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Minding Accidents

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MINDING ACCIDENTS

TENEILLE R. BROWN, JD*

Tort doctrine states that breach is all about conduct. Unlike in the criminal law context, where jurors must engage in amateur mindreading to evaluate mens rea, jurors are told that they can assess civil negligence by looking only at the defendant's external behavior. But this is false. Here I explain why, by incorporating the psychology of foresight. Foreseeability is at the heart of negligence—appearing as the primary test for duty, breach, and proximate cause. And yet, it has been called a “vexing morass” and a “malleable standard” because it is so poorly understood. This Article refines and advances the construct of foresight by describing it as an epistemic mental state—similar to intent, knowledge, or recklessness. We cannot ask whether a defendant should have foreseen a risk without interrogating what they subjectively perceived, realized, or remembered at the time. Indeed, the focus on actions in negligence is misleading because unreasonable actions are not necessary for negligence liability, while a negligent mental state is. It is time for negligence doctrine to “mind” accidents. Unfortunately, when we assume that foreseeability can be assessed objectively through conduct, jurors are left rudderless to engage in hindsight bias. The phrasing of “objectively reasonable foreseeability” encourages jurors to superimpose what should have been foreseen ex post on what could have been foreseen ex ante. Further, while the outputs of mental states may be labeled reasonable or unreasonable, some of the underlying mental states themselves cannot be. There is no such thing as “objectively reasonable memory” or “objectively reasonable perception.” If we are committed to basing negligence on breach, we must pay more attention to whether a particular

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defendant is capable of foresight. This is not about eliminating the reasonable person standard, but rather recognizing that what is reasonable is constrained by what is possible. Given these insights, I propose significant revisions to negligence doctrine. I reshuffle and simplify the prima facie elements to focus the jury's attention on the descriptive aspects of breach (i.e., whether foresight and prevention were possible in this instance) and the judge's attention on the normative aspects (whether there should be duties imposed in cases like this and whether this particular defendant should be held responsible). This proposal aims to decrease hindsight bias by requiring an assessment of the defendant's capacity for foresight before asking whether the outputs of this mental process were reasonable. My proposal brings to the surface processes that are already occurring. It has the added benefit of distinguishing the tests for duty, breach, and proximate cause, which at present overlap considerably. Because breach, proximate cause, and duty all ask whether the outcome was reasonably foreseeable, courts frequently conflate the breach analysis (which should be for the jury) with that of duty (for the judge). My proposal eliminates this confusion by defining descriptive elements that are uniquely for the jury and normative elements that are uniquely for the judge.

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INTRODUCTION: NEGLIGENCE IS INVISIBLE

How do jurors decide whether someone is negligent? That is, how do we *see* the defendant's negligence? Quite simply, we don't. We may infer negligence when someone speeds through a red light or when a pharmacist fills the wrong prescription. These risks are so obvious and common, rules and norms have developed around the behavior. But in many situations, there is no established standard of reasonable conduct. When an injury results, it can be quite difficult to determine whether the actor should have behaved differently, or whether the whole thing

resulted from a freak accident.¹ This is not just an academic problem. Every year billions of dollars hang in the balance because defendants are only liable for negligence damages if they *breached* a duty of care.²

As Oliver Wendell Holmes notoriously quipped, “Even a dog distinguishes between being stumbled over and being kicked.”³ That is, we can often infer someone’s intentional mental state from the circumstances.⁴ But once we have decided the action was unintentional, it is much harder to distinguish between a careless stumble and a completely unpreventable fall.⁵ We appeal to foresight to help us do this, to separate blameless true accidents from blameworthy foreseeable ones.⁶ Differentiating foreseeable from unforeseeable harms is the subject of the tort of negligence and also of this Article.

To make this concrete, consider the tragic case of human rights activist, Esther Nakajjigo. Esther was killed when the entrance gate to Arches National Park swung into her car, slicing through it “like butter” as she sat with her husband.⁷ Her husband sued the park for negligence. If this goes to trial, a jury will be instructed to infer breach based on the reasonableness of the park employees’ actions.

While the park employees’ actions are relevant, it is their *mental states* that determine whether the park was careless. Regardless of how the employees at Arches National Park

1. See Kenneth W. Simons, *Dimensions of Negligence in Criminal and Tort Law*, 3 THEORETICAL INQUIRIES L. 283, at 285, 288 (2002).

2. PAUL HINTON ET AL., U.S. CHAMBER INST. FOR LEGAL REFORM, COSTS AND COMPENSATION OF THE U.S. TORT SYSTEM 20 (2018), https://instituteforlegalreform.com/wp-content/uploads/2020/09/Tort_costs_paper_FINAL_WEB.pdf [<https://perma.cc/V2XZ-9XY8>].

3. OLIVER WENDELL HOLMES, JR., THE COMMON LAW 3 (1881).

4. See, e.g., Jorie Koster-Hale et al., *Decoding Moral Judgments*, 110 PROC. NAT’L ACAD. SCIS. 5648, 5648 (2013); Jordan Theriault et al., *Theory of Mind Network Activity Is Associated with Metaethical Judgment: An Item Analysis*, NEUROPSYCHOLOGIA, June 2020, at 1.

5. Psychology studies also conflate unforeseeable and foreseeable accidents, despite the distinction between the two being morally (and legally) relevant. See Brooke C. Hilton & Valerie A. Kuhlmeier, *Intention Attribution and the Development of Moral Evaluation*, FRONTIERS PSYCH., Jan. 7, 2019, at 3.

6. David A. Lagnado & Shelley Channon, *Judgments of Cause and Blame: The Effects of Intentionality and Foreseeability*, 108 COGNITION 754, 758 (2008).

7. Elizabeth Chuck & Diana Dasrath, *An Activist’s Dreams ‘Were About to Come True.’ Then, a Horrific Accident Cut Her Life Short.*, NBC NEWS (Nov. 1, 2020, 2:30 AM), <https://www.nbcnews.com/news/us-news/activist-s-dreams-were-about-come-true-then-horrific-accident-n1245517> [<https://perma.cc/7WV4-6XXL>].

behaved, we cannot label this unreasonable until we know what they knew at the time. For example, was the wind stronger than ever before, such that the employees could not have *been aware* the gate could swing into traffic, or were powerful gusts common? Had the lock securing the gate broken a few days ago, or was it working perfectly? These questions about the employees' mental states drive the analysis of the negligence claim; the defendant's knowledge is critical for sorting out whether this was a freak accident or a foreseeable harm.

The idea that negligence requires mindreading is not metaphysical or mysterious. Mindreading is already a fundamental part of every trial; we just either fail to see it or pretend it does not occur.⁸ But like unpaid bills or terrible diagnoses, denying something's existence does not make it go away.

Pretending that there is no mindreading in negligence has led to a paradox between doctrine and reality. The doctrine is clear: there is no mindreading in negligence. The case law is less clear: mindreading may be helpful in some cases. And the reality is completely ignored: *every* negligence case *requires* jurors to read the defendant's mind. This Article seeks to resolve the disparity between the law on the books and the law in practice, by exposing and clarifying how people evaluate the mental state of foresight to assess negligence liability.

This is not a nerdy, theoretical pursuit. Foreseeability plays a huge and instrumental role in negligence. It is the primary test used to assess three of the four negligence elements—duty, breach, and proximate cause.⁹ It is also used to assess whether certain types of injuries are compensable.¹⁰ Despite its critical importance, however, foreseeability has been described as a “vexing morass,”¹¹ “a malleable standard,”¹² and the “dark

8. Teneille R. Brown, *Demystifying Mindreading for the Law*, 126 WIS. L. REV. 1, 8 (2021).

9. Benjamin C. Zipursky, *Foreseeability in Breach, Duty, and Proximate Cause*, 44 WAKE FOREST L. REV. 1247, 1248 (2009).

10. *Aikens v. Debow*, 541 S.E.2d 576, 588 (W. Va. 2000).

