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EXPECTED BAD MORAL LUCK

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TABLE OF CONTENTS

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I. INTRODUCTION

After a long renovation process, your house is finally ready. Unfortunately, several weeks after its completion you, notice water leaking from the second floor, and a few days later a pipe bursts damaging a large portion of the house. As a legally informed homeowner, you sue the contractor for damages and repair costs. The court rules in your favor, declaring that the contractor's services were negligently performed. You hire a new contractor.

This example captures how people think about their legal options in these situations. In many cases, the sued party will rely on her insurance company for coverage against the claim. Assuming the contractor attempted to do her best work, but for a variety of reasons fell short, should her negligence be covered? Most people would answer in the affirmative. What if the contractor intentionally damaged the homeowner's plumbing? Most people would agree the insurance company should not bear the cost of the contractor's intentional infliction of harm. However, what if the contractor intentionally used cheap materials knowing this choice would increase her profits but also increase the leakage probability? In this case, the answer is less clear.

Courts have struggled to determine under what circumstances the injured, such as the contractor, should be covered and when her actions forfeit coverage.[1] This determination is governed, *inter alia*, by the "expected or intended harm clause," a liability insurance policy provision that excludes coverage for expected or intended harm.[2] Courts in different jurisdictions vary in their interpretation of this clause ranging from a broad construction that *any* expectation of harm bars coverage to a narrow one where only the *intention* to inflict harm bars recovery. *Wausau Underwriters Ins. Co. v. United Plastics Grp., Inc.*,[3] highlights this difference. In this case, the insured, United Plastic Group Inc. (UPG), manufactured a defective part

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[1] *See* FISCHER, WIDISS & KEETON, *infra* note 53 at 435–37. *See also* the relevant discussion in Section III.C.1.

[2] *See* FISCHER, WIDISS & KEETON, *infra* note 53 at 421–24. *See also* the relevant discussion in Section III.

[3] Wausau Underwriters Ins. Co. v. United Plastics Grp., Inc., 512 F.3d 953 (7th Cir. 2008).

for its water heaters by using a significantly lower molding temperature. As a result, the water heaters ruptured in customers' homes causing $26.5 million in property damage. In its opinion, the court noted: "[s]uppose UPG thought that 0.1 percent of the heaters would fail; instead 15 percent did. Is the difference in magnitude enough to show that the harm to the customers that occurred was 'expected'?"[4]

To answer this question, we must look to how jurisdictions construe the expected or intended harm clause because this choice affects injurer behavior. The central difficulty is defining "expected" harm, which can lead to over- and under-inclusive outcomes—an unfavorable result. In response, injurers and insurance companies may alter their actions to avoid exposure to liability. As one court described this relationship:

> [B]oth [the] insured and insurer have an incentive, at the contracting stage, to rule out [expected or intended harm]. If a policy allows recovery for discharges that expectedly or intentionally generate liability, policyholders will be tempted (at the margin) to engage in harm-generating (or reckless) behavior, i.e., will be subject to 'moral hazard.' To the extent that the moral hazard is not constrained, total compensable losses will be increased by a number of reasonably avoidable losses, and premiums, of course, will rise with them.[5]

This Article provides a novel analysis of the incentives created by different interpretations of the expected or intended harm clause. Moreover, this interpretive decision has ramifications on the insurance system. Given the connection between courts' interpretative decisions, party incentives, and the insurance industry, this Article recommends that courts look to the injurer's efforts to comply with the standard of care to distinguish unintentional behavior from intentional negligent risk-taking. To achieve this aim, this Article suggests that courts should employ a "best effort" defense, which removes liability if the injurer can prove she exercised her best efforts to comply with the standard of care. This approach differs from previous doctrines and scholarship because it subjectively evaluates the injurer based on personalized information now available through technological advancements. With more information available during the underwriting process, insurers can create tailored standards of care for their policyholders. Courts can then use this personalized rubric to more

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[4] *Id.* at 961.

[5] Charter Oil Co. v. Am. Employers' Ins. Co., 69 F.3d 1160, 1166 (D.C. Cir. 1995).

accurately measure the injurer's *ex post* behavior. This article will examine the benefits of the advanced underwriting process and its mechanics, including information acquisition and burdens of proof. The result is a personalized insurance policy that can provide more favorable outcomes in insurance coverage disputes.

Part II of this Article will summarize the three categories of negligent behavior—intentional infliction of harm, intentional negligent risk-taking, and unintentional non-compliance—any one of which may be implicated in an insurance dispute. Part III will review the expected or intended harm clause and how courts have decided to interpret it. From these observations, we can trace how current legal doctrine may result in flawed applications of this clause which negatively impacts insurer and injurer incentives. Part IV offers a new way of looking at this problem by introducing the "best efforts" defense to safeguard policyholders against imperfect applications of the expected or intended harm clause exclusion. This section will elaborate on how and why this defense is feasible in today's legal system. Finally, Part V concludes this discussion.

II. NON-COMPLIANCE

Liability insurance disputes often begin with a compensable harm to a third party. In most cases, either negligence or strict liability will determine whether the defendant's harm, caused by the injurer, is legally compensable.[6] Harm is legally compensable when the injurer fails to comply with the appropriate liability regime.[7] For strict liability, harm is compensable regardless of whether the injurer took precautions.[8] Under a negligence regime, harm is compensable if the injurer failed to take legally mandated precautions.[9] Non-compliance—the failure to take legally mandated precautions—materializes for a variety of reasons. Distinguishing between

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[6] Although the scope of this article focuses on harm caused by negligence, further scholarship can apply this discussion to other liability regimes. Regardless of the governing liability rule, harm is legally compensable when the injurer caused it while failing to comply with the standard of care.

[7] KENNETH S. ABRAHAM, THE FORMS AND FUNCTIONS OF TORT LAW 188 (4th ed. 2012) ("[S]trict liability is in effect activity-based, whereas negligence liability is act-based").

[8] *Id.*

[9] *Id.* at 51–52.

them is noteworthy for two reasons. First, insurance policies often determine coverage based on the type of non-compliance. There are two types of non-compliance: (1) expected or intended (intentional non-compliance) and (2) inadvertent (unintentional non-compliance).[10] The expected or intended harm clause explicitly bars coverage for the first category, while coverage for the latter depends on how courts interpret this clause. Since these categories inform the scope of insurance, any mechanism that enhances our ability to distinguish between them will strengthen injurers' confidence in their level of coverage. Second, and perhaps more importantly, organizing non-compliance into these two categories allows scholars to quantify when courts misclassify the harm. This observation is important to gauge how consistently courts can accurately identify non-compliance type, which directly impacts coverage. Before examining non-compliance under the negligence standard, we will briefly review the standard of care under this liability regime.

A. UNDERSTANDING THE LEGAL AND THEORETICAL FRAMEWORK

Negligence is the failure to exercise reasonable care that causes compensable harm.[11] In order to assess whether an individual acted negligently, the court must engage in a two-step analysis. First, the court must define "reasonable care," a standard derived from asking what a reasonably prudent person would do in the same situation.[12] The court may adjust the standard after evaluating evidence so that the level of care is sensitive to the case's particular circumstances.[13] Second, the court measures the defendant's behavior against this standard.[14] Failure to comply with this standard informs the finding of liability.

Different schools of thought articulate various rationales for why individuals do or do not comply with the standard of care. Under an economic analysis of tort law,[15] compliance depends on how much the

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[10] *See* discussion *infra* Section III.C.

[11] MARK A. GEISTFELD, TORT LAW: ESSENTIALS 51; KENNETH S. ABRAHAM, *supra* note 7 at 58-59; RICHARD A. EPSTEIN, TORTS 109–10 (1999).

[12] Kenneth S. Abraham, *The Trouble with Negligence*, 54 VAND. L. REV. 1187, 1190–91 (2001).

[13] *Id.*

[14] *Id.*

[15] For the purpose of this Essay an in-depth analysis of victims'

defendant internalizes the accident costs. The more an injurer internalizes the cost of her harm, the more likely she is to comply with the standard of care. In this way, tort law aims to achieve efficient incentives by pricing non-compliance appropriately. To elaborate, both victims and injurers take efficient precaution when negligent behavior costs more than complying with the standard of care. Negligence law creates efficient compliance incentives when the standard of care is aligned with the efficient precaution.[16] We can achieve this outcome by reconceptualizing the Hand Formula[17] into marginal terms where a defendant is negligent when the marginal cost of increasing her precaution is lower than the benefit gained from reducing the expected harm.[18] Put differently, negligence law requires the injurer to take all efficient precautions.[19]

Although this theoretical account explains injurers' incentives to comply with the standard of care, non-compliance frequently occurs. Evaluating these cases provide limited explanation of non-compliance because individuals fail to conform with the standard of care for a variety of reasons. The following section explores these explanations.

B. INTENTIONAL NON-COMPLIANCE

Why do rational injurers knowingly and intentionally fail to comply with the standard of care? An injurer may fail to meet the standard of care because she enjoys inflicting harm on the victim or, alternatively, because she does not fully internalize the magnitude of her harm. Most would agree that the former injurer should receive harsher treatment than the former given the harm's intentional nature. As such, it is important to differentiate between intentional infliction of harm (when the injurer intends to harm the

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precautions is unnecessary as we focus on the injurer interaction with its insurance, however, it is important to note that any comprehensive economic analysis of tort law will require incentivizing both injurers and victims to behave efficiently.

[16] ROBERT COOTER & THOMAS ULEN, LAW & ECONOMICS 205–06 (6th ed. 2012).

[17] U.S. v. Carroll Towing Co., 159 F.2d 169, 173–74 (2d Cir. 1947).

[18] COOTER & ULEN, *supra* note 16, at 213–15.

[19] Mark F. Grady, *A New Positive Economic Theory of Negligence*, 92 YALE L.J. 799 (1983); Mark F. Grady, *Untaken Precautions*, 18 J. LEG. STUD. 139 (1989).

victim) and intentional negligent risk-taking (when the injurer engages in risky behavior, but does not intend to cause harm).

1. Intentional Infliction of Harm

Some injurers intend for their behavior to cause harm. This article refers to such injuries as "intentional infliction of harm" where the injurer's activity is aimed at causing harm. Most criminal activity falls within this category. Moreover, these intentional cases differ from calculated risk or gross negligence because of the injurer's deliberateness. In economic terms,[20] the intentional injurer generates some value or enjoyment from harming the victim.[21] In these cases, the defendant takes no precaution to prevent the accident but purposefully acts to increase its probability.[22]

2. Intentional Risk-taking

Unlike intentional infliction of harm, an injurer's negligent conduct can also be characterized as "intentional negligent risk-taking," where the injurer engages in risky behavior that violates the standard of care but does not explicitly intend to cause harm. Put differently, the injurer's activity may foreseeably harm the victim, but such harm is not the objective. The

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[20] RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW 239–45 (9th ed. 2014); THOMAS J. MICELI, THE ECONOMIC APPROACH TO LAW 74–75 (2004); WILLIAM M. LANDES & RICHARD A. POSNER, THE ECONOMIC STRUCTURE OF TORT LAW 149–60 (1987); COOTER & ULEN, *supra* note 11, at 188 (classifying intentional torts as a criminal activity); William M. Landes & Richard A. Posner, *An Economic Theory of Intentional Torts*, 1 INT. REV. L. ECON. 127, 127–39 (1981).

