-objectionable, I think, is that the violation of the fundamental principle isn't even noticed.

questions. Chief among these is the following: Should there be a requirement regarding the availability and reliability of data, or the burdensomeness and costliness of the inquiry, or both, with respect to LOCD information in particular cases? And if so, what rules, standards, burdens, presumptions, or other devices should we use to determine which cases can in fact employ the LOCD?[229]

At one end of the spectrum is the following possible answer: The LOCD should *never* be applied because it *always* runs afoul of the concerns regarding the availability and reliability of data and the burdensomeness and costliness of an inquiry. This answer directly contradicts the adoption of both Expansion and Symmetry, and is thus rejected here. At the other end of the spectrum of possible approaches to this issue would be for the LOCD to be employed in all cases and with no constraints—regardless of the state of the data or the burden on the court. This is not the approach that we should take either. Instead, the best approach is an intermediate one: Because each case will likely present unique reasons related to data reliability and burdensomeness as to why, on balance, it might or might not be too difficult to reliably apply the LOCD, these issues should be resolved with case-by-case determinations.

In determining how to draw the line between cases that should employ the LOCD and cases that should not, the causation inquiry can take a page out of the book of the inquiry into damages sums in torts and other private law areas. In torts, as in contracts, the traditional rule is that although the existence of harm[230] needs to be proven by a preponderance, the *extent* of the harm (i.e., its *valuation*) does not.[231] But this does not mean, however,

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[229] Although the primary goal of this sub-Part thus is a positive one (addressing a key question regarding the implementation of Expansion and Symmetry), this discussion will simultaneously serve to provide additional support for my responses to the objections regarding availability/reliability of data and regarding burdensomeness/costliness inquiries. *See supra* Parts III.A.1, III.B.2.

[230] And other elements of a claim also need to be proven by a preponderance.

[231] *See* RESTATEMENT (THIRD) OF TORTS: REMEDIES § 5(a)–(b) (AM. L. INST. 2022) (distinguishing proof of the precise monetary value of damages, which plaintiff need not establish by a preponderance, from proof of the existence of damages, which plaintiff does need to establish by a preponderance). Note, however, that the reduced evidentiary burden in the damages phase of the case rests on principles of fairness that are thought to not extend to the prima facie case. For example, if a defendant tortiously causes a compensable harm, he should not be able to rely on the inherent uncertainty in the damages phase of the case to avoid liability, as doing so would systematically under-compensate plaintiffs. *See* Story Parchment Co. v. Paterson Parchment Paper Co., 282 U.S. 555, 563–64 (1931) (noting that where a defendant's wrongful conduct makes precise damage calculation impossible, the uncertainty is resolved against the wrongdoer). But even if this has been thought to be a reason that applies only to the extent of damages and not to other parts of the claim, this Article has argued that there are other strong reasons in favor of employing the LOCD and Expansion and Symmetry. *See supra* Parts I–III. Thus, even if the specific reasons in favor of not requiring the extent of damages to be shown by a preponderance are different from the reasons supporting the LOCD and Expansion and Symmetry, the lack of preponderance requirement in showing the extent of damages is still helpful for the project of advocating for Expansion and Symmetry because (1) it shows that we do, in some instances, think the preponderance standard should not be used, thus supporting the position that it could similarly not be used in other

that just any evidence is sufficient to support a damages award. Among other things, damages cannot be "speculative."[232]

This Article proposes that the "speculativeness" standard be used when determining whether to employ the LOCD in any particular case. Specifically, courts should assess the concerns in the particular case regarding the data's availability and reliability and regarding the burdensomeness and costliness of the inquiry.[233] Not only is this "speculativeness" standard neither vague nor indeterminate, but courts already have experience applying it in the context of torts and contracts damages, and it has not proven to be inadministrable. The case law establishing and describing precedent on this issue can be cited by courts assessing speculativeness for the purposes of the LOCD. Further, as these determinations are established in the LOCD context, additional relevant and specific case law (with clear interpretations) will develop.