11. W. Jonathan Cardi, *Purging Foreseeability: The New Vision of Duty and Judicial Power in the Proposed Restatement (Third) of Torts*, 58 VAND. L. REV. 739, 740 (2005).

12. *Wilson v. Moore Freightservice, Inc.*, No. 4:14-CV-00771, 2015 WL 1345261, at *3 (M.D. Pa. Mar. 25, 2015) (quoting Patricia K. Fitzsimmons & Bridget Genteman Hoy, *Visualizing Foreseeability*, 45 ST. LOUIS U. L.J. 907, at 908, 911 (2001)).

matter of tort.”¹³ Legal foresight seems to frustrate us because it is everywhere, and carefully defined nowhere. But before we jettison foreseeability, as some have proposed,¹⁴ we can do a better job explaining what it is and how it operates.

Let’s start with clarifying the definition of “mental state.” Perhaps because of the historical tethering to the criminal law, judges and attorneys seem to incorrectly assume that “mental states” must be blameworthy like the Model Penal Code mens rea categories. But this narrow view of mental states ignores their diverse contribution to many areas of legal decision-making.¹⁵ Mental states include cognitive processes like perceiving, remembering, foreseeing, or deceiving. When I use the term “mental state,” I refer to *any* cognitive or emotional state of mind. The universe of legally relevant mental states is much broader than the four mens rea categories.

With this in mind, I will explain in great detail how civil negligence requires the jury to read the defendant’s mind to infer foresight—just as they do in the criminal law when inferring intent or knowledge. This is not a major insight for psychologists, who would respond with “well, of course.” But it turns out to be quite a radical observation for the law. Indeed, foresight is a lesser included mental state that is required for proving all the criminal mens rea categories. We cannot intend, know, or be near certain of a risky outcome that we do not, at a minimum, foresee. However, in civil negligence, foresight independently carries the weight for assigning blame.¹⁶ The hidden role of foresight has perhaps allowed us to ignore its independent status as the mental state driving negligence liability.

13. Russ VerSteeg, *Perspectives on Foreseeability in the Law of Contracts and Torts: The Relationship Between “Intervening Causes” and “Impossibility”*, MICH. ST. L. REV. 1497, 1498 (2011) (quoting David G. Owen, *Figuring Foreseeability*, 44 WAKE FOREST L. REV. 1277, 1277 (2009)).

14. Cardi, *supra* note 11, at 740.

15. Brown, *supra* note 8, at 8.

16. In a rare set of cases, liability will not attach despite outcomes being foreseeable. This is often when the bad outcome is also foreseeable *to the plaintiff* and where the activity would be fundamentally altered by imposing the duty to take greater care (such as in primary assumption of risk, or so-called “no duty” cases). Another area where courts have decided to deprioritize foresight are premises liability cases where the plaintiff is a trespasser, or where for policy reasons the role of foreseeability is muted. However, these are outlier cases; the trend even in premises liability and other qualified duty cases is to impose duties based on heightened foreseeability of harm.

The focus on mindreading in the criminal law, at the neglect of civil law, is unfortunate. While no one is going to jail for civil negligence, it is likely more elusive and difficult to infer than criminal intent. When someone commits a crime, their voluntary actions (*actus reus*) may reveal their guilty mind (or *mens rea*).¹⁷ Take burglary or assault, for example. People do not accidentally break into bedrooms and then accidentally sell the diamond jewelry that they found. They do not accidentally make repeated plans to isolate, drug, and rape multiple women. The outward manifestations of intent (planning, physical force, damaging property, repetition, covering up) are easier for us to see than the mental state of lacking foresight. Its invisibility makes it an even more important mental state for scholarly attention.

Negligence liability rises and falls on one question: whether someone *should have foreseen* a risk. This *is* supposed to be an objective inquiry. Objectivity means that jurors are to focus only on a defendant's externally visible conduct and not assess the defendant's mind. However, as I will explain, this doctrinal aspiration is impossible. Not only must we infer what the specific defendant knew or perceived to decide whether a harm was reasonably foreseeable, but jurors must also assess the defendant's foresight through their own subjective lens of knowledge and morality. Unfortunately, however, our objective standard of "reasonable foreseeability" conceals the extent to which these two subjective processes *must* occur. Jurors are largely left to their own devices to discern what the clunky term "objectively reasonably foreseeable" means. This is a problem. For one, while the actions or *outputs* of mental states can be labeled reasonable or unreasonable, the underlying mental states themselves often cannot be. But because we claim that foresight can be assessed based only on external conduct, we skip right over the descriptive inquiry (could the defendant have foreseen and prevented this risk?) and move right to the second (should they have?). When the outcome is bad enough, the answer to the former question is almost always yes. This is why the first question cannot be ignored—it is what keeps negligence doctrine from being merely a form of wealth distribution.

To pursue these ambitious goals, I will divide this Article into four parts. In the first Part, I debunk the idea that negligence can be assessed by looking only at the defendant's

17. Fiery Cushman, *Deconstructing Intent to Reconstruct Morality*, 6 CURRENT OP. PSYCH. 97, 97 (2015).

conduct. In the second Part, I deconstruct the psychological components of foresight to imbue the legal concept with greater precision and validity. I will explain how foresight provides the primary epistemic condition for negligence liability. In the third Part of this Article, I explore how the idea of an objective test for foreseeability can lead jurors to engage in various forms of hindsight bias. Further, I will explain how the concept of “reasonable foreseeability” is deeply flawed because it assumes there is an ordinary or reasonable level of foresight that can be collapsed onto an objective standard.

Considering the foregoing, I conclude in the fourth Part by proposing important revisions to the elements of negligence, which I reshuffle to distinguish the descriptive inquiry for the jury (were foresight and prevention possible in this instance?) from the normative one for the judge (should there be duties imposed in cases like this, and should this particular defendant be held responsible?). In addition to adding clarity, this framing removes the considerable overlap between the judge and jury, and the foreseeability tests for duty, breach, and proximate cause. This work has the potential to generate a doctrinal sea change because its insights apply regardless of one’s conception of negligence—as either correcting injustices, compensating victims for wrongs, or deterring inefficient risk.

I. NEGLIGENCE REQUIRES MINDREADING

This Part will debunk the idea that negligence can be assessed by looking only at the defendant’s conduct. It will explain how negligence liability does not just permit, but in fact requires jurors to read the defendant’s mind. It will do so by describing the literature on how humans make ordinary assessments of blame for causing accidental harm. Further, it will compare and contrast the notion of negligence in the civil and criminal law and reveal the paradox between the law in practice and the law on the books. It will also explain how we got here based on two myths we tell ourselves.

A. *In Industrialized Societies We Automatically Read Minds to Assess Blame*

When we are deciding whether to blame someone for the harm that they have caused, we generally contemplate their mental states. Intentional harms are considered more diagnostic of immorality than those that are merely negligent.¹⁸ If we did not care about mental states, we would hold hornets in the same regard as bees. After all, they both sting us. But we reserve our sharpest condemnation for the hornet—which deliberately stings us with impunity and for no apparent reason. Mental states matter and drive our assessments of blame.¹⁹

While adults spontaneously infer mental states, mindreading is taxing and requires a certain level of cognitive maturity. This is why toddlers blame people who accidentally hurt them more than people who intend to hurt them but fail.²⁰ They center punishments more on outcomes than mental states, which they are still learning how to infer. This same phenomenon reappears later in life when much older adults prioritize outcomes over intentions. However, in all societies studied to date, as between two actions that both cause harm, those that were intentional are considered more blameworthy, wrong, and deserving of punishment than those that were accidental. From about age six onwards, we automatically and subconsciously incorporate mental state information into punishments and blame.²¹ There is no evidence that assuming

18. See Sean Laurent et al., *The Influence of Desire and Knowledge on Perception of Each Other and Related Mental States, and Different Mechanisms for Blame*, 60 J. EXPERIMENTAL SOC. PSYCH. 27, 27 (2015); Kelly Lynn Mulvey et al., *Who Is to Blame? Children's and Adults' Moral Judgments Regarding Victim and Transgressor Negligence*, COGNITIVE SCI., Feb. 2020, at 4.