[21] In his discussions of the economic analysis of torts, Shavell does not cover intentional in the accident law analysis. *See* STEVEN SHAVELL, ECONOMIC ANALYSIS OF ACCIDENT LAW 1 (1987) [hereinafter: ACCIDENT LAW]; STEVEN SHAVELL, ECONOMIC ANALYSIS OF LAW (1st ed. 2004) (ignoring intentional torts in his analysis); STEVEN SHAVELL, FOUNDATIONS OF ECONOMIC ANALYSIS OF LAW (2004) (ignoring intentional torts in his analysis). One can infer, according to Shavell and also intuitively, that intentional torts are not accidents.

[22] As a matter of fact, when an injurer intentionally inflicts harm, the precaution cost becomes negative when stated in the terms of the Hand Formula. The injurer does not invest in avoiding the harm, but instead invests her energy in harming the victim.

relationship between shareholders and management provides an example. A CEO may participate in high-risk corporate activity without meaning to harm her shareholders; nonetheless, this activity may ultimately reduce the shareholders' assets.

Injurers may become intentionally negligent risk-takers for several reasons. First, some injurers enjoy risk-taking because it generates a danger-induced exhilaration rooted in the potential for harm rather than a victim's suffering. We can think of street racing as an example where drivers are attracted to the high-risk environment, rather than a desire to hit pedestrians or other vehicles. Likewise, injurers may take risks to achieve a competitive edge. This can be seen when cheerleaders hope to elevate their performances with difficult stunts, individuals pursue high-stakes gambling, or CEOs engage in highly leveraged investments. In these examples, risky activity attracts ambitious individuals because it can generate considerable rewards and profits.

In addition to an injurer's preference for risky activity, negligent risk-taking can also occur because of imperfections in the legal system. Such deficiencies are problematic because they prevent injurers from fully internalizing their accident costs. Several institutional factors explain this externalization, which as noted above, increases the likelihood of non-compliance. First, there may be judicial mistakes in setting liability. When courts systematically set the standard of care too low, the injurer is incentivized to align her level of care with the court's lowered standard.[23] Second, inaccurately computed damages can also lead to distorted party incentives. When courts consistently undervalue harm, the injurer is incentivized to lower her precautions since she will not be responsible for the total accident costs.[24] Third, collective action problems motivate injurers

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[23] Steven Shavell, *Liability for Accidents*, 1 HANDBOOK OF L. ECON. 139, 160-161 (2007); Mitchell A. Polinsky & Steven Shavell, *Punitive Damages: An Economic Analysis*, 111 HARV. L. REV. 869, 892 (1997); COOTER & ULEN, *supra* note 11, at 220–22.

[24] COOTER & ULEN, *supra* note 11, at 257–61; Louis Kaplow & Steven Shavell, *Accuracy in the Assessment of Damages*, 39 J.L. ECON. 191 (1996); Ariel Porat, *Misalignments in Tort Law*, 121 YALE L.J. 82, 135–36 (2011); SHAVELL, *supra* note 16, at 165; Yehonatan Shiman, Reasonably Subjective & Subjectively Reasonable: Examining Subjectivity in Negligence: Victims, Injurers, & Courts 8–51 (May 2018) (unpublished Ph.D. dissertation, University of Virginia School of Law) (on file with author). (Pages 8-51).

to lower their precautions[25] because victims may not litigate harms when costs exceed the recovery.[26] Fourth, an injurer can be "judgment-proof" meaning she cannot practically be accountable because she cannot compensate the victim. The judgment-proof defendant's[27] resources limit her expected costs[28] thereby allowing her to engage in tortious behavior when the expected benefits exceed these potential costs.[29]

Finally, injurers benefit when courts ignore excessive victim precautions in calculating liability or damages, even though these behaviors lower the accident's probability.[30] When victims take excessive precaution to safeguard against harm, their action reduces the accident costs below the

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[25] Steven Shavell, *Liability for Harm versus Regulation of Safety*, 13 J. LEG. STUD. 357 (1984); COOTER & ULEN, *supra* note 11, at 257–61.

[26] David Gilo, Ehud Guttel & Erez Yuval, *Negligence, Strict Liability, and Collective Action*, 42 J. LEGAL STUD. 69, 70 (2013); MANCUR OLSON, THE LOGIC OF COLLECTIVE ACTION; PUBLIC GOODS AND THE THEORY OF GROUPS (Harvard Univ. Press 2nd ed. 1971); William B. Rubenstein, *Why Enable Litigation: A Positive Externalities Theory of the Small Claims Class Action*, 74 UMKC L. REV. 709, 712 (2006).

[27] Steven Shavell, *The Social Versus the Private Incentive to Bring Suit in a Costly Legal System*, 11 J. LEGAL STUD. 333 (1982); Steven Shavell, *The Judgment Proof Problem*, 6 INT'L REV. L. & ECON. 45 (1986).

[28] Lynn M. LoPucki, *The Death of Liability*, 106 YALE L. J. 1 (1996).

[29] Amanda Edwards, *Medical Malpractice Non-Economic Damages Caps*, 43 HARV. J. ON LEGIS. 213, 217 (2006); David A. Hyman et al., *Estimating the Effect of Damages Caps in Medical Malpractice Cases: Evidence from Texas*, 1 J. LEGAL ANALYSIS 355 (2009); Greg Pogarsky & Linda Babcock, *Damages Caps, Motivated Anchoring, and Bargaining Impasse*, 30 J. LEGAL STUD. 143, 146 (2001); Catherine M. Sharkey, *Unintended Consequences of Medical Malpractice Damages Caps*, 80 N.Y.U. L. REV. 391, 402 (2005).

[30] Scholars have examined how precaution levels can affect the total accident cost such as how one party's precaution costs may change the other party's precaution costs. *See* Dhammika Dharmapala & Sandra A. Hoffmann, *Bilateral Accidents with Intrinsically Interdependent Costs of Precaution*, 34 J. LEGAL STUD. 239, 246 (2005). *See also* Alan J. Meese, *The Externality of Victim Care*, 68 CHICAGO. L. REV. 1201, 1211–15 (2001) (Alternatively, precaution costs can affect the total accident costs when the injurer fails to internalize the victim's precaution costs).

cost of precaution.[31] As victims take more precautions, an accident is less likely to materialize, thus reducing the injurer's internalized accident costs. Such scenarios arise when victims protect items with high subjective value.[32] Items are highly valued when they are irreplaceable, or when the law does not provide full recovery. Taken together, these institutional reasons illustrate why injurers may engage in intentional risk-taking since they will not internalize the full cost of their harm.

C. UNINTENTIONAL NON-COMPLIANCE

In addition to intentional risk-taking, courts can also find injurers negligent for "unintentional non-compliance," episodes where the injurer tried to comply with the standard of care but failed.[33] Various features in negligence law contribute to unintentional non-compliance, including an unreachable standard of care,[34] unintentional lapses of attention,[35] and the *res ipsa loquitur* doctrine.[36] The following sections examine these cases.

1. The Objective Standard

As noted above, tort law establishes an objective standard of care based on the reasonably prudent person.[37] This reasonable person standard

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[31] Shiman, *supra* note 24.

[32] Shiman, *supra* note 24.

[33] Abraham, *supra* note 6; Mark F. Grady, *Res Ipsa Loquitor and Compliance Error*, 142 U. PA. L. REV. 887 (1994); Robert Cooter & Ariel Porat, *Lapses of Attention in Medical Malpractice and Road Accidents*, 15 THEOR. INQ. L. 329 (2014); Omri Ben-Shahar & Ariel Porat, *Personalizing Negligence Law*, 91 N.Y.U. L. REV. 627 (2016).

[34] Kenneth S. Abraham, *Strict Liability in Negligence*, 61 DEPAUL L. REV. 271 (2011); Ben-Shahar & Porat, *supra* note 33.

[35] Grady, *supra* note 33; Cooter & Porat, *supra* note 33; Abraham, *supra* note 34.

[36] Grady, *supra* note 33.

[37] RESTATEMENT (THIRD) OF TORTS: LIAB. FOR PHYSICAL & EMOTIONAL HARM § 3 (AM. LAW INST. 2010). Other elements that determine liability are also evaluated from an objective perspective. For example, the foreseeability of the accident is determined objectively rather than subjectively. The question for the jury is not whether the defendant foresaw the plaintiff, but rather whether the defendant should have foreseen the plaintiff and the risk of the accident.

does not consider a defendant's specific capabilities[38] thereby leading to circumstances where the standard is too low for some injurers and too high for others.[39] While this misalignment does not disadvantage injurers in the former category, its impact can be substantial for the latter. Unintentional non-compliance results when injurers cannot achieve the reasonable person standard. For example, a physician is still expected to act like a "reasonable practitioner" even if she lacks some knowledge or skill to satisfy this standard in a particular circumstance.[40] As such, the objective standard condemns injurers who experience capacity limitations that fall below the reasonable person's abilities. Non-compliance with the standard of care can result from physical, mental, or emotional constraints.

2. Perfect Compliance

Unintentional non-compliance can also occur when the court expects conformity with the standard of care in *every* instance. Liability occurs under a "perfect compliance" regime when injurers cannot meet this rigorous requirement[41] due to random errors or lapses.[42] Individuals are prone to lapses either from limited capacity, attention span, or multi-tasking over extended periods of time. For example, Amy may be an excellent driver who generally takes precautions yet causes an accident in the few seconds she glances at her speedometer. Thus, even cautious drivers can negligently cause an accident because of a lapse.[43] As such, demand for perfect

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[38] Abraham, *supra* note 33, at 283. There are a few limited exceptions to this rule, including when courts allow evidence of limited capacity to be presented. *See* Ben-Shahar & Porat, *supra* note 33, at 637–41; ABRAHAM, *supra* note 7, at 64–67.

[39] Ben-Shahar & Porat, *supra* note 33.

[40] Note however that asymmetry exists when a high level of skill or knowledge may raise the required precaution by the defendant.

[41] William M. Landes & Richard A. Posner, *The Positive Economic Theory of Tort*, 15 GA. LAW REV. 851, 880 (1980).

[42] *Id.*at 879–80; Grady, *supra* note 33, at 894–906; Abraham, *supra* note 34, at 288–89.

[43] Peter A. Diamond, *Single Activity Accidents*, 3 J. LEG. STUD. 107, 123–25 (1974). We can think about compliance error as the distinction between two orders of negligence. *See* Cooter & Porat, *supra* note 33, at 330–31. The first order is the decision itself, such as driving at the speed limit. The second order is the attempt to maintain a precise precaution within

compliance with the standard of care is another example of unintentional non-compliance.