In sum, because certain aspects of cases (namely the determination of the exact valuation of a harm) already do not require a preponderance, and because this inquiry can be reined in by doctrines such as the doctrine of speculativeness, there is a strong reason to think that this framework can similarly be successfully employed—and without disastrous effects on administrability—for the determination of whether a case is one in which the LOCD should be employed.[234]

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instances, and (2) it is a data point showing that relying on a speculativeness standard when not employing the preponderance standard did not lead to disastrous effects for administrability, thus suggesting that it might similarly be administrable in other contexts.

[232] Black's Law Dictionary defines "speculative damages" as follows: "Damages that are so uncertain to occur that they will not be awarded. — Also termed *remote damages*." BLACK'S LAW DICTIONARY (10th ed. 2014) (emphasis in original); *see also* Lawrence Cnty. v. Miller, 786 N.W.2d 360, 362 (S.D. 2010) (equating speculative damages with those that are "grossly conjectural").

[233] Note that one might think that instead of the "speculativeness" approach that I advocate for here, a different approach could be taken to explaining how courts implementing Expansion and Symmetry can/should determine if LOCD principles can/should be used in the case at bar: We currently are employing the LOCD in typical LOCD cases (at least in the jurisdictions that do so), so clearly in these cases there is a standard being employed that distinguishes between cases in which the data are available/reliable and those in which they are not, and clearly this standard has not proven to be intractable in any way. Accordingly, one might think that my point in this sub-Part could simply be that for all areas covered by Expansion and Symmetry, what we should do is just employ the standard for assessing the availability/reliability of data that is already being employed in typical cases where the LOCD is employed. But this is not the case. This is because almost all courts that employ the LOCD today espouse the redefinition-of-the-injury approach. *See supra* notes 81–82 and accompanying text. As a result, there is no relaxation of the burden of proof, and the plaintiff must prove the lost chance by a preponderance. And then the damages analysis would then be subject to a speculativeness requirement, as the damages phase always is, but this would not be used for (or needed for) determining the percentages because that would already have been shown by a preponderance. Accordingly, the question that my approach confronts is what standard should be used when a court takes the relaxing-the-burden-of-proof approach, and since that is currently rarely employed, this is why the Article must articulate an approach rather than just pointing to how LOCD cases typically operate.

[234] A question arises, however, regarding how the speculativeness standard would work in the LOCD context given a particular disanalogy between the damages context that currently employs the

Furthermore, as was discussed above in the context of an argument against Symmetry,[235] it's not even clear that we wouldn't *already* have the facts that are relevant for the partial-damages inquiry in evidence even in cases employing the preponderance standard. Thus, it could be that any additional evidence required in cases employing partial-damages would result in only de minimis inefficiencies from additional administrative costs. Even if these costs would not be de minimis, however, the framework offered in this sub-Part can be used to constrain inquiries that would otherwise be at risk for being unreliable or overly burdensome.[236]

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speculativeness standard and the LOCD context: In the damages context, if a particular component of a potential recovery is deemed too speculative, this component of the potential damages award then simply is not awarded, but what does this translate to happening in the LOCD context when the data are deemed too speculative to employ? What default do we revert to if it is deemed that we will not employ the LOCD in a particular case? That is, what is the analogue of not awarding the speculative component of damages? The answer is that if the data are deemed to be too speculative for the court to apply LOCD principles to the case, the court will then revert to the underlying rule that exists absent the employment of the LOCD: the preponderance standard—and this is the case regardless of whether it is an LOCD case or a non-LOCD case. Notably, though, the result of the data being deemed too speculative to employ the LOCD will then be different for the parties depending on whether it is an LOCD case or a non-LOCD case: If it is an LOCD case and the court applies the preponderance standard, the plaintiff will then be unable to meet the preponderance standard and will be unable to recover; if it is a non-LOCD case and the court applies the preponderance standard, the plaintiff will then meet the preponderance standard and will receive full compensation. In sum, on my account: (1) An LOCD case will result in no recovery for the plaintiff unless the plaintiff non-speculatively establishes the LOCD percentages, and (2) a non-LOCD case will result in full recovery for the plaintiff unless the defendant non-speculatively establishes the LOCD percentages (assuming that the plaintiff has proven the elements of the claim).