19. See generally Brendan Gaesser, *Episodic Mindreading: Mentalizing Guided by Scene Construction of Imagined and Remembered Events*, COGNITION, June 2020.

20. See Francesco Margoni et al., *The Influence of Agents' Negligence in Shaping Younger and Older Adults' Moral Judgment*, 49 COGNITIVE DEV. 116 (2019).

21. H. Clark Barrett et al., *Small-Scale Societies Exhibit Fundamental Variation in the Role of Intentions in Moral Judgment*, 113 PROC. NAT'L ACAD. SCI. 4688, 4693 (2016); Rita Anne McNamara et al., *Weighing Outcome vs. Intent Across Societies: How Cultural Models of Mind Shape Moral Reasoning*, 182 COGNITION 95, 96 (2019); Teneille R. Brown, *The Content of Our Character*, 126 PENN STATE L. REV. 1, 37 (2021).

the role of the judge or jury allows us to escape this tendency to infer mental states when placing blame.²²

There is a psychological process to how we blame. If we assess blame deliberately, such as in a formal legal process, we first must recognize that there was a *harm*. Then, we ask whether the actor *caused* the harm.²³ If this actor can be said to have caused it, we then move on to the next step, where we inquire into the actor's *intentionality*. Here, we look to circumstantial evidence that points toward the actor's desired outcome.

The analysis does not stop there. If the actor does not appear to have intended to cause harm, they might still be blamed if we think they could have *prevented* the harm by exercising greater care.²⁴ A careless actor may be blamed even if they are described as well-intentioned.²⁵ Thus, the only way to escape condemnation is to prove that the accident *could not have been prevented with greater care*.²⁶ Unsurprisingly, this maps on perfectly to civil negligence doctrine.²⁷ Because we cannot prevent the accidents we do not foresee, this reveals two key requirements for imposing blame for unintended harm: capacity to foresee the harm and capacity to prevent it.²⁸ Given that the common law often tracks intuitive moral judgments, this is

22. See sources cited *supra* note 21.

23. See generally Mark Alicke, *Culpable Control and the Psychology of Blame*, 126 PSYCH. BULL. 556 (2000).

24. Fiery Cushman, *Crime and Punishment: Distinguishing the Roles of Causal and Intentional Analyses in Moral Judgment*, 108 COGNITION 353, 354 (2008); Marine Buon et al., *A Non-Mentalistic Cause-Based Heuristic in Human Social Evaluations*, 126 COGNITION 149, 149 (2013); see also Francesco Margoni & Luca Surian, *Judging Accidental Harm: Due Care and Foreseeability of Side Effects*, CURRENT PSYCH., Jan. 17, 2021, at 7; Michael S. Moore & Heidi M. Hurd, *Punishing the Awkward, the Stupid, the Weak, and the Selfish: The Culpability of Negligence*, 5 CRIM. L. & PHIL. 147 (2011).

25. Gavin Nobes et al., *The Influence of Negligence, Intention, and Outcome on Children's Moral Judgments*, 104 J. EXPERIMENTAL CHILD PSYCH. 382, 393 (2009).

26. See Margoni & Surian, *supra* note 24, at 2; Buon et al., *supra* note 24, at 149; Cushman, *supra* note 24, at 353.

27. Thomas Schultz et al., *Assignment of Moral Responsibility and Punishment*, 57 CHILD DEV. 177, 178 (1986); Margoni, & Surian, *supra* note 24, at 2; Liane Young & Lily Tsoi, *When Mental States Matter, When They Don't, and What That Means for Morality*, 7 SOC. & PERS. PSYCH. COMPASS 585, 585 (2013) (“[M]oral judgments depend on the capacity to engage in mental state reasoning.”).

28. While some studies treat negligence as a separate construct from foreseeability, there are often statistically significant interactions between “due care” and “foreseeability.” Information about carelessness is tightly linked with information about foreseeability and preventability when judging actions. See Margoni & Surian, *supra* note 24, at 6.

likely why foreseeability has been incorporated into the prima facie elements of duty, breach, and proximate cause.²⁹

B. Civil Negligence Doctrine Contains No Mens Rea Element

Scholarship on the mental state of negligence focuses almost exclusively on its use in criminal law. But the criminal and civil notions are quite different. For starters, criminal negligence often requires conduct that is more blameworthy than civil negligence.³⁰ But the two also have completely different legal architecture. The criminal law concept involves statutes with bright-line rules of prohibited conduct and the accompanying mens rea of negligence. In contrast, the civil doctrine simply requires four common law prima facie elements be likely met, which operate more like standards than rules. As the reader likely knows, these elements are duty, breach, causation, and an injury the law recognizes.

The words “actus reus” and “mens rea” are nowhere to be found in these elements. If there were something like an actus reus in civil negligence, it would reside in the element of breach. But there simply is no analog for a mental state requirement because it does not exist in civil negligence. The black letter law found in case law,³¹ treatises,³² and law reviews³³ is that breach is about *acting* and only acting.³⁴ As one scholar put it, breach is a “failure to comply with a legally specified standard of

29. Benjamin C. Zipursky, *Foreseeability in Breach, Duty, and Proximate Cause*, 44 WAKE FOREST L. REV. 1247, 1248 (2009).

30. Simons, *supra* note 1, at 291–94 (explaining that in many cases the criminal mens rea of negligence requires something more than unreasonable conduct and approaches wanton disregard for risks or recklessness).

31. Lynn Strickland Sales & Serv., Inc. v. Aero-Lane Fabricators, Inc., 510 So. 2d 142, 148 (Ala. 1987) *overruled by* Alfa Mut. Ins. v. Roush, 723 So. 2d 1250 (Ala. 1987) (Houston, J., concurring in part) (“[U]nreasonably dangerous conduct is negligence, without any requirement that it be accompanied by any particular state of mind, and no particular state of mind needs to be proven by the plaintiff . . .”).

32. See EDWARD KIONKA, TORTS IN A NUTSHELL 67 (7th ed. 2020) (“Always bear in mind that negligence is *conduct*.”); RESTATEMENT (SECOND) OF TORTS §§ 430–31 (Am. L. Inst. 1965); 57A AM. JUR. 2D *Negligence* § 10 (2022).

33. See James Goudkamp, *The Spurious Relationship Between Moral Blameworthiness and Liability for Negligence*, 28 MELB. U. L. REV. 343, 350–51 (2004) (“[I]t is well-established that liability depends on neither the possession nor the absence of a particular mental state.”).

34. Simons, *supra* note 1, at 291–94.

conduct, pure and simple. It has no mental element.”³⁵ Others note that breach is “clearly objective—the primary question is whether the ‘external’ conduct of the defendant was reasonably careful, not whether he maintained an ‘internal’ attitude of concern or care.”³⁶ Despite this apparent orthodoxy, it was not always so clear that breach focuses exclusively on conduct.

Early American tort scholars debated whether breach “consisted of a state of mind or a type of conduct.”³⁷ Oliver Wendell Holmes took the position that it should exclude mental states—a view which Henry W. Edgerton embraced.³⁸ Edgerton acknowledged that assessments of breach could invite analyses of mental states.³⁹ For normative reasons, however, he thought the defendant’s mental states would be too difficult to prove.⁴⁰ Edgerton’s view of breach has prevailed and is reflected in the law on the books, if not the law in practice. Negligence is only conduct⁴¹ and does not require “any evidence or proof of a defendant’s state of mind.”⁴² Torts giant Dan Dobbs agreed: “[A] bad state of mind is neither necessary nor sufficient to show negligence, and conduct is everything.”⁴³

Some judges have acknowledged that jurors *may* rely on mental state information when assessing foresight.⁴⁴ Indeed, some states incorporate constructive knowledge into their test of foreseeability.⁴⁵ Judges also recognize that a defendant’s

35. See Daniel More, *The Boundaries of Negligence*, 4 THEORETICAL INQUIRIES L. 339, 360 (2003).

36. JOHN GOLDBERG ET AL., TORT LAW: RESPONSIBILITIES AND REDRESS 172 (4th ed. 2016).

37. Mark F. Grady, *The American Negligence Rule*, 53 VAL. U.L. REV. 545, 548 (2019); see also Leon Green, *Duties, Risks, Causation Doctrines*, 41 TEX. L. REV. 42, 56 (1962).