3. Res Ipsa Loquitur – The Presumption of Negligence

Finally, unintentional non-compliance can emerge from *res ipsa loquitur* ("the thing speaks for itself"), which assigns liability when the defendant's negligence is the likely consequence of the harm, even if it cannot be proven.[44] To illustrate, if a driver and a pedestrian collide, *res ipsa loquitur* presumes the former was the faulty party. The court can invoke *res ipsa loquitur* when the following conditions are fulfilled: (1) the accident is typically caused by a common type of defendant, (2) the defendant assumed full control of the instrument that caused the accident, and (3) the injury does not result from the plaintiff's voluntary action or contributory behavior.[45]

Unlike compliance errors and limited capacity, *res ipsa loquitur* enables defendants to be found negligent due to an overriding presumption even when they perfectly comply with the legal standard. From the defendant's perspective, *res ipsa loquitur* essentially creates a version of strict liability[46] by casting liability without finding legal fault as traditionally defined.[47] This outcome leads injurers to internalize error costs. Error costs are instances where, courts find injurers liable despite compliance because of the negligence presumption. Error costs, therefore, provide another reason why injurers need insurance to cover unintentional non-compliance episodes.

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the first order, such as maintaining a precise speed limit. Similarly, the goalkeeper's decision to jump right is a first order decision, and the quality of his attempt to block the ball is a second order decision.

[44] RESTATEMENT (THIRD) OF TORTS: LIAB. FOR PHYSICAL & EMOTIONAL HARM § 17.

[45] ABRAHAM, *supra* note 7, at 107.

[46] Grady, *supra* note 33, at 892–94; GEISTFELD, *supra* note 11, at 237–38.

[47] ARIEL PORAT & ALEX STEIN, TORT LIABILITY UNDER UNCERTAINTY 95–97 (2001); Stephen G. Gilles, *Negligence, Strict Liability, and the Cheapest Cost-Avoider*, 78 VA. L. REV. 1291, 1303–13 (1992).

4. Bad Moral Luck

Unintentional non-compliance occurs when an injurer cannot meet the objective standard, fails to exercise perfect compliance, or is presumed negligent under *res ipsa loquitor*. These factors all involve circumstances where compliance is beyond the injurer's physical control, making non-compliance an involuntary behavior. When an injurer's uncontrollable moments of non-compliance cause harm, we can conceptualize this condition as "bad moral luck."[48]

To demonstrate, a driver following the speed limit may nonetheless accelerate when she drives downhill. She will suffer "bad moral luck" if a pedestrian crosses her path at the exact moment she deviates from the standard of care. Thus, "bad moral luck" occurs when the injurer causes harm during her period of unintentional non-compliance.[49] Conversely, injurers experience "good moral luck" when their non-compliance does not trigger any harmful consequences.

III. THE EXPECTED OR INTENDED HARM CLAUSE

Given the possibility of bad moral luck, the expected or intended harm clause gives courts a tool to assign different protections to unintentional non-compliance and intentional negligent risk-taking. When harm is expected or intended, courts can use this contractual clause to bar

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[48] This article refers to bad moral luck in the sense of compliance luck and the personal characteristics of the injurer. This formulation mirrors the natural lottery concept. *See* JOHN RAWLS, A THEORY OF JUSTICE 101 (1971). Another type of moral luck, which is not discussed in this article, is casual moral luck. For a discussion of this manifestation of moral luck see generally Kasper Lippert-Rasmussen, *Justice and Bad Luck*, *in* THE STANFORD ENCYCLOPEDIA OF PHILOSOPHY 1 (Edward N. Zalta ed., 2014), https://plato.stanford.edu/archives/sum2014/entries/justice-bad-luck/ (last visited May 9, 2017); John C. P. Goldberg & Benjamin C. Zipursky, *Tort Law and Moral Luck*, 92 CORNELL L. REV. 1123, 1143–49 (2006). OLIVER WENDELL HOLMES, JR., THE COMMON LAW 108 (Revised ed. 1991); Jeremy Waldron, *Moments of Carelessness and Massive Loss*, *in* PHILOSOPHICAL FOUNDATIONS OF TORT LAW 387, 387–88 (David G. Owen ed., 1995).

[49] Tom Baker, *Liability Insurance, Moral Luck, and Auto Accidents Moral and Legal Luck*, 9 THEOR. INQ. L. 165, 168 (2008).

coverage.[50] Conversely, courts can find that unintentional non-compliance does not forfeit insurance protection.[51]

A. DISTINGUISHING NON-COMPLIANCE IN INSURANCE POLICIES

Insurance is a contract between two parties in which the injurer transfers her risk to an insurance company for a premium. Examples of liability insurance include automobile, commercial liability, homeowner, and renter insurance policies. In many cases, an insurance company requires its policyholder to conform to certain safety measures in order to maintain coverage or price. For example, homeowner insurers offer discounts when policyholders install smoke detectors.[52] By dictating the coverage terms, the insurance company monitors individuals to ensure they take appropriate

[50] FISCHER, WIDISS & KEETON, *infra* note 53, at 424–26 (reviewing various judicial different "approaches to assessing whether liability coverage exists for a consequences that the tortfeasor allegedly did not intend").

[51] FISCHER, WIDISS & KEETON, *infra* note 53, at 424–25 (the second approach presented by the authors). *See also infra* notes 76–78 and accompanying text.

[52] Ben-Shahar & Logue, *Outsourcing regulation*, *infra* note 53, at 224.

safety measures.[53] Thus, liability insurance serves as a safety regulator.[54]

Insurance plays a pivotal role in the American tort system[55] and thus merits attention for any understanding of injurer incentives. A quantitative study showed that in 2010 liability insurance was the greatest cost associated with tort cases ($172.9 billion) while self-insurance[56] accounted for a smaller amount ($61.9 billion).[57] Another study showed that plaintiff attorneys typically sue defendants for their insurance policy limits rather than for their personal assets' value.[58] As such, an insurance policy's scope and

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[53] JAMES M. FISCHER, ALAN I. WIDISS & ROBERT E. KEETON, INSURANCE LAW: A GUIDE TO FUNDAMENTAL PRINCIPLES, LEGAL DOCTRINES, AND COMMERCIAL PRACTICES 463–65 (2nd ed. 2016); Kenneth S. Abraham, *Four Conceptions of Insurance*, 161 PA. L. REV. 653, 683–91 (2012); Omri Ben-Shahar & Kyle D. Logue, *Outsourcing Regulation: How Insurance Reduces Moral Hazard*, [hereinafter: *Outsourcing regulation*] 111 MICH. L. REV. 197 (2012); Omri Ben-Shahar & Kyle D. Logue, *How Insurance Substitutes for Regulation*, 36 REGULATION 36 (2013) [hereinafter: *How Insurance Substitutes for Regulation*]. Tom Baker, *Liability Insurance as Tort Regulation: Six Ways That Liability Insurance Shapes Tort Law in Action*, 12 CONN. INSUR. LAW J. 1–16 (2005); but see Tom Baker & Sean J. Griffith, *The Missing Monitor in Corporate Governance: The Directors' & (and) Officers' Liability Insurer*, 95 GEO L. J. 1795 (2006); Tom Baker & Sean J. Griffith, *Predicting Corporate Governance Risk: Evidence from the Directors' & (and) Officers' Liability Insurance Market*, 74 CHIC. L. REV. 487 (2007).

[54] Abraham, *supra* note 53, at 683–91; Ben-Shahar & Logue, *How Insurance Substitutes for Regulation*, *supra* note 53; Ben-Shahar & Logue, *Outsourcing regulation*, *supra* note 53.

[55] Baker, *supra* note 53; Kathryn Zeller et al., *Physicians' Insurance Limits and Malpractice Payments: Evidence from Texas Closed Claims, 1990-2003 Current Research on Medical Malpractice Liability*, 36 J. LEG. STUD. S9–S46 (2007); *see e.g*. Ellen S. Pryor, *Stories We Tell: Intentional Harm and the Quest for Insurance Funding*, 75 TEX. L. REV. 172 (1996) (arguing that the plaintiff can engage in strategic pleading based on the policy's exclusions).

[56] This includes high deductibles and captive insurance programs. TOWERS WATSON, U.S. TORT COST TRENDS – 2011 UPDATE 10 (2012).

[57] *Id.* at 14.

[58] Tom Baker, *Blood Money, New Money, and the Moral Economy of Tort Law in Action*, 35 LAW & SOC'Y REV. 275, 281 (2001). ("[I]f the

limitations, particularly liability insurance, has rippling effects for injurer behavior and tort litigation.[59]

Central to this structure is how insurance companies differentiate coverage between intentionally inflicted harm, intentional negligent risk-taking, and unintentional non-compliance. Insurers, policyholders, and society all benefit when coverage includes unintentional non-compliance but rejects the former two categories. A fairness argument supports this distinction: it seems improper to bar coverage for injurers who purchase insurance to protect against unintentionally caused harm. Policyholders obtain insurance because they seek coverage for unintentional non-compliance, including uncontrollable accidents that cause substantial harm. In contractual terms, obtaining coverage for unintentional behavior is within the injurer's reasonable expectation. By contrast, denying coverage for intentional negligent risk-taking makes sense since this approach eliminates moral hazard problems that would emerge if insurance companies subsidized intentional risk-taking. Once again, an injurer who intentionally engages in risk-taking may expect her coverage to be challenged if her deliberate intentions are revealed.

Another important consideration is efficiency. Unintentionally non-compliant policyholders pose an ordinary risk on average since they consistently attempt to meet the standard of care but occasionally fall short. This description captures all individuals since human error prevents perfect compliance. Assuming unintentional non-compliance is random, then under a normal distribution all policyholders impose the same risk on average. Therefore, unintentional non-compliance operates within the ordinary insurance framework in which harm results from lapses or limited capacity, not from a lack of precaution. In this way, allowing coverage for unintentional non-compliance will not distort injurer incentives since the policyholder continues to internalize her accident costs as she tries to comply with the standard of care. The same cannot be said for intentional negligent risk-taking. When insurance covers intentional negligent risk-taking, the injurer externalizes some of the accident costs to her insurer, leading to a moral hazard problem. With the insurance company subsidizing her negligent risk-taking, the injurer will continue to take inefficient precautions against potential harms.

Efficiency also demands barring coverage for intentional negligent risk-taking because this conduct raises costs to insurers and other

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respondents are accurate, plaintiffs prefer not to purse blood money in an ordinary negligence case").

[59] ABRAHAM, *supra* note 7, at 281–83.

policyholders. For unintentional non-compliance, an insurer can balance high-risk activity through its policy terms or the average risk pool. Once insurers agree to cover individuals with a high-lapse potential, they can mitigate their risk by adjusting ratings, increasing deductibles and requesting higher premiums. Conversely, intentional negligent risk-taking is more challenging to assess during the underwriting process because policyholders will not disclose their intentions.[60] As a result, insurers cannot discriminately impose stricter coverage terms for these individuals since they cannot accurately identify them. Moral hazard also increases the risk pool because intentional risk takers transfer the costs of their risk-taking to other compliant policyholders in the pool.[61]

Following these assumptions about insurers and injurers, there is both a need and a benefit to policies differentiating between types of non-compliance. The expected or intended harm clause seeks to provide this needed filter.