[235] *See supra* Part III.B.2.i.

[236] In addition to there being possible concerns about this Article's proposals causing additional burdens and costs in cases that would already be filed absent the proposals, however, there is also a possible concern that the Article's proposals would lead to greater burden and costs as a result of there being a greater number of cases being filed. Determining whether (and if so, the extent to which) there would be more cases filed if this Article's proposals are implemented is a convoluted task with many relevant factors. But even if it turns out that more cases would be filed (and even if it turns out that there are additional burdens and costs in cases that would already be filed), it's important to consider a way in which the proposals might be likely to provide a countervailing *reduction* in burdens to the system: The proposals might lead to more settlements (and settlements that occur earlier on), thus reducing burdens on the courts and litigation expenses. The typical belief is that settlements are more likely to occur the smaller the gap is between the two parties' expectations regarding the case's value. *See, e.g.*, A. MITCHELL POLINSKY, AN INTRODUCTION TO LAW AND ECONOMICS 135–46 (3d ed. 2003) (noting that if the parties agree on the plaintiff's probability of prevailing at trial, a settlement range beneficial to both parties generally exists). With an all-or-nothing preponderance standard, there can be a large gap between likely outcomes of the case and, similarly, the parties' diverging assessments of the likely outcomes. But with a system employing this Article's proposals, however, a result might be that there is a much narrower band of likely outcomes (e.g., with a plaintiff possibly being expected to obtain somewhere between 40 and 60 percent of full damages), and, similarly, of the parties' assessments of likely outcomes. To the extent that this is the case, this Article's proposals might result in considerably more (and considerably earlier) settlements, thus providing either substantial decreases in burdens and costs to the system, or a factor that at least tempers the severity of any increases caused by other aspects of the proposals.

IV. OUTLOOK

A. *Resolving the LOCD's Turmoil, With Theoretical and Practical Implications*

1. *Resolving the LOCD's Turmoil*

The confusion, lack of consensus, and difficulties afflicting the two main accounts of the LOCD[237] and Geistfeld's[238] and Simons's[239] accounts are not merely concerns that affect theorists. It is quite clear—and, indeed, courts declining to employ the LOCD have explicitly stated[240]—that those jurisdictions that refuse to adopt it have done so because (a) there is no persuasive justification for the LOCD and (b) there is no account of the LOCD that is not afflicted by substantial problems. Thus, if the LOCD is to be employed in all (or at least more) jurisdictions, it is crucial to articulate a more plausible account of, and justification for, the doctrine.[241]

Does the account of the doctrine presented in this Article provide a more satisfactory account of the LOCD than those presented previously? It does. The following describes this Article's positions on the specific questions at issue in this debate, how these positions relate to those of the other four accounts, and how this Article's account succeeds where the other four failed.

Although the account presented in this Article is unique, it does share a feature with the first account and with Simons's account: As with these two (and unlike the second account and Geistfeld's account), this Article's position is that the LOCD should operate by relaxing the preponderance standard for proving causation.[242] Unlike the second account (which is the one that the restatements endorse[243]), this Article does not call for the injury to be redefined as the loss of chance.[244] And unlike Geistfeld's account, this Article does not operate by appealing to a "duty-preserving rule" that "justifies a special evidentiary rule" excluding the "exculpatory causal

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[237] *See supra* Part I.B.1.(1)–(2).

[238] *See supra* Part I.B.2.(1).

[239] *See supra* Part I.B.2.(2).

[240] *See supra* note 94 and accompanying text.

[241] Further, not only is the lack of a plausible account of, and justification for, the LOCD leading to many jurisdictions not employing it, but it is also causing problems for the courts that do employ the LOCD. Because different accounts of the LOCD can affect the determination of how damages are calculated in LOCD cases, courts are often in a state of uncertainty about which damages measure should be used, and this often leads to employing different damages measures. This causes uncertainty for litigants and also a lack of horizontal equity. Further, to the extent that there indeed is reason to think that one of these measures is the preferable one (be it on fairness grounds and/or efficiency grounds), whenever a court employs a different damages measure, it is then bringing about a suboptimal result. *See supra* Parts I.A.4, I.B.