38. Grady, *supra* note 37, at 548–49 (describing how *Vaughan v. Menlove* embraced an objective standard of mental states, while claiming to be about conduct).

39. Henry W. Edgerton, *Negligence, Inadvertence, and Indifference; The Relation of Mental States to Negligence*, 39 HARV. L. REV. 849, 867 (1926).

40. *Id.*

41. See KIONKA, *supra* note 32, at 67.

42. Timothy D. Lytton, *Rules and Relationships: The Varieties of Wrongdoing in Tort Law*, 28 SETON HALL L. REV. 359, 366 (1997); Goudkamp, *supra* note 33, at 351.

43. Lytton, *supra* note 42, at 366; Goudkamp, *supra* note 33, at 351.

44. For an early example of the doublespeak, where judges could describe the breach in terms of what the defendant knew but still assume this was an analysis only of conduct, see *Blyth v. Birmingham Waterworks Co.* (1856) 156 Eng. Rep. 1047. See also KIONKA, *supra* note 32, at 67.

45. In Massachusetts, the plaintiff “must demonstrate that the harm was within the reasonably foreseeable risks that the defendant knew or reasonably

knowledge may be relevant in particular cases.⁴⁶ However, the doctrine remains clear that there is no required mental state inference for negligence. Jurors are not instructed to infer mental states from the physical circumstances. And unlike in the criminal law, where defendants will be acquitted if the state fails to prove the requisite mens rea beyond a reasonable doubt, civil defendants are not granted motions to dismiss based on the plaintiff's failure to demonstrate a negligent mental state. If any mindreading occurs, and it most certainly does, it must occur in the background—in the shadows of negligence doctrine.

C. How Jurors Are Instructed on Breach

The pivotal role of mindreading exists entirely in the shadows of breach. Jurors are instructed merely to ask if the defendant's conduct was unreasonably risky or careless. The touchstone for this is objective—what would be done by a reasonably prudent and cautious person under the same or similar circumstances. We learn from the case of *Heaven v. Pender* that breach occurs whenever someone fails to use “ordinary care and skill in his own conduct” that “would cause danger of injury to the person or property of the other.”⁴⁷ We thus have different acceptable formulations of breach: carelessness, imprudence, unreasonable risk, or failure to meet the ordinary standard of care. These are not identical, but they are frequently employed interchangeably.

When the conduct is something a group of people regularly engage in, what is reasonable will often be what is normatively (and legally) required.⁴⁸ Examples include how physicians ought to obtain informed consent to surgeries or how electricians should generally wire homes. However, rather than replacing the foreseeability test, these standards developed based on a shared knowledge of routine, foreseeable risks. Thus, when risks are common knowledge, norms develop around the foreseeable

should have known about.” TERESA J. FARRIS & CHARLES KINDREGAN III, 12 MASS. PRAC., MOTOR VEHICLE LAW AND PRACTICE § 10:1 Elements of Negligence (5th ed. 2022).

46. *Id.*

47. *Heaven v. Pender* (1883) 11 QBD. 503 at 509 (Eng.).

48. *See B & B Insulation, Inc. v. Occupational Safety & Health Rev. Comm'n*, 583 F.2d 1364, 1370 (5th Cir. 1978) (“[T]he reasonable man personifies the community ideal of reasonable behavior, [so] evidence of customary conduct of those similarly situated may be probative in determining his behavior.”).

risks and guide what is reasonable, prudent, or careful. However, in many cases the conduct is too novel or extraordinary, so there are not shared standards of care. The jury must then bring to the surface the underlying question of whether the defendant *should have foreseen the general type of harm*.⁴⁹ While not always brought to the surface, foreseeability underlies every formulation of breach.

Jurors are told that foreseeability is “a common-sense perception of the risks involved in certain situations” and “whatever is likely enough to happen that a reasonably prudent person would take it into account.”⁵⁰ If a reasonable person would perceive this risk as likely and try to avert it, it would be careless for the defendant not to as well. This is often about as deep as the definitions go. And even when terms like carelessness or unreasonably risky do not incorporate the word “foreseeable,” it is still doing the work for these concepts. The failure to prevent a risk is careless or unreasonable precisely because, *and only if*, it was foreseeable.

When the term foreseeability is explicitly used, jurors are instructed to apply it prospectively. That is, foreseeability asks what the defendant should have realized before the accident materialized.⁵¹ To escape liability, the defendant need only foresee the general type of harm that a *reasonable person* would find likely to occur.⁵² I will say more later about why this objective standard is elusive and misleading. Even so—in theory, defendants should not be held accountable for outcomes that are merely possible, as opposed to probable.⁵³

49. See DAN B. DOBBS ET AL., HORNBOOK ON TORTS § 9.4 (2d ed. 2016).

50. *Canaday v. Midway Denton* U.S.D. No. 433, 218 P.3d 446, 454 (Kan. 2009).

51. *Piazza v. Kellim*, 377 P.3d 492, 499 (Or. 2016); see also *Winkler v. Win Win Aviation, Inc.*, 339 F. Supp. 3d 772, 779 (S.D. Ohio 2018), *aff'd*, 769 F. App'x 337 (6th Cir. 2019) (stating that foreseeability is not a question of exact probability but rather of what a reasonably prudent person would have realized); *Hodges v. Putzel Elec. Contractors*, 580 S.E.2d 243, 247 (Ga. Ct. App. 2003) (stating that a defendant is not obligated to anticipate what is not likely or probable); *Stiens v. Bausch & Lomb, Inc.*, 626 S.W.3d 191, 200 (Ky. Ct. App. 2020) (explaining that foreseeability is determined by what the tortfeasor either knew or should have known at the time, not what is deemed foreseeable in hindsight).

52. Neal R. Feigenson, *The Rhetoric of Torts: How Advocates Help Jurors Think About Causation, Reasonableness, and Responsibility*, 47 HASTINGS L.J. 61, 99–100 (1995).

53. *Hodges*, 580 S.E.2d at 247 (quoting *Davis v. Blockbuster*, 575 S.E.2d 1, 3 (Ga. Ct. App. 2002); *Baum-Holland v. Hilton El Con Mgmt., L.L.C.*, 964 F.3d 77, 89 (1st Cir. 2020); *Orthman v. Idaho Power Co.*, 895 P.2d 561, 563 (Idaho 1995).

Alas, there is no magic test for specifying what exactly needs to be foreseen.⁵⁴ Jurors are merely told that the defendant need not foresee the precise injury that occurred, just the general type.⁵⁵ That is, foreseeability speaks “not as to the particulars but the genus.”⁵⁶ But even a general description of the injury permits wiggle room, as there is not a bright line between types and tokens.⁵⁷ Thus, the thing to be foreseen can be described at various levels of abstraction.

D. The Three Foreseeability Tests Overlap

The ability to tinker with the level of abstraction in describing the harm presents an opportunity for strategic framing. The plaintiff seeks to frame the harm broadly to render it more foreseeable, and the defendant seeks to define it as narrowly as possible. Should the employer have foreseen that the lack of a splashguard for employees working with molten metal would likely cause a burn that would lead to plaintiff’s lip cancer and ultimate death?⁵⁸ Probably not. Should the employer have foreseen that *some* physical harm would likely result from not having a splashguard? That’s a much easier call. The more narrowly the injury is described, or the more it is represented as a token, the less foreseeable that specific outcome is.

The way the injury is described impacts outcomes. If a defendant should have foreseen the general type of injury, but it turns out to be much greater in magnitude, they can be liable for the unexpected, full amount.⁵⁹ But if the type of injury is not

54. This problem is present in the analysis of duty, but even more acute with breach, because factfinders are supposed to rely on the facts of this particular case.