B. EXCLUDING COVERAGE FOR EXPECTED OR INTENDED HARM

Commercial General Liability (CGL) is "the first line of coverage that businesses in [the United Sates] use to insure against liability."[62] A standard CGL insurance policy provides coverage for bodily injury or property damages that result from "an occurrence."[63] An insurance policy

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[60] We can also ask whether individuals who have a high tendency of lapsing will disclose this information during the underwriting process. Intuitively, it seems unlikely because this honesty will lead to higher premiums. Therefore, as will be discussed further in Section III.C.2, injurers who know and do not disclose their high-lapsing behavior, essentially engage in intentional negligent risk taking. To see why, recall that the intentional risk taker chooses her activity *because* she can externalize the harm to the insurer and only bears the premium costs. In a similar manner, the injurer who suffers from high-lapses and uses insurance to mitigate her exposure to the risk is intentionally negligent. Absent her insurance, this individual would not have engaged in the same activity.

[61] *See* Charter Oil Co. v. Am. Emp'rs Ins. Co., 69 F.3d 1160, 1166 (D.C. Cir. 1995) (arguing to a similar effect).

[62] Kenneth S. Abraham, *The Rise and Fall of Commercial Liability Insurance*, 87 Va. L. Rev. 85, 85 (2001).

[63] INSURANCE SERVICES OFFICE, COMMERCIAL GENERAL LIABILITY – COVERAGE FORM CG 00 01 04 13, at 1 (2012) [hereinafter COMMERCIAL

generally defines occurrence as "an accident, including continuous or repeated exposure to substantially the same general harmful conditions."[64] Through its broad scope, this language accounts for harm caused by sudden and unexpected events as well as harm caused by a slow and gradual injury.[65] It is important to note that the policy leaves "accident" undefined despite using the term six additional times.[66] Although a definition is not clearly provided, "accident" can be inferred to encompass an event that is neither expected nor intended. This presumed meaning is grounded in the fact that insurance policies explicitly exclude expected or intended harm, noting that coverage does not apply to "[b]odily injury or property damage expected or intended from the standpoint of the insured."[67]

By contractually excluding expected or intended harm, insurance policies cabin the type of risk an individual can transfer to her insurer.[68] By limiting coverage to unanticipated harm, the injurer bears the costs for any "expected" or "intended" accident. This responsibility differs from universal coverage, which would enable injurers to externalize all their costs for non-compliance. Determining when an accident is "expected" or "intended" presents a difficult inquiry that courts approach differently. This varied

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GENERAL LIABILITY].

[64] *Id*. at 15.

[65] FISCHER, WIDISS & KEETON, *supra* note 53, at 422 (internal quotations omitted).

[66] COMMERCIAL GENERAL LIABILITY *supra* note 63; *See, e.g.*, State Farm Fire & Cas. Co. v. CTC Dev. Corp., 720 So. 2d 1072, 1075 (Fla. 1998) (discussing the definition of accident).

[67] COMMERCIAL GENERAL LIABILITY, *supra* note 63, at 2. Other insurance policies that provide liability insurance, such as homeowners and renters insurance also contain a similar expected and intended exclusion. *See, e.g.*, INSURANCE SERVICES OFFICE, HOMEOWNERS 3 – SPECIAL FORM - HO 00 03 10 00 (1999).

[68] For example, exclusions such as "Knowing Violation of Rights of Another," "Material Published With Knowledge of Falsity," "Criminal Acts," "Contractual Liability," "Quality or Performance of Goods – Failure to Conform to Statements," "Wrong Description of Prices," and "Infringement of Copyright, Patent, Trademark or Trade Secret" attempt to mitigate the insurance company's exposure to intentional negligent risk-taking by the insured that would be transferred to the insurance company. *See* COMMERCIAL GENERAL LIABILITY, *supra* note 63, at Coverage B-Exclusions.

response is problematic because it can lead to inconsistent outcomes. The subsequent section discusses these challenges in judicial interpretation.

C. AN IMPERFECT INTERPRETATION

Some jurisdictions interpret the expected or intended clause to cover only intentionally inflicted harm. As one court articulated in *Snyder v. Nelson*, "it is against public policy for a tortfeasor to insure against liability for intentionally inflicted injury or damage." [69] Under this approach, both intentional negligent risk-taking and unintentional non-compliance receive insurance coverage. However, measuring intentions is difficult with the line between intentional infliction of harm and intentionally negligent risk-taking often blurred.

Should coverage forfeiture be limited to intentionally inflicted harm or should intentional negligent risk-taking also be barred? One might assume that the shared '*intentional*' element leads to an affirmative answer. However, intentional risk-taking is also aligned with unintentional non-compliance in that both behaviors have similar outcomes: their activities *do not intend* the resulting harm. Given this commonality, it is not clear that intentional negligent risk-taking is more like intentionally inflicting harm than unintentional non-compliance. As such, courts should determine where intentional risk-taking falls on the spectrum between intentional infliction of harm, a socially unacceptable activity, and unintentional non-compliance, a behavior deserving coverage. By using different "expected" harm definitions, courts create coverage uncertainty for behavior falling outside intentionally inflicted harm. Such unpredictability impacts injurer incentives because there is a possibility she will be responsible for the total accident cost.

An intuitive approach to "expected" harm is understanding it in terms of tort law where "expected" often equates to "foreseeable." When an injurer anticipates her conduct will generate some likelihood of harm, then coverage should be denied if such harm materializes. Most courts reject this unforgiving approach as seen in *Carter Lake v. Aetna Cas. & Sur. Co.*[70]:

> [A]n injury is not caused by accident because the injury is reasonably foreseeable would mean that only in a rare instance would the comprehensive general liability policy be of any benefit

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[69] 278 Or. 409, 564 P.2d 681 (1977).
[70] 604 F.2d 1052 (8th Cir. 1979).

> to [the defendant]. Enforcement of the policy in this manner would afford such minimal coverage as to be patently disproportionate to the premiums paid and would be inconsistent with the reasonable expectations of an insured purchasing the policy.[71]

Instead, the court focused on the magnitude of the injurer's risk-taking and did not bar coverage simply because the harm was foreseeable. The court elaborated:

> [T]he word 'expected' denotes that the actor knew or should have known that there was a substantial probability that certain consequences will result from his actions. If the insured knew or should have known that there was a substantial probability that certain results would follow his acts or omissions then there has not been an occurrence or accident as defined in this type of policy when such results actually come to pass. The results cease to be expected and coverage is present as the probability that the consequences will follow decreases and becomes less than a substantial probability.[72]

In *Carter Lake*, the court offered a common construction for "expected" harm where coverage is excluded if (1) the injurer had knowledge that her conduct created a (2) substantial probability of harm.[73] To satisfy the first prong, insurers must show that the injurer knew (subjective) or should have known (objective) her actions risked harm. Under the *Carter Lake* test, meeting either the subjective or objective standard satisfies this prong. However, *Carter Lake* is not a universal approach. Most jurisdictions employ similar prongs in their "expected" harm analysis,[74] but limit the first inquiry to a strictly subjective standard.[75] For

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[71] *Id.* at 1058.

[72] *Id.* at 1058–59.

[73] *See* discussion *infra* Section III.C.2.

[74] *See, e.g.*, Johnson v. Am. United Life Ins. Co., 716 F.3d 813, 882-27 (4th Cir. 2013); Carney v. Vill. of Darien, 60 F.3d 1273, 1280 (7th Cir. 1995); Wickman v. Nw. Nat'l Ins. Co., 908 F.2d 1077, 1088 (1st Cir.1990); Hartford Roman Catholic Diocesan, Corp. v. Interstate Fire & Cas. Co., 199 F. Supp. 3d 559, 594-96 (D. Conn. 2016); Cas. & Sur. Co. v. Waisanen, 653 F. Supp. 825, 830-31 (D.S.D. 1987).

[75] U.S. Fid. & Guar. Co. v. Armstrong, 479 So. 2d 1164, 1167 (Ala. 1985) ("[T]he legal standard to determine whether the injury was either

example, in *Johnstown v. Bankers Standard Ins. Co.*,[76] the court found the injurer forfeited recovery if she "intended the damages, or if it [could] be said that the damages were, in a broader sense, 'intended' by the insured because [she] knew that the damages would flow directly and immediately from its intentional act."[77] Many courts adopt this narrower formulation of the "expected" harm analysis.[78] The following section discusses how a court' decision to adopt the broad *Carter Lake* approach or the narrow *Johnstown* approach impacts coverage for unintentional non-compliance and intentional negligent risk-taking.

1. Assessing Subjective Expectation

Whether employing *Carter Lake*'s broad test or *Johnstown*'s narrow one, courts must evaluate an injurer's harm expectation. Two elements are critical for an accurate analysis: (1) ascertaining the injurer's knowledge, and (2) measuring the quality of her knowledge.[79] Both these inquires present

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expected or intended . . . is a purely subjective standard."); Fire Ins. Exch. v. Berray, 694 P.2d 191, 194 (Ariz. 1984) (the legal standard should be "from the standpoint of the insured"); Great Am. Ins. Co. v. Gaspard, 608 So. 2d 981, 985 (La. 1992) ("[T]he subjective intent of the insured is the key and not what the average or ordinary reasonable person would expect or intend."); Shell Oil Co. v. Winterthur Swiss Ins. Co., 15 Cal. Rptr. 2d 815, 861 (Cal. Ct. App. 1993) (rejecting the subjective "should have known" test).

[76] 877 F.2d 1146 (2d Cir. 1989).

[77] *Id.* at 1150 (internal citation omitted).

[78] Westfield Ins. Co. v. Tech Dry In., 336 F.3d 503 (6th Cir. 2003); Stonewall Ins. Co. v. Asbestos Claims Mgmt. Corp., 73 F.3d 1178 (2d Cir. 1995); Am. Home Assurance Co. v. Safeway Steel Prods. Co., 743 S.W.2d 693 (Tex. App. 1987); Quaker State Mint-Lude, Inc. v. Fireman's Fund Ins. Co., 868 F. Supp. 1278 (D. Utah 1994).