[242] *See supra* Parts I.B.1.(1)–(2), I.B.2.i–ii.

[243] *See supra* Part I.B.1.

[244] *See supra* Part I.B.1.(1).

evidence [of the underlying condition] . . . from the liability phase of the case . . . ."[245]

But despite these similarities between this Article's account, on the one hand, and the first account and Simons's account, on the other hand, the differences are great. The first account and Simons's account both view the LOCD as constituting an exception to the general requirement that causation be proven by a preponderance. Accordingly, these accounts hold that cases where the LOCD is not typically employed (i.e., (1) cases where it is not impossible to prove causation by a preponderance, and (2) cases in areas other than medical malpractice) do still require that causation be proven by a preponderance. In light of this, these two accounts attempt to provide limiting principles that can explain why the exception is made in typical LOCD cases and not in others, and these accounts either attempt to articulate limiting principles that are based on principles of policy or principles of doctrine. But on this Article's account, the fact that causation need not be proven by a preponderance in cases employing the LOCD is *not* an exception. No tort cases should require that causation be proven by a preponderance. Accordingly, on this Article's account, no limiting principle is needed, and, further, there *should be no limiting principle*.

In light of the positions of this Article's account, just described, it avoids the problems that afflict the other four approaches:

(1) Unlike the second main account, this Article does not redefine the injury as the loss of chance. Therefore, the account here is not susceptible to the objections to that approach.

(2) Unlike the first account and Simons's account, this Article does not state that the cases that typically employ the LOCD are treated differently from other cases, and therefore this Article does not need to articulate a limiting principle. Therefore, this Article is not susceptible to the objections to these accounts that they fail to articulate a plausible limiting principle.[246]

(3) In addition to the objections raised in Part I.B.2.i against features specific to Geistfeld's account (which do not afflict this Article's account), this Article has argued[247] that his account is functionally similar to the first account and Simons's account. Accordingly, his account similarly is in

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[245] *See* Geistfeld, *supra* note 3, at 427, 432; *supra* Part I.B.2.i.

[246] Although this Article's account avoids the difficulties afflicting the other accounts, this of course does not mean that it is not afflicted by difficulties of its own. But this Article has argued that its account is best on the whole even if there are difficulties that it confronts.

[247] *See supra* Part I.B.2.i.

need of limiting principles, and similarly is susceptible to the objections to the first account and Simons's account—whereas this Article's account is not.

2. *Theoretical and Practical Implications of This Solution*

In light of this Article's solution to the problem of justifying the LOCD, this Article's proposals, even though aimed at extending the doctrine to areas other than typical LOCD cases, create a broader account of the doctrine that will also provide a steadier foundation for its application in typical LOCD cases. And this will happen in two related—but distinct—ways: one that involves removing a foundation that is cracked, and one that involves the creation of a new and completely re-imagined base that is even stronger than the initial one would have been even without cracks. First: Importantly, courts will no longer be able to claim that the LOCD, because it does not have a plausible limiting principle, lacks a steady foundation. Second: Instead of merely providing a plausible limiting principle to serve as a patch for this problem, this Article's proposals provide a broad theory of how the doctrine can and should be applied to all types of tort cases beyond typical LOCD cases. With this broader theory underlying the applications in each specific context (be it in the context of the cases typically employing the LOCD or in the context of cases covered by Expansion or Symmetry), the support for any particular application of the broader theory is stronger than it would be if the underlying theory were more specific—because the broader theory has much more explanatory force behind it.

Accordingly, having established this new foundation, this Article's proposals should result in courts being persuaded that in typical LOCD cases,[248] use of the doctrine is, indeed, supported by the law. Ideally, this will result in courts that do not currently use the LOCD starting to do so.[249]

B. *Net Effects*

Expansion and Symmetry have opposing effects in torts suits (with Expansion increasing recoveries and Symmetry decreasing recoveries), and it remains to be seen whether the net effects of employing both reforms would result in an increase or a decrease in recoveries. In addition, as just discussed,[250] there would likely be a third effect on recoveries that would be caused by adoption of Expansion and Symmetry: Because they create a steadier foundation for the use of the doctrine, this will likely lead to

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[248] Courts should, for the same reasons, be persuaded that the LOCD should apply in cases covered by Expansion and Symmetry, but the current discussion is focusing primarily on typical LOCD cases.