55. *Stiens*, 626 S.W.3d at 200; *see also* *L. Currie Corp. v. E. Coast Sand & Gravel, Inc.*, 109 N.E.3d 524, 528 (Mass. App. Ct. 2018) (stating that a jury need only foresee a general injury; not the particular injury that occurred).

56. *Jolley v. Sutton London Borough Council* [2000] P.I.Q.R. P136 at P145 (“The foreseeability is not as to the particulars but the genus.”); *see also* *Ortega Garcia v. United States*, 986 F.3d 513, 526 (5th Cir. 2021) (articulating a standard of foreseeability in terms of general harms and general types of persons).

57. Linda Wetzel, *Types and Tokens*, in *STANFORD ENCYCLOPEDIA OF PHILOSOPHY* 1 (Edward N. Zalta et al. eds., Fall ed. 2018), <https://plato.stanford.edu/entries/types-tokens> [<https://perma.cc/SA73-FTLU>].

58. *Smith v. Leech Brain & Co.* (1962) 2 QB 405 (NIQB) (stating that the defendant cannot be liable for “unforeseeable damage of a different kind from that which was foreseen, but [can be liable for] more extensive damage of the same kind”).

59. *See* Christopher Jackson, *Tort, Moral Luck, and Blame*, 60 CLEV. STATE L. REV. 57, 64 (2012).

foreseeable, the defendant will pay nothing because either (1) the judge will not impose a duty, (2) a jury will find there is no breach, or (3) the jury will find the breach was not a proximate cause of the injury. Parties, and even judges, often go back and forth negotiating how the scope of foresight ought to be defined. However, assuming *arguendo* we could agree on what exactly should be foreseen, then jurors must then ask whether the type of outcome should have been prevented with foresight and greater care.

The fact that the harm is not self-defining in scope presents a problem for disambiguating the analysis of duty from breach and proximate cause. The plaintiff needs to demonstrate each of these elements to survive a motion to dismiss.⁶⁰ And yet the presence of foreseeability in all three makes it difficult to explain how each factor is uniquely met. Once the plaintiff has argued that the harm was foreseeable to make a *prima facie* claim for duty, do they just repeat that same argument two more times to establish breach and proximate cause? If parties and judges can vary the extent to which the harm is described as a type or a token, how different are these tests *really*?

Of course, in theory the “duty” analysis should be more abstract. This is because it is based on policy factors, will apply to similar defendants in future cases, and is decided by the judge.⁶¹ The breach and proximate cause elements, on the other hand, are decided by the factfinders, are unique to this case, and invite a more fact-specific inquiry.⁶² However, this means of disambiguating the foreseeability tests is not wholly satisfying. Duty cannot be assessed entirely in the abstract, and proximate cause and breach can also rely on policy factors. And, as discussed above, there is no obviously correct way of formulating the harm to be foreseen. The overlapping foreseeability tests have led to criticism that judges are deciding cases on “no duty” grounds, which could, or should, be handled by jurors under breach or causation.

60. See *In re Target Corp. Customer Data Sec. Breach Litig.*, 64 F.Supp.3d 1304, 1309–10 (D. Minn. 2014).

61. See Mark A. Geistfeld, *Proximate Cause Untangled*, 80 MD. L. REV. 420, 435 (2021) (discussing how, in theory, the foreseeability inquiry should be different as between duty and proximate cause).

62. See *id.*; Mark P. Gergen, *The Jury’s Role in Deciding Normative Issues in the American Common Law*, 68 FORDHAM L. REV. 407, 427 (1999).

E. Judges' Analysis of Foreseeability

Judicial opinions often fail to provide the necessary analytical reasoning to bolster foreseeability's descriptive validity. Some judges simply ask, "Should this have been foreseen?" and then recite the facts of the case with a conclusion that the injury was clearly foreseeable, or was not.⁶³ Indeed, my torts students are often perplexed as to how they are to answer the predictable exam questions on foresight, given the shallow caselaw materials from which they have to draw. Judges have failed to develop the component parts of foresight because we have told them, and they have told us, that it is not a mental state.

Consider this example: A patron at a rock concert was injured when another guest threw a beer bottle at him. He sued the venue for negligence. The trial judge did a better-than-average job explaining the facts—that is, there was insufficient security and reserved seating, patrons were openly drinking from liquor bottles, and some patrons were unruly.⁶⁴ But apparently we are to glean from these facts alone that it was obviously "reasonably foreseeable" that a guest would be physically injured in some way.⁶⁵ There is no explanation for why these facts tilt toward a probable injury like the one that occurred. This is where jurors fill in the gaps with their own subjective sense of what is fair or reasonable.

Imagine you are a juror in this case. Your analysis of foreseeability will depend on your own feelings, memories, knowledge, and experiences with concerts and unruly crowds. Perhaps you think it was likely that someone would be injured because you personally hate drunken crowds and avoid them out of worry about getting hurt. But it's equally likely you find this outcome to be improbable *ex ante* because you have attended many rowdy concerts and always went home unscathed. People only throw beer bottles in the movies, not in real life.

While jurors might be instructed not to consider what they would have personally done had they been the defendant, this is

63. See, e.g., Sloan *ex rel.* Est. of Sloan v. Providence Health Sys.-Oregon, 437 P.3d 1097, 1104 (Or. 2019) (upholding the appellate court's denial of the defendant's motion for a direct verdict on the basis that the injury was foreseeable).

64. Greenville Mem'l Auditorium v. Martin, 391 S.E.2d 546, 548 (S.C. 1990).

65. *Id.* at 548.

often exactly what they do.⁶⁶ Foreseeability cannot be assessed without jurors putting themselves in the shoes of the defendant and reflecting on the defendant's mental states at the time. This is called "mental time travel," where events in the future or past are imagined by referencing how scenes are constructed for us, as well as other episodes in our lives.⁶⁷ It is hard to imagine jurors assessing foreseeability in any more objective way.

There are two types of mental time travel that occur in negligence cases. First, there is the defendant's first-person, ex ante calculation of the foreseeability of harm, which involves their contemporaneous perception, memory, and knowledge.⁶⁸ I will explain the psychology of this process in more detail below, but for now suffice to say that mental time travel involves playing out possible outcomes in our heads. We project forward and imagine what is most likely to occur and how this will make us and others feel based on what we then know.⁶⁹

The second type of mental time travel occurs when jurors analyze whether that initial ex ante calculation was reasonable. They do this by going backward in time to put themselves in the shoes of the defendant before the accident occurred.⁷⁰ Jurors must imagine what the defendant would have been thinking at the time and visualize counterfactuals of what might have occurred had the defendant behaved differently. Jurors are constantly engaged in a type of mental time travel, which requires imagination and cognitive flexibility. Ignoring this shift from the first-person assessment of foresight by defendants to the third-person assessment by jurors can generate biases that have yet to be fully explored in negligence scholarship.⁷¹ I will address two such biases in Part III.

66. Instructions not to consider what the jurors themselves would have done are referred to as "no golden rule" rules.

67. Thomas Suddendorf & Michael Corballis, *The Evolution of Foresight: What Is Mental Time Travel and Is It Unique to Humans?*, 30 BEHAV. & BRAIN SCI. 299, 299–313 (2007).

68. Daniel Schachter et al., *Episodic Future Thinking: Mechanisms and Functions*, 17 CURRENT OP. BEHAV. SCI. 41, 44 (2017).

69. *Id.*

70. Gaesser, *supra* note 19.

71. *Id.* at 5.

F. Every Negligence Case Requires Jurors to Read the Defendant's Mind

Despite what the doctrine says, assessing breach is never limited to analyzing only how the defendant's body moved. Except for cases of vicarious liability, the breach of the primary actor *always* includes within it a claim that the defendant failed to perceive, attend, realize, know, or carefully weigh the risk of a bad outcome.⁷² In some cases this failure might be reasonable, and in other cases it might not.