[79] Another challenge to a narrower subjective test is redundancy as the policy language already excludes harm that is either expected or intended through the Expected or Intended Harm Clause. Some courts have ruled that insurance policy provisions should be interpreted so that every word has a distinct meaning. *See* Galli v. Metz, 973 F.2d 145, 149 (2d Cir. 1992) (applying N.Y. law); Bay State Ins. Co. v. Wilson, 451 N.E.2d 880, 882 (Ill. 1983); Klapp v. United Ins. Grp. Agency, Inc., 663 N.W.2d 447, 453 (Mich. 2003); Balandran v. Safeco Ins. Co. of Am., 972 S.W.2d 738, 741 (Tex. 1998). If the test for expected harm is subjective intent, then the insurance

hurdles for courts. Often it is unclear whether harm resulted from negligent risk-taking or unintentional non-compliance. To illustrate, assume a manufacturer disposes harmful waste knowing her improper disposal will cause permanent contamination. If she disposes the waste improperly, is her behavior a calculated risk or a human error despite aiming for perfect compliance? When subjective intent is inferred from objective evidence (i.e. improper waste disposal, or warnings about the potential of hazard),[80] it is almost impossible to determine if the manufacturer intended to take the risk or whether she suffered from bad moral luck.

In these instances, the choice between using the *Carter Lake* test or the *Johnstown* test determines the scope of coverage. Courts adopting the *Johnstown* approach require the insured to prove the manufacturer *knew* about the risk when she acted. Under this standard, unintentional non-compliance is covered because the manufacturer's harm was neither expected nor intended, but resulted from involuntary behavior. Conversely, the broad *Carter Lake* approach requires proof that the manufacturer *should have known*[81] about the risk—a much lower evidentiary bar that can be

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policy could have easily precluded intended harm. This contractual interpretation is not necessarily as problematic as it may appear at first glance. Having laid the foundations for how to distinguish between different types of non-compliance in Part II, we can attribute the term "intended" to "intentional infliction of harm" and the word "expected" to "intentional negligent risk-taking." Under this word association, unintentional non-compliance is inapplicable to either of these categories and remains covered by the policy. Even once incorporating "intent" into the narrower subjective test, this term may still have a unique and distinguishable meaning from "intended harm."

[80] The court in *Walnut Grove Partners., L.P. v. Am. Family Mut. Ins. Co.*, 479 F.3d 949 (8th Cir. 2007) concluded that a notice of mold established an expectation that harm would occur. In *Carney*, *supra* note 74, the court ruled that prior allegations against officer misconduct established an expectation by his employer.

[81] Objective approach supports barring recovery, for example, for blatantly foolish behavior, which is sometimes referred to as the "Damn Fool Doctrine." FISCHER, WIDISS & KEETON, *supra* note 53, at 440–42; Tenn. Farmers Mut. Ins. Co. v. Evans, 814 S.W.2d 49 (Tenn. 1991); Metro. Prop. & Cas. Ins. Co. v. Buckner, 302 S.W.3d 288 (Tenn. Ct. App. 2009). The "Damn Fool" doctrine can be conceptualized as a variation of an objective measure to establish subjective expectations regarding an

inferred as a matter of law.[82] With a reduced burden of proof, courts may find the expected or intended harm clause excludes coverage for both intentionally negligent risk-taking and unintentional non-compliance. As a result, the court's decision to evaluate "knowledge" under a subjective or objective test impacts whether courts will find unintentional non-compliance excluded from coverage. If devised broadly, a subjective test prohibits coverage, whereas a narrow interpretation under perfect information allows coverage for bad moral luck.

The second challenge in dealing with subjective intent is gauging the precision of the injurer's knowledge, i.e. how accurately did the injurer anticipate the materialized harm. The injurer may forecast a specific harm from her actions but a different harm actually occurs. For instance, the manufacturer expects her improper waste disposal to pollute the soil, but it unexpectedly expands to pollute the next town's water reservoirs. Additionally, the injurer may expect her actions to produce a certain magnitude of harm; yet, the actualized harm is substantially greater. Again, improper waste disposal may contaminate a larger area because of rain and run-off. An injurer's mistake in assessing her harm's type and magnitude *ex ante* complicates the question of whether it was "expected." Courts must determine whether these miscalculations negate an injurer's expectation of harm. The court's choice of interpretive approach often informs this outcome.

Under a broad *Carter Lake* test, an injurer's harm miscalculation is unimportant since liability can be found under an objective standard. Because the resulting harm is measured against what a reasonable person would have anticipated, the injurer's error is irrelevant. As such, both intentional negligent risk-taking and unintentional non-compliance will be excluded from coverage under an objective standard so long as the reasonable person could anticipate the harm's magnitude and type. Conversely, the narrower *Johnstown* test prioritizes the injurer's predictions as a critical factor in evaluating "expected" harm. This interpretation's advantage is that it covers unintentional non-compliance, which by nature yields less anticipated harms since the objective is compliance with the standard of care. However, the *Johnstown* approach can be over-inclusive and sweep in intentional negligent risk-taking. If intentionally negligent risk-

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individual's intention to cause harm.

[82] Auto-Owners Ins. Co. v. Harvey, 842 N.E.2d 1279 (Ind. 2006); Am. Bumper & Mfg. Co. v. Nat'l Union Fire Ins. Co., 683 N.W.2d 161 (Mich. Ct. App. 2004).

takers cause harm that is different in-kind or proportion to their initial aims, then by definition their harm was "unexpected", and they receive coverage.

As seen through this discussion, the court's interpretive approach informs the scope of coverage. Whether the court decides to adopt a broad objective test or a narrow subjective test results in comparable unintentional non-compliance being excluded from coverage in some cases but not others. By focusing on the injurer's knowledge at the time of the accident, a narrow subjective test under perfect information distinguishes unintentional non-compliance and intentional negligent risk-taking. Conversely, a broad objective test cannot attain this same filtering and so excludes coverage for the former behavior. While the narrow subjective test seems superior in evaluating the extent of the injurer's "knowledge" (whether she is or is not aware of her activity's possible harm), it is less apt at measuring the accuracy of her knowledge (the certainty of her risk). Under a subjective test, any harm that diverges from the injurer's expectation is "unexpected." Therefore, a narrow subjective test allows coverage for intentional negligent risk-taking when the actualized harm differs. For these reasons, assessing an injurer's harm expectation is important in the coverage analysis, but may lead to imperfect outcomes in some instances.

2. Substantial Probability

In addition to determining "knowledge," courts must also determine the second prong in the "expected" harm subjective analysis: whether the injurer's conduct created a substantial probability of harm. To satisfy this prong, the *Carter Lake* court, like many others,[83] requires a substantial probability that the injurer's harm will materialize. While no court has explicitly quantified the "substantial probability" threshold,[84] we can assume this test demands a higher likelihood than a 50-50% probability. Courts use the "substantial probability" inquiry to gauge an injurer's awareness regarding the likelihood that her harm may occur. In other words, the answer to this inquiry is articulated as a percentage—for instance, Amy is 60% confident that her risk-taking could cause harm. The advantages of the "substantial probability" approach are two-fold. First, it provides flexibility

[83] *Wickman v. Nw. Nat'l Ins. Co*., 908 F.2d 1077 (1st Cir. 1990); *Carney*, 60 F.3d 1273; *Hartford Roman Catholic Diocesan, Corp. v. Interstate Fire & Cas. Co.*, 199 F. Supp. 3d 559 (D. Conn. 2016); *Honeycomb Sys., Inc. v. Admiral Ins. Co.*, 567 F. Supp. 1400 (D. Me. 1983).

[84] See all the above cases in this part, none defines substantial probability numerically.

to cover unintentional non-compliance since injurers aim for the standard of care yet fail. Absent atypical situations, unintentionally non-compliant injurers take precautions that are close to the legal standard so it is less likely that their conduct will trigger a substantial probability of harm. Second, as a supplement to the "knowledge" requirement, the "substantial probability" inquiry also filters out intentional negligent risk-taking from coverage. If an injurer knows her conduct will impose a high probability of risk, then such harm is expected. To this extent, awareness of a risk's substantial probability necessarily implies knowledge and, therefore, cannot be unintentional.

Despite advantages in filtering injurer behavior, the "substantial probability" probe also presents difficulties. First, it remains unclear what percentage constitutes a "substantial probability," with any determination appearing arbitrary. Does the probability need to be a high threshold like 90% or is a number above 51% sufficient? Second, probability is hard to precisely evaluate because of its speculative nature. Third, this test may exclude beneficial behavior when there is a substantial probability of harm. Fourth, and relatedly, the "substantial probability" test may also suspend coverage for small-magnitude harm, while providing insurance for high-magnitude and costly harm as long as there is a low probability of occurrence.

Although the "substantial probability" analysis seems to conflict with the aims of the expected or intended harm clause, four important factors mitigate these concerns: (1) injurer awareness of unintentional non-compliance; (2) specialty policies; (3) the common law of torts; and (4) restorative efforts. Regarding the first element, when an injurer knows there exists a substantial probability of her harm materializing, then pursuing this activity reveals a deliberate and informed decision. A rational injurer will only participate in an activity when the benefits outweigh the costs. The possibility of losing coverage increases an activity's cost, thereby making it less likely that the injurer will externalize this cost to her insurer. When injurers anticipate their small lapses could produce a substantial probability of harm, then coverage forfeiture will dissuade them from engaging in the activity. Given this effect, insurance policies can exclude injurer behavior that generates a substantial probability of harm as compared to the average policyholder pool even when such harm is unintended.[85]

This arrangement has merit because it mitigates adverse selection and moral hazard problems.[86] When the injurer knows she is likely to deviate

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[85] Baker, *supra* note 49.

[86] *W. Cas. & Sur. Co. v. W. World Ins. Co., Inc.,* 769 F.2d 381, 385 (7th

significantly from the standard of care or her activity is dangerous, she can exploit this information asymmetry by purchasing insurance and expecting coverage. While some may challenge the assumption that injurers know their own deviation frequencies and magnitudes, it is important to emphasize that injurers are best positioned to acquire information about their own lapses. Although injurers cannot predict their every non-compliance, they know the risk of lapsing and should be incentivized to acquire this information.

Another factor that can provide coverage for unintentional non-compliance is a specialized insurance policy. This tool allows insurers to pool injurers whose slight deviations generate a high probability of harm, thus distributing the risk and providing coverage for these episodes. Medical malpractice and auto-insurance are examples of these policies.[87] Through this insurance structure, policyholders, who may have otherwise been barred from coverage because of their probable harm-generating activity, could still receive coverage. To illustrate, assume a surgeon performs a lifesaving treatment on a patient knowing that this procedure has a high probability of failure and can trigger harmful side effects. Absent a specialized policy that provides coverage for expected harm, the surgeon's conduct will be barred from insurance protection when reviewed under the expected or intended harm clause because she is aware of her high harm-generating probability.

The third vehicle to address significant lapses is through the common law of torts, which excuses certain non-compliant injurers from liability. Negligence law carves out groups that are expected to take fewer

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Cir. 1985) (suggesting that purchasing insurance can incentivize the insured to "take more risks than before because he bears less of the cost of his conduct."); Gary T. Schwartz, *The Ethics and the Economics of Tort Liability Insurance,* 75 CORNELL L. REV. 313, 338 n.117 (1990) ("'Moral hazard' is sometimes distinguished from 'morale hazard,' the former referring to deliberate acts like arson, the latter to the mere relaxation of the defendant's discipline of carefulness."); George L. Priest, *The Current Insurance Crisis and Modern Tort Law*, 96 YALE L.J. 1521, 1547 (1987) ("Ex ante moral hazard is the reduction in precautions taken by the insured to prevent the loss, because of the existence of insurance").