[249] Further, as discussed, the turmoil in LOCD doctrine resulted not only in a split regarding whether to employ the LOCD, but also splits regarding LOCD damages calculations among those courts that do employ the LOCD. Accordingly, adoption of my proposals should also bring greater clarity and uniformity to damages calculations.

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

jurisdictions that do not currently employ the LOCD in typical LOCD cases beginning to do so, thereby allowing plaintiffs to receive partial damages in cases in which they could not have received any in the past.

It is notable, and potentially quite important to the chance of widespread adoption of both Expansion and Symmetry, that these two reforms, which are supported by a single underlying rationale, have opposing effects on recoveries. This feature could enable the pair of reforms to garner broader support and have a greater chance of being adopted, be it through the common law or through legislation, than they otherwise would if (1) there were a clear single direction of the net effects, or (2) they were adopted separately. It is of course true, though, that even if the net effect on recoveries were to end up being somewhat neutral, there still could be certain categories of individuals who would stand to be much better off or much worse off as a result of the proposals. In fact, this is practically guaranteed to happen. Therefore, even if the net effects on recoveries for plaintiffs versus defendants were close to zero, this would not mean that particular interested parties would feel neutrally about the proposals. There might be just as many strong positions opposing the proposals as there would be if the net effects for plaintiffs and defendants, as a whole, were not neutral. Notwithstanding this, however, the fact that Expansion and Symmetry have opposing effects for plaintiffs and defendants, and the fact that the net result could be close to neutral, will prove to be an important feature of the proposals in terms of the likelihood of their adoption. Taken together, they can be pitched as a reform proposal that is neither pro-plaintiff nor pro-defendant, but that simply aims to improve the law from both fairness and efficiency perspectives.

Going forward, details regarding the implementation of Expansion and Symmetry remain to be worked out. Will it indeed be best to adopt both at the same time, or should they be adopted in a particular order? Should they each be adopted in full all at once, or would it be better to adopt them both in waves—with the proposals being adopted in certain contexts before others? Should they ultimately be adopted in full or, for certain practical reasons, would it be better to adopt some forms of lesser-included proposals? If so, what would this look like? Further, as we proceed, we will learn more about how the proposals fare when implemented, and as we do, we can, if and when needed, make tweaks. Ultimately, however, what is crucial for any plan for incorporating this Article's proposals is that, to as great of an extent as possible, we strive to maximize fairness and effectuate optimal deterrence while, at the same time, minimizing burdens to litigants and courts.

C. *Beyond But-For Causation*

In light of this Article's arguments in favor of a probabilistic approach to but-for causation, the question arises whether we should treat other elements of tort claims (e.g., duty, breach, and proximate cause) in an

analogous way, and if not, why not, and if so, how this would work. And, similarly, a further question also arises of whether areas of law other than torts—e.g., contracts, property, and beyond—should adopt a similar approach. Only so much can be discussed in one article, and these questions will be explored in future work, but the following sketches some preliminary thoughts on these questions.