The doctrinal focus on actions is misleading. This is because an unreasonable *action* is not a requirement for negligence liability, while possessing a negligent *mental state* is. This is true whether the case involves an unsecured gate swinging in the wind, dispensing the wrong medication,⁷³ stacking hay in a way that would likely ignite,⁷⁴ failing to warn a paramour about a sexually-transmitted disease,⁷⁵ not buying a radio for a tugboat,⁷⁶ failing to give a pressure test for glaucoma,⁷⁷ not cleaning up a spill that leads to a fall,⁷⁸ failing to keep a proper lookout when driving a tractor-trailer,⁷⁹ or not securing informed consent for medical treatment.⁸⁰ Each of these cases involve conduct (or lack of conduct) that was unreasonable in light of what the defendant knew or should have known, or a risk that they perceived or should have perceived. If jurors were presented with a truly blank slate as to the defendant's mental states, they would be simply unable to assess the foreseeability of harm. Observing the defendant's conduct alone is never enough.

In the case of the pharmacist who dispensed the wrong medication, this was careless not because of his physical act of

72. See *Contreras v. Roadrunner Distrib., Inc.*, No. Civ. 98-991 SC/RLP, 1999 WL 35808346, at *1 (D.N.M. Nov. 29, 1999); Robert J. Rhee, *A Principled Solution for Negligent Infliction of Emotional Distress Claims*, 36 ARIZ. ST. L.J. 805, 884 (2004) (stating that this is even true in cases of design defect and failure to warn "strict" product liability).

73. *Walter v. Wal-Mart Stores, Inc.*, 748 A.2d 961 (Me. 2000).

74. *Vaughan v. Menlove* (1836) 173 Eng. Rep. 232.

75. *Mussivand v. David*, 544 N.E.2d 265 (Ohio 1989).

76. *The T.J. Hooper v. N. Barge Corp.*, 60 F.2d 737 (2d Cir. 1932).

77. *Helling v. Carey*, 519 P.2d 981 (Wash. 1974).

78. *Medders v. Kroger Co.*, 572 S.E.2d 386, 387 (Ga. Ct. App. 2002).

79. *Contreras v. Roadrunner Distrib., Inc.*, No. Civ. 98-991, 1999 WL 35808346, at *1 (D.N.M. Nov. 29, 1999).

80. *Largey v. Rothman*, 540 A.2d 504 (N.J. 1988).

filling the pill container, but because he mistook the name of the prescribed drug or was inattentive to dosing information. If he had intentionally filled the wrong medication, and it killed the patient, it could be murder. If he had filled the bottle with the right pills, there would be no negligence. His actions and specific motor movements were not what constituted the breach—it was his failure to attend to the name or quantity of the prescribed drug. This is a cognitive error, not a motor one.

Similarly, failing to buy a functioning radio for your tugboat is not an *actus reus*; it is a miscalculation of the risk of not taking a reasonable precaution of which you should have been aware. Failing to mop up a spill in a grocery store is not careless if it is after-hours, and no one will traverse the area before it is cleaned in the morning. Whether any act is careless depends on the defendant's subjective knowledge, perception, and awareness at the time. This is not an exception; this is the rule.

Even in cases that seem mostly about conduct, such as a claim that a contractor failed to use adequate skill when building a home, the unreasonableness of the act depends on the defendant's mental states. The breach may result from miscalculating distances, failing to accurately predict spatial relationships, or making a mistaken risk assessment in the choice of materials or installation methods. Even pure clumsiness involves cognitive miscalculations in visual acuity and proprioception.

Candid judges admit that even something simple like being careful to look for oncoming trains contains within it a mental element:

[I]t cannot be understood that the plaintiff's act of looking was a mere involuntary or instinctive physical motion devoid of intelligence. If it were so, then the act was no evidence of care. The ordinary person who is habitually careful in looking for passing trains at crossings does something more than turn his head. He also thinks whether a train is approaching. The act of looking is a physical motion plus a mental process.⁸¹

Common sense, as well as findings from psychology and neuroscience, confirm this observation to be true. Without

81. *Bursiel v. Boston & M.R.R.*, 134 A. 40, 43 (N.H. 1920).

evidence of the actor's mental state, we will forever be the dog who cannot distinguish between the careless stumble and the unforeseeable fall.

G. Negligence Law Must Pay More Attention to Whether Defendants Were Capable of Foresight

Negligence requires “that the defendant is chargeable with some fault, negligence, carelessness, or want of prudence.”⁸² Without this, negligence loses its distinction from stricter forms of liability. This is the key function of breach—to determine when the defendant was somehow at “fault” for failing to prevent a foreseeable accident, and when they were not. Actors may be held liable in the absence of fault, but then this is not negligence. It is something else entirely.⁸³

To H.L.A. Hart, this “fault” element meant that negligence ought to be conceived of as the failure to exercise a *capacity* for greater care.⁸⁴ Without the capacity to have prevented a foreseeable harm, there could be no fault, and thus no breach. This explains why children under seven years old are typically not liable for the breaches they commit (called the “tender years doctrine”), because they ostensibly lack the capacity to be negligent.⁸⁵ Similarly, this explains why those who are blind or deaf are not held to the standard of care for sighted or hearing people.⁸⁶ However, unless the defendant is a child or has a physical disability, “the actor's mental or emotional disability is not considered in determining whether conduct is negligent.”⁸⁷

The problem with Hart's capacitarian account is that while it makes good sense, it does not track present tort doctrine. For

82. *Brown v. Kendall*, 60 Mass. (1 Cush.) 292, 298 (1850).

83. For a discussion of the dissociation between “ought” and “can” in non-legal contexts, see Vladimir Chituc, et al., *Blame, Not Ability, Impacts Moral “Ought” Judgments for Impossible Actions: Toward an Empirical Refutation of “Ought” Implies “Can”*, 150 COGNITION 20, 21 (2016).

84. Moore & Hurd, *supra* note 24, at 151.

85. KIONKA, *supra* note 32, at 76 (“In many states, children below a certain age (usually seven) are legally (conclusively presumed) incapable of negligence. The new Restatement Third states that a child less than five years old is incapable of negligence.”).

86. “[A] person who is blind or has another physical disability is held not to the uniform, objective standard of care, but to a lower, more generous, standard, taking into account her disability.” Elizabeth Weeks, *Healthism in Tort Law*, 12 J. TORT L. 81, 114 (2019).

87. RESTATEMENT (THIRD) OF TORTS: GEN. PRINCIPLES § 11 subsec. (c) (AM. L. INST. 2010).

several complex reasons, negligence has never required that *all* defendants have the capacity to do otherwise. A finding of breach does not mean that the defendant was subjectively capable of foresight. Courts hold people with mental deficiencies to an objective standard of care, even if compliance with that standard is subjectively impossible.⁸⁸ This has been captured by saying “an insane person is liable for his torts.”⁸⁹

The reason given for not accommodating insanity, or even more modest mental impairments, is that these defendants can still cause a great deal of harm that should be compensated. But perhaps an even bigger reason is that we really struggle to measure and validate these mental impairments. While someone’s blindness or deafness can be measured, we cannot reliably measure and distinguish “mental illness and variations of temperaments, intellect, and emotional balance.”⁹⁰ The point about recognizing our inability to differentiate between minor variations in intellect and psychosis may seem small, but it is *huge*. This provides the strongest practical argument for why we ignore the role of mental states in negligence. But if we continue to ignore the role of subjective mental states for practical reasons, we must be clear that liability may be imposed on many people—and not just those who are mentally insane—without fault.

If we assume that adults are all roughly capable of foresight, then we do not have to open Pandora’s Box into subjective mental states. There seems to be a presumption of a defendant’s capacity to foresee, which can only be rebutted with evidence of physical disability or youth. The presumption of capacity for foresight cannot be rebutted with evidence of ordinary, subtle mental impairments. This leads to a form of strict liability for adults who could not have foreseen or prevented the harm.