[87] These specialized policies are also characterized by certain governmental regulation. These regulations create external incentives for insurers to provide insurance for policyholders that can potentially cause great harm. Examples include tort reform and the cap on medical malpractice damages and the requirement for mandatory Automobile Insurance Policy. See ABRAHAM, *supra* note 7, at 281–95.

precautions.[88] Children, the elderly, and individuals with disabilities, for example, are consistently assessed against a lower standard of care.[89] In the context of coverage forfeiture, negligence doctrines protect these individuals so that even highly probable risk-generating behavior may not be classified as negligent. This exception occurs when the injurer is part of a recognized sub-group that has traditionally been evaluated under a lower standard, and she meets this standard notwithstanding her harm's high probability. In this way, negligence law shields certain groups from suspended coverage since their liability threshold is already set at an exceptionally high standard.

Finally, coverage may be regained from conduct with a substantial probability of harm if the injurer took actions to mitigate her risk. Several courts advance this idea by allowing recovery if the defendant attempted to reduce her risk. For example, in *Potomac Ins. of Ill. v. Jonson Huang*,[90] the court found that when the defendant "took proactive measures to repair and replace the leaky windows in a sincere attempt to avoid recurrent incidents of the same nature…[he] fully hoped and expected that its remedial efforts would prevent subsequent incidents of the same nature."[91] By reducing the likelihood of occurrence or recurrence, preventative measures insulate the injurer from expecting subsequent accidents. As a result, when an injurer knows her conduct has a substantial probability of causing harm and she takes measures to lessen it, then the risk's manifestation should legally be considered "unexpected."

While the aforementioned approaches may reduce the adverse effects of the "substantial probability" test, insurance companies can offer a superior solution. Foremost, insurers can adjust their policy language away from expected harm—a "substantial probability" inquiry— and towards assessing the magnitude of harm—a "substantial risk" examination. Under this new focus, courts can determine that an injurer's conduct was "expected" when her action produced a substantial *risk* of harm regardless of its occurrence probability.

Although colloquially similar, "substantial probability" and "substantial risk" evaluate different factors, and thus result in disparate outcomes. Unlike "substantial probability" which measures chance, "substantial risk" concerns the degree of risk. We can conceptualize this

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[88] Ben-Shahar & Porat, *supra* note 33, at 636–41.

[89] ABRAHAM, *supra* note 7, at 64–67.

[90] Potomac Ins. of Ill. v. Jonson Huang, No. 00-4013-JPO, 2002 U.S. Dist. LEXIS 4710, at *25 (D. Kan. Mar. 1, 2002).

[91] *See also Lone Star Steakhouse & Saloon, Inc., v. Liberty Mut. Ins. Grp.*, 343 F. Supp. 2d 989 (D. Kan. 2004).

distinction in economic terms, where substantial risk is the probability of harm multiplied by the accident cost. This is its main advantage: a "substantial risk" approach provides courts with a calculation for measuring probability. For example, a 5% marginal increase in probability (from 2% to 7%) for $2 billion in environmental damages can be a substantial risk even though generally a 7% probability of harm may seem low. Absent this "substantial risk" computation, courts are left with arbitrary line-drawing. The arbitrariness problem is not present in a "substantial risk" examination since courts can weigh the resulting harm against the activity's benefits.

While "substantial risk" solves the computation problem, this approach has limitations and may fail to differentiate unintentional non-compliance and intentional negligent risk-taking when unintentional activities generate substantial risks. One way to conceptualize this outcome is by grouping "risk" into three categories: compliance, ordinary, and substantial. An injurer who conforms with the standard of care only imposes a compliance risk—a risk injurers can legally inflict without being liable for the resulting harm. However, both ordinary and substantial risk suggest some deviation from the standard of care. In order for an injurer's harm to be expected, a "substantial risk" examination requires her risk be substantial in magnitude, not just likelihood.

One disadvantage of the "substantial risk" approach is that it ignores activities that diverge from the typical correlation that increased precautions reduce accident costs. In fact, small lapses may lead to an enormous increase in an accident's probability or the risk level. For example, assume that physicians lapse randomly when analyzing their patients' test results. A physician's slight misreading may have larger implications in the future if her mistake prevents an early cancer diagnosis. When courts use "substantial risk" to estimate a harm's "substantial probability," then unintentional non-complaint injurers are barred from coverage when small lapses produce a large increase in risk.

In sum, courts currently use the "substantial probability" test to determine whether coverage should be barred when the injurer knew about her risk. This test provides a good mechanism to infer knowledge since courts can cite to an injurer's awareness of substantial probability as evidence that her harm was expected. However, despite this advantage, this test lacks a reliable computation method for courts to determine what degree of certainty amounts to a "substantial probability." This shortcoming can sometimes be mitigated through injurer awareness of unintentional non-compliance, specialty policies, the common law of torts, and restorative efforts. Yet such solutions are not guaranteed. In response, insurers may be wise to adopt a different assessment approach by drafting their insurance

policies to bar coverage for harm with a "substantial risk" rather than harm with a substantial probability of occurring. This shift in evaluation is better aligned with efficiency considerations because it provides courts a more reliable computation to measure expected harm. Although offering important advantages when compared to the "substantial probability" test, the "substantial risk" test has its own imperfections, which can lead courts to bar coverage for unintentional non-compliance since the "substantial risk" knowledge requirement is also vulnerable to misclassification. This outcome is described further in Section III.C.1.

IV. OPTIMAL INTERPRETATION

The expected or intended harm clause allows insurance companies to differentiate between bad moral luck and intentional negligent risk-taking. Due to interpretive imperfection, courts undermine this aim when assessing subjective expectation and substantial probability. To mitigate this problem, this article recommends adding a best efforts component[92] to the "expected" harm analysis where injurers are evaluated according to their personal abilities. By rejecting the *Carter Lake* objective approach and refining the *Johnstown* subjective standard, the best efforts test provides a more reliable way to distinguish intentional non-compliance. With an enhanced mechanism for identifying "expected" harm, courts can more consistently interpret the expected and intended harm clause to exclude coverage for intentional negligent risk-taking, without also barring unintentional non-compliance. At this core, the best efforts test shifts the inquiry from a knowledge-oriented analysis (what did the injurer know?) to a behavior-oriented analysis (how did the injurer act?). The following sections detail this test's advantages, the need for shifting the burden of proof, and possible criticisms.

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[92] The best efforts test suggested in this article is similar to the Second Order Precaution defense that has been suggested in the context of negligence law. *See* Cooter & Porat, *supra* note 33; However, the Second Order Precautions defense raises certain problems in the context of negligence, such as the problem of proving causation, which the authors note, *id.* at 355–56. There is no causation problem in the insurance policy context. Additionally, there is no problem of costing shifting to the victim, a party that usually cannot contract with the injurer, rather to the insurer a party that have contracted with the insurer. Hence, inefficiencies in cost shifting could be solved contractually between the parties.

A. DETERMINING WHAT IS "BEST"?

A critical component of the best efforts test is how to measure "best." While an injurer's actual efforts provide insight into intentionality, this criterion can be over-inclusive because it also captures minimal risk-taking that appears unintentional. To avoid this problem, the legal test must ensure that an injurer's efforts represent her *best* precautionary measures, not just her *actual* precautionary measures. Defining "best" implicates both practicality and fairness concerns. Regarding practicality, injurers must be able to meet the standard of care notwithstanding their imperfections. In terms of fairness, only efforts that surpass a higher threshold should qualify as "best" compared to any generic effort.

In applying a best efforts test, courts should evaluate an injurer's negligent behavior against her ordinary conduct in order to establish a subjective standard of care. To accomplish this analysis, courts must examine the injurer's behavior over an extended period of time before the accident—an approach which deviates from traditional tort doctrine by considering previous compliance. For instance, an injurer with a speeding infraction would be assessed against her past driving record. A medical malpractice claim would invite examination into the physician's records. Pollution would trigger research into a factory's historical handling of its toxins. By evaluating an injurer's previous actions, courts can learn a great deal about her ordinary behavior and see how her negligent conduct compares. If an injurer maintains a strong record of previous compliance, then it is more likely her harm resulted from unintentional non-compliance. The inverse is also true where frequent substantial deviations suggest intentional negligent risk-taking. Revisiting *Carter Lake* assume the municipality provided evidence of: (1) their timely response to previous complaints; and (2) a record of answered complaints. If the court believes, the municipality's behavior did not fall substantially below its ordinary conduct, then such conduct does not indicate a lack of "best" efforts, and thus a defense should stand as the case does not constitute intentional negligent risk-taking, and vice versa.

A likely criticism to the best efforts test is that it incentivizes injurers to reduce their ordinary precautions, so their subjective standard is also lowered. While a valid concern, mitigating factors within the insurance industry counteract this problem, especially premiums. Insurance policies undergo an underwriting process in which the insurance company determines the injurer's level of risk. Lowering one's best efforts standard to qualify for *ex-post* coverage can increase the insurance premium *ex ante*. In fact, in some cases, applicants with high ordinary risk may not be able to

obtain insurance at all. To counteract higher premiums, injurers will show they do not pose a risky investment and have exceptional "best efforts." Having presented this narrative to capitalize on lower premiums, the injurer will be foreclosed from later arguing that her best efforts comport to a lower standard. Given these counterbalancing factors, an injurer's best efforts will correlate to the standard initially presented and captured by the policy premium.

Another criticism of the best efforts test is that it incentivizes insurance companies to require timely updates of injurer behavior. While a potential administrative inconvenience, this byproduct is not necessarily a disadvantage. If the injurer and insurer both know that "best efforts" includes behavior captured by the policy and premium, then each party will be incentivized to provide the other with periodic information. Injurers will be motived to submit their information because a record of compliance safeguards against "expected" harm claims. Similarly, insurers have an interest in receiving this information, which would normally not be shared, so they can update their policy terms and premiums.

Thus far, we have examined the best efforts test through the injurer's representations, but policy warranties also serve as a reliable "best" effort proxy since they reveal the injurer's guarantees. No legal rule prevents parties from incorporating the injurer's subjective standard of behavior into the insurance policy as a form of warranty. For example, an insurer may require a factory to pledge its compliance with its own rules regarding hazardous material handling. In response, the factory is incentivized to create rules that are not too strict to facilitate easy compliance but also not too lenient, which will increase the premium price. As such, when insurance policies use a subjective standard, they provide courts a better rubric to measure the injurer's conduct.