The typical rationale offered for the preponderance standard is that it has significant benefits relative to a fact-finder assigning probabilities or confidence measures: It is believed to have significant efficiency benefits and to not be unfair.[251] This Article (examining the issue in the context of but-for causation), however, has argued that when comparing a partial-damages system (symmetrically employed on both sides of the preponderance threshold) to the all-or-nothing preponderance system (symmetrically employed on both sides of the preponderance threshold), the partial-damages system is superior on fairness grounds because of how it narrowly tailors the parties' results to their situations—rather than painting with a broad brush and allowing luck to play a larger role.[252] As for efficiency, the Article has argued that there are certain cases in which a partial-damages system will be *more* efficient: where the potential defendant has knowledge at the time of his actions about which side of the preponderance threshold he is on (or is more likely to be on)—e.g., that he is more likely to be in an LOCD case or in a non-LOCD case.[253] For cases not falling in this category (and thus lacking the efficiency benefits of a partial-damages system), however, the potentially greater costs of administering a partial-damages system could render a partial-damages system less efficient.[254] It remains to be seen, however, how great these purported inefficiencies truly are, as well as whether they are greater or less than the *efficiencies* that the partial-damages system brings about in the context of the pockets where a defendant has knowledge of what type of case he is in.[255] Further, even if these two factors resulted in a net inefficiency (which they might not), there would be the question of whether this net inefficiency would or would not outweigh the benefits in terms of fairness that the partial-damages system would bring about.[256] This Article has argued that, though more remains to be learned about these costs and benefits, there is reason to think that a partial-damages system would bring about a net benefit.[257] This is especially the case because, as discussed, (1) many inefficiencies—if they do indeed exist—of implementing a partial-

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[251] *See generally* Ronald J. Allen & Alex Stein, *Evidence, Probability, and the Burden of Proof*, 55 ARIZ. L. REV. 557 (2013) (discussing the preponderance standard's accuracy and fairness effects).

[252] *See supra* Part II.C.

[253] *See id.*

[254] *See id.*

[255] *See id.*

[256] *See id.*

[257] *See id.*

damages system can be minimized by employing certain burdens, presumptions, and other devices that rein in a partial-damages system;[258] and (2) it's not clear that the feared inefficiencies will indeed exist (or that they will be non-de-minimis).[259]

This Article has examined these issues in the context of but-for causation, but the same framework, just described, for assessing the benefits and costs (in terms of both fairness and efficiency) of espousing a partial-damages system or a preponderance-standard system in this context is what should be employed for making these assessments in the context of other elements of tort claims and other areas of law altogether. As in the context of but-for causation, more information will be needed in order to conclusively state whether for any particular tort element (or non-tort areas of the law), the benefits will indeed outweigh the costs. Despite this stance, however, the following are a few speculative comments.

First of all, as discussed,[260] the valuation of the damages element in a tort claim already doesn't require a preponderance.[261] As for duty, duty is a question of law and not a question of fact, and thus no question arises about whether to employ a preponderance standard or a partial-damages approach. Breach and proximate cause, however, are questions of fact. This Article's tentative hypothesis is that the benefits of employing a partial-damages approach for these elements would likely outweigh the costs, and for reasons similar to those in the context of but-for causation—as there is no immediate reason to think that similar considerations would not apply. Lastly, there is also reason to think that similar considerations would support a partial-damages regime in non-tort areas of the law. But for each of these extensions, further inquiry—empirical and otherwise—will be required before making these assessments.

CONCLUSION

Rather than constituting a narrow exception to how tort law operates, the LOCD actually offers valuable insight into how tort law *should always operate*. The LOCD doesn't suggest the need to redefine what tort law is about (e.g., making it about harms *risked*) or to make ad hoc patches to reflect our intuitions about justice in certain cases. Rather, it gives us a window into a different comprehensive approach to attending to what tort law is about (i.e., harms *caused*)—an approach that truly acknowledges the challenges we face in determining causal relationships. The best we can do,

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

[259] *See id.*

[260] *See id.*

[261] *See supra* note 231 for a discussion of the rationale courts employ in not requiring parties to show the extent of damages by a preponderance, and how, despite this rationale not applying to the elements of the plaintiff's prima facie case, this example of tort law not employing a preponderance standard still provides helpful support for the project of advocating for Expansion and Symmetry.

after all, is assign probabilities to the claims that our actions causally contribute to the harms others suffer. Acknowledging this should involve us in a full rethinking of the preponderance standard. We should implement tort law by *always* asking a plaintiff to prove causation of harm to the degree possible in the case and adjust the damages sum accordingly. Further, we likely should not stop there. While this Article's proposed reforms regarding but-for causation constitute a crucial step for tort doctrine in taking chance seriously, they can also serve as a blueprint for analogous reforms for other elements of tort claims and, perhaps, for areas of the law other than torts.