Despite the law’s implicit presumption that adults have capacity for foresight, it is not a simple “on/off” switch. Capacity for foresight is subject to normal variation in healthy people and is highly dependent on the circumstances.⁹¹ And yet, on average,

88. See *Delahanty v. Hinckley*, 799 F. Supp. 184, 187 (D.D.C. 1992); *Mullen v. Bruce*, 335 P.2d 945, 947 (1959).

89. *Williams v. Kearbey*, 775 P.2d 670, 673 (1989).

90. *Ramey v. Knorr*, 124 P.3d 314, 317 (2005); accord *Stephanie Splane, Tort Liability of the Mentally Ill in Negligence Actions*, 93 YALE L.J. 153, 163 (1983).

91. Arnaud D’Argembeau et al., *Component Processes Underlying Future Thinking*, 38 MEMORY & COGNITION 809, 810 (2010); see also Arnaud D’Argembeau & Martial Van der Linden, *Individual Differences in the Phenomenology of Mental*

some of us are better at it than others. Given the individual variation in the capacity for foresight, what is “objectively reasonable conduct” in each situation will be very difficult to measure. But rather than confront this reality, we assume that negligence is purely about external conduct. If we are committed to negligence being based on breach and not simply as a form of wealth redistribution or compensation, we must pay more attention to whether a particular defendant is *capable* of foresight and prevention given what they knew and should have known.⁹²

*H. We May Be Negligent for Failing to Undertake
Procedural Epistemic Obligations*

Actions we may be expected to take to generate the knowledge or awareness that could prevent future accidents are called “procedural epistemic obligations.”⁹³ It is not a valid moral or legal defense to say that we stuck our head in the sand and avoided any information about future risks.⁹⁴ Physicians have procedural epistemic obligations to stay educated on new risks from the procedures they perform. Operators of heavy equipment have obligations to set up safety checklists to reduce workplace injuries that may stem from inattentiveness. While negligence liability can be based on procedural epistemic obligations, these precautions only become possible because defendants are aware, or should be aware, of a category of risk. If we reasonably and completely fail to appreciate a future risk, it will be impossible to plan to avoid it.⁹⁵ Thus, even if we must constructively impute “common knowledge” to a defendant that we think they should have known, this procedural epistemic obligation can only be triggered based on some other prior subjective mental state, such as actual knowledge of a risk.

Time Travel: The Effect of Vivid Visual Imagery and Emotion Regulation Strategies, 15 CONSCIOUSNESS & COGNITION 342 (2006).

92. “[R]esponsibility-relevant control is capacitarian control, [so] it follows that the obligation agents have are directly tied to those things over which they have capacitarian control.” Fernando Rudy-Hiller, *A Capacitarian Account of Culpable Ignorance*, 98 PAC. PHIL. Q. 398, 418 (2017).

93. See Daniel Miller, *Reasonable Foreseeability and Blameless Ignorance*, 174 PHIL. STUD. 1562, 1568 (2017).

94. See *id.* at 1580; Kenneth W. Simons, *When Is Negligent Inadvertence Culpable? Introduction to Symposium, Negligence in Criminal Law and Morality*, 5 CRIM. L. & PHIL. 97, 105 (2011).

95. Moore & Hurd, *supra* note 24, at 181–82.

People will have different procedural epistemic obligations depending on their status and what they actually knew or realized.

As such, we cannot trace all liability back to procedural epistemic obligations. There will be some risks for which we have no notice because humans have limited cognitive capacities that must “navigate information-rich environments.”⁹⁶ We are always prioritizing and always cutting corners. It would be unreasonable to expect anyone to have perfect vigilance, knowledge, or perception *at all times*. And to the extent we fail to live up to demands for vigilance, these are cognitive errors and not behavioral ones.

My thesis is supported by the case that gave us the objective standard for breach: *Vaughan v. Menlove*.⁹⁷ Recall that the defendant said he would “chance it” by keeping his barrels of hay near his neighbors’ cottages, despite multiple warnings that they could ignite. It was not the stacking of the hay that was careless. Indeed, if the hay had been dry, this would have been appropriate. But knowing his hay was damp and that it was close to one neighbor’s property line rendered this unreasonable. Indeed, while defendants are not expected to be perfectly vigilant, in this case the defendant had concrete, repeated notice of the risks. In light of this, the defendant’s conscious disregard for a substantial, life-threatening risk likely meets the mental state of recklessness.⁹⁸ Because negligence is a lesser-included mental state, reckless or grossly negligent conduct can demonstrate breach. Even so, relying on reckless conduct to prove negligence does not help us determine what is *uniquely* negligent. So, there we have it—even the canonical negligence cases do not help us to see or define negligence per se.

This leads to a critique of the law and economics theory of negligence, which emphasizes *ex ante* incentives and efficiency.⁹⁹ Embedded within the idea that negligence is inefficient risk-taking is an assumption that negligence involves some sort of deliberate, yet ultimately incorrect, weighing of the

96. Samuel Murray & Manuel Vargas, *Vigilance and Control*, 177 PHIL. STUDS. 825, 828–29 (2018).

97. Grady, *supra* note 37, at 550 (describing how *Vaughan* adopted an “objective conception of negligence, but it was an objective definition of a negligent *state of mind*,” and this evolved into an objective standard for conduct, as evidenced by the case of *Blyth v. Birmingham Waterworks*).

98. *See id.* at 548–51; GOLDBERG ET AL., *supra* note 36, at 173.

99. Richard Posner, *A Theory of Negligence*, 1 J. LEGAL STUDS. 29, 32 (1972).

costs and benefits of precaution.¹⁰⁰ Without explicitly relying on mental state information, breach is defined in terms of rational and conscious mental states that are sensitive to external deterrence goals.¹⁰¹ While this might not entail recklessness, it nonetheless envisions a rational or conscious decision to act.

However, in many garden variety negligence cases, there is no conscious decision whether to act. Thus, there is no opportunity to deter a nondecision with optimal legal incentives.¹⁰² Examples of this include when people unwittingly forget,¹⁰³ when they are distracted, or when they simply cannot attend to everything around them. We daydream. We get preoccupied. We cannot look everywhere all at once. We move subconsciously. In these situations, there can be no rational, ex ante weighing of risks and benefits. The effects of cognitive load are also so normal that they cannot be labeled per se unreasonable.¹⁰⁴

For example, if a driver fails to hit the brakes quickly enough, this is often due to implicit cognitive mechanisms that are impervious to deterrence goals. In this situation, let us assume that there was nothing that could be added to the car or to the driver's habits to reduce the risk ex ante. There was no additional precaution that could have been invested in beforehand. The failure, like most car accidents, was just a failure of human perception or attention. If, however, the driver instead weighed the possibility of an accident but consciously thought he was willing to risk it because he did not want to be late for a critical business meeting, then this is more like recklessness than negligence.

Holding defendants liable for their failure to invest in efficient precautions might make sense when applied to sophisticated, deliberate decisions involving repeat players.

100. "[T]he Hand formula itself seems to presuppose advertent risk-taking." Gary T. Schwartz, *Contributory and Comparative Negligence: A Reappraisal*, 87 YALE L.J. 697, 701 (1978); see also Charles R. Korsmo, *Lost in Translation: Law, Economics, and Subjective Standards of Care in Negligence Law*, 118 PENN STATE L. REV. 285, 306 (2013).

101. Lytton, *supra* note 42, at 365–66, 375.

102. George Sher, *Out of Control*, 116 ETHICS 285, 286–87 (2006).

103. Zachary Irving et al., *The Catch-22 of Forgetfulness: Responsibility for Mental Mistakes*, AUSTRALASIAN J. PHIL. (forthcoming).

104. Murray & Vargas, *supra* note 96, at 841 ("Failures of appropriate vigilance are those where an agent manifests substandard vigilance, where standards of vigilance are determined by the content of reasonable demands made on our cognitive resources.").

Examples include weighing the risk-utility tradeoffs in the design of new products or deciding whether to fly a helicopter in bad weather conditions. This view of breach makes much less sense when applied to fallible human beings, who initiate movement without much conscious thought. Viewing negligence as being about efficient incentives and deterrence ignores the vast majority of negligence cases where no conscious risk evaluation can or does occur.