B. BURDEN OF PROOF – BEST EFFORTS AS A DEFENSE

In order to bar coverage, the insurance company bears the burden of proof.[93] To satisfy its burden, the insurer must prove that the injurer had (1)

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[93] Johanna Hjalmarsson, *The Standard of Proof in Civil Cases: An Insurance Fraud Perspective*, 17 INT'L J. EVIDENCE & PROOF 47, 48 (2013); William C. Hoffman, *Common Law of Reinsurance Loss Settlement Clauses: A Comparative Analysis of the Judicial Rule Enforcing the Reinsurer's Contractual Obligation to Indemnify the Reinsured for Settlements*, 28 TORT & INS. L.J. 659, 698–99 (1993).

subjective knowledge that there was (2) a substantial probability of harm.[94] Once the insurer satisfies these two elements, the best efforts test can be used as a defense, rather than an independent claim. The best efforts test is optimally situated as a defense for several reasons. First, this test assesses the injurer's culpability, competence, and behavior—all information within the injurer's possession.[95] As such, it is efficient to assign the injurer the burden of proof because her superior access to this information and high level of reliability makes her the cheapest information gatherer.[96] Moreover, as the above discussion revealed, the underwriting process discourages injurers from lying about their best efforts because their premiums reflect their capacities.

Second, assigning the burden of proof to the insurance company creates a conflict of interest. Rational injurers will not provide best efforts evidence when it is lacking because they will lose coverage. If the insurance company fails to satisfy its burden of proof because of insufficient evidence, then coverage will be granted regardless of whether the injurer exercised her best efforts. In this way, the injurer is incentivized to keep deficient best effort evidence secret since she benefits when the insurance company cannot prove this element. This result bolsters the broad subjective test's over-inclusiveness because any mitigating effect becomes marginal.

Third, employing a best efforts defense lowers litigation costs. A defense is triggered when courts rule that the expected or intended harm clause exclusion applies. As such, in cases where the court finds no exclusion, the best efforts test is superfluous because failure to meet the first two conditions—subjective knowledge and substantial probability—is fatal. Conversely, when the injurer believes she has a strong best efforts defense, then parties can litigate this question first. If the court finds for the injurer, then the "expected" harm inquiry becomes secondary since the injurer took her best precautions. For these reasons, a best efforts defense is optimal because the injurer possesses the necessary information and is incentivized to use it in her defense. Moreover, this defense saves litigation costs because

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[94] *Compare* with the current requirement for substantial probability *supra* Part III.C.2.

[95] Ben-Shahar & Porat, *supra* note 33.

[96] Similar argument made in the context of contractual disclosure, *see* Anthony T. Kronman, *Mistake, Disclosure, Information, and the Law of Contracts*, 7 J. LEG. STUD. 1, 4 (1978) ("[A] court concerned with economic efficiency should impose the risk on the better information gatherer").

it is only implicated when the exclusion applies at which point it can be litigated first.

C. DISTINGUISHING "BEST EFFORTS" FROM SECOND ORDER PRECAUTIONS

This article's best efforts test parallels Robert Cooter and Ariel Porat's Second Order Precautions defense in negligence law.[97] Cooter and Porat recommend that First Order Precautions, those actually taken by the defendant and affect the likelihood of accident, should be distinguished from Second Order Precautions, "behavior that changes the probability distribution over first-order precaution."[98] It is important to distinguish the best efforts test from Second Order Precautions because while they may seem to overlap they maintain material differences.

First, Second Order Precautions are used to determine negligence and, therefore, affect litigation between injurers and victims.[99] Conversely, the best efforts test applies to disputes between injurers and insurers, so it does not directly impact victims and their precaution incentives. Second, self-control grounds Second Order Precautions, which injurers can continue managing even if they lapse when taking First Order Precautions.[100] Employing Cooter and Porat's hypothetical,[101] a driver might not always control her speed, but she can always glance at her speedometer. Straying from Second Order Precautions, the best efforts test takes a broader approach assuming that injurers can lapse when controlling their speed *and* when deciding how frequently to consult their speedometer. In this way, both actions are unintentional lapses under the best efforts test.

Third, Second Order Precautions presume an individual's capacities, which *de facto* applies an objective standard.[102] The best efforts test rejects this objective standard in favor of a personalized rubric constructed from the injurer's characteristics and competencies. Under an objective analysis, evidence of the injurer's best efforts is marginally significant because the standard is measured against the reasonable person. For instance, an injurer's

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[97] *See* Cooter & Porat, *supra* note 33.

[98] *See* Cooter & Porat, *supra* note 33, at 330.

[99] *See* Cooter & Porat, *supra* note 33, at 330–31.

[100] *See* Cooter & Porat, *supra* note 33, at 345–48.

[101] *See* Cooter & Porat, *supra* note 33, at 330.

[102] *See* Cooter & Porat, *supra* note 33, at 347 (suggesting the second-order precaution defense will be based on reasonableness).

exceptional driving record has no bearing on a speeding case. Similarly, a factory that pollutes hazardous chemicals beyond the legally permitted limit cannot introduce evidence of prior compliance. These outcomes are undesirable because they treat defendants as intentional negligent risk-takers when their harm could also plausibly result from unintentional non-compliance. As such, this objective approach underutilizes valuable information that the best efforts test prioritizes.[103] Relevant inquiries under the best efforts test include: does the driver speed regularly, and if so, what is her degree of deviation? Did the factory comply with its own internal rules? All these questions try to assess whether the injurer's non-compliance was unintentional by measuring her conduct against her ordinary behavior. Constant deviations or repeated high-risk activities indicate intentional non-compliance whereas infrequent episodes or small deviations suggest unintentional non-compliance.

Finally, the best efforts test does not face the same evidentiary hurdles as Second Order Precautions.[104] Since the latter is a defense within negligence law, it often confronts problems with proving causation.[105] In some cases, it is almost impossible to prove that Second Order Precautions could have prevented an accident. To illustrate, a driver looking at her speedometer takes a Second Order Precaution because her action reduces her distribution of lapses. However, proving that another glance at the speedometer would have prevented her accident is a herculean task given its hypothetical nature.[106] Within the insurance context, where the best efforts test operates, this causation problem does not exist. The expected or intended harm clause renders additional precautions irrelevant since it is the injurer's intention that matters most. Thus, although the best efforts test seems to overlap with Second Order Precautions, they diverge significantly. While Second Order Precautions provide a theoretical framework from which the best efforts test borrows, the latter is further tailored to meet the efficiency concerns within insurance.

D. APPLICATION OF THE BEST EFFORTS TEST

To evaluate the best efforts test's force, it is important to consider how courts would apply it in interpreting the expected or intended harm clause. When an injurer's expectation is interpreted narrowly so to require

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[103] Ben-Shahar & Porat, *supra* note 33.
[104] Cooter & Porat, *supra* note 33, at 356.
[105] *Id*.
[106] *Id*.

actual knowledge of a substantial probability of risk, then the best efforts test is insignificant. There is no need to assess an individual's best efforts if courts exclude coverage only for intentional actions. Thus, if an injurer intended to engage in negligent behavior, then she did not exercise her best efforts to conform with the standard of care.

While inapplicable in these scenarios, the best efforts test becomes valuable for courts engaging in a broad subjective analysis where the injurer possesses knowledge of harm but lacks the capacity to avoid it. This test also proves beneficial in cases where objective evidence leads courts to infer subjective (constructive) knowledge as a matter of law.[107] Thus, the central inquiry grounding the best efforts test under a subjective analysis is whether the injurer exercised sufficient care to yield the lowest accident cost given her idiosyncratic characteristics.

A review of *Harleysville Worcester Ins. Co. v. Paramount Concrete*[108] reveals how the best efforts test would operate. In *Harleysville Worcester*, a concrete factory faced charges for producing defective concrete that caused severe damage to the pools in which it was used. In its opinion, the court concluded that the factory "lacked an effective quality control system, its management lacked experience with concrete, and its batch man did not feel adequately trained. Those issues point to severe deficiencies in Paramount's operations and were enough for the jury to find that it acted recklessly."[109] However, the court ruled, that even if the jury found the company's behavior reckless, the harm was not "expected" under a subjective standard of injurer intent. It continued, "But [the plaintiffs] d[id] not prove that the relevant individuals at Paramount *actually knew*, *much less intended*, that the shotcrete was so defective it could cause harm." Such language highlights the court's reliance on a narrow subjective test where harm is "expected" if the injurer intends or has knowledge of an accident's possibility.

However, if the *Harleysville Worcester* court adopted a broad subjective interpretation, then the factory's incompetence could satisfy the subjective knowledge requirement for "expected" harm. To this extent, the factory's management knew it lacked the necessary knowledge about its product and maintained inferior quality-control technology compared to the rest of the industry. Using a broad *Carter Lake* approach, the court could

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[107] *See supra* note 82.

[108] *Harleysville Worcester Ins. Co. v. Paramount Concrete*, 123 F. Supp. 3d 282 (D. Conn. 2015).

[109] *Id*. at 300 (internal quotations omitted).

reasonably conclude that the factory's management knew or should have known about the risk their product imposed.

If this outcome occurred, then the best efforts test would trigger, thereby allowing the factory to present evidence that the management team exercised its best efforts given their limited expertise and resources. Having examined the factory's best efforts evidence, the court could decide that the harm was "unexpected" and thus entitled to coverage. Courts would not be able to achieve this outcome if they applied a *Carter Lake* construction of knowledge and conducted a "substantial probability" inquiry because the factory's best efforts would be irrelevant in these assessments.

Similar to the *Harleysville Worcester* counterfactual, *Carter Lake* would also result in a different outcome if we applied the best efforts test. Unlike the former, the *Carter Lake* municipality was aware of their failing sewage system and knew, or should have known, that there was a substantial probability for a second flood.[110] Despite this knowledge and the foreseeable probability of a heightened flood risk, the municipality did not act to prevent future accidents.[111] The municipality's conduct clearly illustrates a failure to exercise its best efforts. With no evidence of alternative precautions, the court would find the municipality's harm "expected" and thus not a result of unintentional non-compliance. Once identified as "expected" harm, the municipality's conduct would be excluded from coverage.

The best efforts test does not distort the outcome in *Carter Lake*. The municipality forfeited its insurance coverage by engaging in intentional negligent risk-taking because it failed to take efforts to mitigate their risk.[112]

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[110] *Carter Lake v. Aetna Cas. & Sur. Co.*, 604 F.2d 1052, 1059 (8th Cir. 1979) ("the probability of an identical equipment failure and consequential flooding of the [plaintiff's] basement on a particular day was relatively slight, about 2% With hindsight. However, there was clearly a substantial probability of another backup at some time caused by an identical equipment failure if the equipment was not replaced or an alarm system installed").

[111] *Id.* ("Nevertheless, Carter Lake took the calculated risk that such backup would not occur,and elected to continue operations without correcting its methods").

[112] *Id.* ("Once the city was alerted to the problem, its cause, and the likelihood of reoccurrence, it could not ignore the problem and then look to Aetna to reimburse it for the liability incurred by reason of such inaction. [internal citation omitted] Once the city was alerted to the problem, its cause, and the likelihood of reoccurrence, it could not ignore the problem and then look to Aetna to reimburse it for the liability incurred by reason of such

Had the municipality engaged in good-faith yet unsuccessful efforts to prevent the accident, it is likely the court would have found the harm "unexpected." In fact, courts have often found no expectation of harm when injurers attempt to take sufficient care, even if those precautions are insufficient.[113] For example, in *Aetna CA's. & Sur. Co. v. Dow Chem. Co.,*[114] the court, as a matter of law, found that the injurer did not expect the magnitude of contamination despite knowing the disposed materials' hazardous nature. Instead, the court held that the injurer took sufficiently reasonable precautions to mitigate the possible harm.[115] In other words, the injurer exercised her best efforts to lessen the risk; therefore, shifting the inquiry from an examination of knowledge to an examination of behavior. *Aetna* suggests that, in certain cases, some courts cannot adequately assess knowledge and so turn to examining the injurer's behavior. As such, this case illustrates how examining conduct can be superior to evaluating knowledge. This article recommends that by adding this third prong—the best efforts test—courts can more consistently interpret the expected or intended harm clause to exclude intentional negligent risk-taking but not unintentional non-compliance. Ultimately, the best efforts test achieves more efficient outcomes.

The best efforts test is also operative under the court's "substantial probability" inquiry. A behavior-based examination can reveal the probability of harm an injurer imposes over time given her idiosyncratic characteristics. When an injurer's behavior creates a sudden unexplained increase in the probability of harm, her conduct will be classified as "expected" in comparison to her smaller deviations. Inversely, when the injurer's harm-generating behavior aligns with her ordinary deviations and this risk is incorporated in her insurance policy, then the injurer may keep her coverage under the best efforts test despite her conduct's "substantial probability" since this is the risk she was underwritten.

Alternatively, if insurers decide to adopt the more efficient "substantial risk" test, the best efforts test still offers relief for the misclassification problem. Under this recommended approach, the insurance company could underwrite the injurer for a certain risk range. Over time, the risk will increase and decrease due to the injurer's limited cognitive capacity

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inaction").

[113] *See supra* notes 90–91 and accompanying text. *See also* FISCHER, WIDISS & KEETON, *supra* note 53at 442–43.

[114] Aetna Cas. & Sur. Co. v. Dow Chem. Co., 28 F. Supp. 2d 421 (E.D. Mich. 1998).

[115] *Id*. at 434.

to constantly comply with the standard of care. Any sudden unexplained or unexcused deviation triggered by the injurer's risky behavior would provide evidence that the injurer did not exercise her best efforts. Conversely, when a substantial risk materializes but remains within the risk range incorporated into the underwriting process, then the injurer's conduct can be covered. In this way, whether insurers continue to use a "substantial probability" inquiry or shift to a "substantial risk" approach, the best efforts test offers a good mechanism to address the activity misclassification problem which occurs under both tests.

E. BEST EFFORTS TEST AND THE INSURTECH LANDSCAPE

Acquiring the injurer's behavior information demands a significant investment in the underwriting process and an ongoing examination, requirements that may seem impractical. However, like many other commercial vendors, the insurance industry is experiencing radical innovations in technology which may improve such information gathering both in accuracy and efficiency. These technological changes within the insurance industry have led to the emergence of a new market—InsurTech.

In recent years, the traditional insurance industry has transformed as new insurers emerge and incumbent companies offer innovative services. In particular, these actors and services aim to incorporate technological advancements into various aspects of the insurance industry. For example, some web-based insurance providers sell policies for accidents that have not traditionally been protected in the insurance market, such as a flight delay policy or a cracked screen policy.[116] These new policies signal insurers' enhanced abilities to assess risk and offer better coverage against high-risk behaviors and events. One way providers achieve this service is by engaging in an advanced underwriting process,[117] such as the Big-Data-based underwriting procedure.[118] Other insurers incorporate behavioral economics[119] into the underwriting process to structure policies and set

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[116] Don Weinland & Oliver Ralph, *ZhongAn launches InsurTech concept to world*, FINANCIAL TIMES (Sept. 25, 2017), https://www.ft.com/content/c9d10ada-9eb1-11e7-8cd4-932067fbf946 (In addition to these examples, ZhongAn also offers a shipping return policy).

[117] *Id.*

[118] *Id.* (For example, updating the policy premium according to current weather reports).

[119] Lemonade, *Lemonade Launches Insurance API*, PR NEWSWIRE (Oct.

premiums through Artificial Intelligence (AI).[120] These advanced underwriting procedures rely on information gathered through mass-data[121] collections from smart-phones, web searches, wearable sensors,[122] and meta-data, among others to make better-informed decisions about an applicant's risk level.[123] Access to this information's quantity and quality better positions insurance companies to assess risk, set representations and warranties, as well as mitigate exposure to moral hazard and fraud.

Although insurers employ different approaches, these changes to the insurance industry maintain a commonality: they seek to reduce information asymmetry between providers and injurers. By efficiently collecting information about policyholders or applicants,[124] providers can strategically adjust their premiums and design more personalized insurance policies. Currently, these advancements are most active in health and automobile insurance,[125] but we can expect growth beyond these industries due to the numerous advantages specialization offers.

In the context of the expected or intended harm clause, we can expect a few changes to occur simultaneously or consecutively. First, as more

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10, 2017), https://www.prnewswire.com/news-releases/lemonade-launches-insurance-api-650210233.html.

[120] Jemima Kelly & Carolyn Cohn, *Insurers Hope InsurTech Will "Nudge" Customers to Less Risky Behaviors*, INS. J. (Sept. 19, 2017), http://www.insurancejournal.com/news/national/2017/09/19/464718.htm.

[121] Shanique Hall, *How Artificial Intelligence is Changing the Insurance Industry*, CIPR NEWSLETTER 2, 6 (Aug. 2017), http://states.naic.org/cipr_newsletter_archive/vol22.pdf.

[122] Elizabeth Gurdus, *UnitedHealthcare and Fitbit to pay users up to $1,500 to use devices*, CNBC (Jan. 5, 2017), https://www.cnbc.com/2017/01/05/unitedhealthcare-and-fitbit-to-pay-users-up-to-1500-to-use-devices.html.

[123] Kelly & Cohn, *supra* note 120 (For example, Telematics devices in care which are "black boxes in cars which enable insurers to check customers' driving and reward safer habits."). *See also* Tyler Tappendorf, *Five InsurTech Trends and What They Mean for Microinsurance*, MICROFINANCE GATEWAY (Feb. 2017), https://www.microfinancegateway.org/blog/2017/feb/five-insuretech-trends-and-what-they-mean-microinsurance.

[124] Russ Banham, *Investing in the InsurTech Toolbox*, RISK MGMT. (June 1, 2017), http://www.rmmagazine.com/2017/06/01/investing-in-the-insurtech-toolbox/.

[125] See *supra* notes 120–123 and accompanying text.

information about the injurer is available, unintentional non-compliance will be more predictable. Insurers will know promptly, through constant data collection, when a policyholder fails to meet an objective standard, thus transforming the underwriting process from a preliminary step to an ongoing examination.[126] Access to this information will also impact the best efforts test as judges shift from a theoretical exercise of determining "best" efforts to a more technical regression analysis.

Second, this enhanced approach will also enable insurers to more easily and accurately evaluate an injurer's risk-taking intentions. With access to the injurer's private records, providers can create a baseline of their policyholder's ordinary behavior. Using this metric, providers can observe an injurer's conduct for deviations with frequent episodes suggesting intentional negligent risk-taking and prior compliance indicating unintentional incompliance. [127]

V. CONCLUSION

Negligent defendants do not comply with the standard of care for one of two reasons. First, an injurer may wish to engage in intentional negligent risk-taking even if she is capable of meeting the standard. In this case, she has taken a calculated risk that an accident will not occur and has proceeded under this probability. Second, injurers may act negligently despite exercising their best efforts because of lapses, failures to meet the objective standard, and *res ipsa loquitor*. This article classifies the latter category as unintentional non-compliance.[128] When insurance policies can

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[126] Hall, *supra* note 121, at 6. Gurdus, *supra* note 122.

[127] As policies become more individualized, the expected or intended harm clause will slowly lose its applicability since insurers will prefer specific contractual provisions to general "basket" clauses. For a review of personally tailored policies *see* Matt Cullen, *InsureTech Firms Look to Disrupt, but not to Overtake Incumbents*, LSE BUS. REV. (Jun. 14, 2016), http://blogs.lse.ac.uk/businessreview/2016/06/14/insuretech-firms-look-to-disrupt-but-not-to-overtakeincumbents/.

[128] This article does not conceptualize intentional negligent risk-taking as bad moral luck because under those circumstances the decision to engage in negligence is deliberate. The fortuitous element is the accident – the materialization of the risk. Hence, in my view, intentional risk-takers suffer from bad luck generally rather than bad *moral* luck.

bar coverage for the first injurer but not the latter, then we achieve an optimal result.

One mechanism that insurance policies can use to distinguish these two injurer-types is the expected or intended harm clause, which bars coverage when an injurer expects her conduct will cause harm. Courts disagree on what constitutes "expected" or "intended" harm.[129] Some jurisdictions require that the injurer has a subjective expectation[130] that harm has a substantial probability of occurring while other require an objective one.[131] These two approaches represent the most common interpretations of the expected or intended harm clause exclusion. Most courts also require that the accident's probability be particularly high.[132]

Both these approaches have limitations, imperfections, and tradeoffs. On the one hand, an explicit knowledge inquiry solves the problem of bad moral luck but allows coverage for intentional negligent risk-taking when subjective awareness evidence is difficult to obtain.[133] On the other hand, when courts require a subjective expectation of harm, bad moral luck may be barred from coverage.[134] Given human error, it is inevitable that injurers will sometimes engage in unintentional non-compliance that cannot be mitigated.[135] The substantial probability test, which bars coverage for accidents with a high probability of expected harm may help alleviate this problem but will not resolve it.[136]

The best efforts test provides a valuable tool for courts to efficiently distinguish between intentional and unintentional non-compliance. Formulating this test as a defense correctly incentivizes parties to supply important information as evidence, which ultimately saves litigation costs. This test also faces its own limitations and constraints. First, information about the injurer's best efforts may not be available. Second, the study of lapses and limited cognitive capacity is still evolving, leaving many questions unanswered in this area. Nevertheless, as legal and behavioral research continues to develop, we can gain additional insights into addressing these problems in tort law. Finally, further research may also

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

[130] *See supra* note 75.

[131] *See supra* notes 70 and 74.

[132] *See supra* notes 74–75. *See also* FISCHER, WIDISS & KEETON, *supra* note 53 at 435–37.

[133] See *supra* Part III.C.1.

[134] See *supra* Part III.C.1.

[135] See *supra* Part III.C.1.

[136] See *supra* Part III.C.2.

prove beneficial in determining whether applying the best efforts test is justified from an efficiency or fairness perspective in other areas of the law, including contracts, criminal law, and administrative law. In these fields, using the best efforts test to assess the injurer's capability may yield different and superior results than those produced by the objective tests currently employed.