I. The Myths We Tell Ourselves That Permit Us to Ignore Mental States

At this point, you might ask, “How did we get to this place, where negligence doctrine ignores the role of mental states, when it is obviously doing much of the work in the shadows?” There are two myths we tell ourselves that permit us to ignore the formal role of mental states in negligence. The first is that torts are amoral. The second is that mental states are metaphysical. These myths are demonstrably false but undergird our present view of negligence-as-conduct.

1. Myth #1: Torts Are Amoral

The first myth we tell ourselves is that mental states can be ignored because civil negligence is amoral.¹⁰⁵ Nobody is going to jail, the burden of proof is much lower, and the goal is not to punish.¹⁰⁶ Liability can even be strict if a defendant is subjectively incapable of conforming their actions to what is reasonable.¹⁰⁷ We therefore do not need to inquire into what the defendant was thinking at the time or whether they were born “hasty or awkward.”¹⁰⁸ We can cast moral blameworthiness, with its squishy mental state assessments, aside. Instead, the

105. See KIONKA, *supra* note 32, at 67 (explaining that, when it comes to the focus of conduct in breach, “legal fault and moral blame diverge.”); Goudkamp, *supra* note 33, at 352 (“[N]egligence, by reason of being conduct-based, diverges from morality.”).

106. See generally Richard Posner, *Instrumental and Noninstrumental Theories of Tort Law*, 88 IND. L.J. 469, 486 (2013).

107. See Holmes, *supra* note 3, at 108 (“If . . . a man is born hasty and awkward . . . no doubt his congenital defects will be allowed for in the courts of Heaven, but his slips are no less troublesome to his neighbors than if they sprang from guilty neglect. His neighbors accordingly require him, at his proper peril, to come up to their standard . . .”).

108. See *id.*; KIONKA, *supra* note 32, at 67; Goudkamp, *supra* note 33, at 352.

defendant will be held to an *objective* standard of care based on conduct.¹⁰⁹ This amoral view of negligence has prevailed “for far too long” as “professors at elite schools” have focused on the cost of accidents.¹¹⁰

However, the amoral view of negligence was not always,¹¹¹ and is not universally, held.¹¹² From the defendant’s perspective, having to pay hefty damages *feels* like punishment, even if it is not officially labeled as such. And while negligence is less obviously about moral blame than the criminal law, jurors are still deciding whether to use the power of the state to hold defendants accountable and to make them pay.¹¹³ This means that jurors will automatically infer the defendant’s mental states in order to blame them for negligence.¹¹⁴

A large component of the “torts are amoral” rhetoric rests on the presumed ability of ordinary people to check their psychology at the door when they become jurors. We may prefer to keep the messiness of mindreading and morality out of the civil law and to focus only on conduct. But this normative preference is not strong enough to overcome the psychological reality. If we want to continue to rely on human beings to assess legal responsibility and moral blame, we need to come to terms with how they do this. People spontaneously use mental state information to infer negligence. This is often mediated through moral blame.¹¹⁵

109. See sources cited *supra* note 108.

110. Benjamin Zipursky & John Goldberg, *Thoroughly Modern Tort Theory*, 134 HARV. L. REV. F. 184, 184 (2021).

111. See *Blaine v. Chesapeake & O.R. Co.*, 9 W.Va. 252, 254 (1876) (Liability “is founded upon an original moral duty, enjoined upon every person, so to conduct himself, or exercise his own rights, as not to injure another.”).

112. See Gregory C. Keating, *Strict Liability Wrongs*, in PHILOSOPHICAL FOUNDATIONS OF THE LAW OF TORTS 292 (John Oberdiek ed., 2014); John Goldberg & Benjamin Zipursky, *Seeing Tort Law from the Internal Point of View: Holmes and Hart on Legal Duties*, 75 FORDHAM L. REV. 1563, 1565 (2006) (“[T]ort and its historical antecedents were (as tort still is) rife with concepts that link it to notions of morality.”). For a critique of civil recourse theory, see Posner, *supra* note 106, at 470.

113. Anita Bernstein, *The Communities That Make Standards of Care Possible*, 77 CHI.-KENT L. REV. 735, 735 (2002).

114. For a helpful discussion on how blame-validation drives assessments of moral and legal responsibility, see Mark Alicke, *Culpable Causation*, 63 J. PERSONALITY & SOC. PSYCH. 368, 376–77 (1992); Mark Alicke et al., *Causation, Norm Violation, and Culpable Control*, 108 J. PHILOSOPHY 670 (2011).

115. Sources cited *supra* note 114.

2. Myth #2: Mental States Are Metaphysical

The next myth we tell ourselves is that mental states are metaphysical.¹¹⁶ It is true:¹¹⁷ jurors cannot directly observe mental states because “intentions don’t leave fingerprints or footprints.”¹¹⁸ Actions, on the other hand, can be observed and corroborated with physical evidence like cashed checks, bloody murder weapons, or video surveillance. Many legal doctrines thus exhibit suspicion of mental states because they can be more easily fabricated and concealed. Another layer of this is that, because mental states are ethereal, we can isolate the physical *actions* from the *mental states* and attend only to the former.¹¹⁹

This idea reflects the philosophy of René Descartes, who proposed that the physical body and metaphysical mind were distinct.¹²⁰ Referred to as “substance dualism,” this theory holds that mental states are not made from biological matter, but instead exist in an abstract, otherworldly space.¹²¹ Dualism has found permanent residency in many legal and philosophical doctrines, despite being nearly universally rejected by neuroscientists and psychologists.¹²² Even if mental states might be more than the sum of our physiological parts, they are certainly manipulated by our physical brains. Even physically reaching to grab a mug of coffee is mediated “by a rich and complex chain of neuronal processes” which includes action selection, planning, motor execution, and monitoring

116. CHRISTOPHER SLOBOGIN, PROVING THE UNPROVABLE 8, 142 (2007) (explaining how judges and jurors are skeptical of psychological claims).

117. *Id.*

118. McNamara et al., *supra* note 21, at 95.

119. See Keren Shapira-Ettinger, *The Conundrum of Mental States: Substantive Rules and Evidence Combined*, 28 CARDOZO L. REV. 2577, 2579 (2007); TRACY BATEMEN ET AL., 35 NEW YORK JURISPRUDENCE: CRIMINAL LAW: PRINCIPLES AND OFFENSES § 20 Mens Rea and Actus Reus Distinguished (2022).

120. RENÉ DESCARTES, THE PHILOSOPHICAL WORKS OF DESCARTES (Elizabeth S. Haldane & G.R.T. Ross trans., 1837).

121. Matthias Forstmann & Pascal Burgmer, *A Free Will Needs a Free Mind: Belief in Substance Dualism and Reductive Physicalism Differently Predict Belief in Free Will and Determinism*, 63 CONSCIOUSNESS & COGNITION 280, 281 (2018).

122. Albert Bandura, *Toward a Psychology of Human Agency*, 1 PERSPS. PSYCH. SCI. 164, 167 (2006); Patrick Haggard, *Sense of Agency in the Human Brain*, 18 NATURE REV. NEUROSCIENCE 197, 198 (2017) (“The legal concept of *mens rea* also contrasts with neuroscientific views that emphasize the automatic, unconscious precursors of actions that are experienced as voluntary.”).

feedback.¹²³ We cannot act without *thinking* about acting, even if we lack conscious access to those thoughts.¹²⁴

There is an intuitive appeal to treating observable actions as distinct from, and preferable to, invisible mental states. However, despite this, the actus reus and the mens rea are not dichotomous—or even distinct.¹²⁵ Thinking and acting cannot be neatly divided, either in the actor or in the observer. This idea has enormous impact on negligence doctrine.

While we might have different words and metaphors for thinking versus acting, we cannot neatly cleave the two.¹²⁶ Actions and mental states are functionally and structurally interconnected. The mental processes underlying conduct have been thoroughly investigated, revealing the brain architecture necessary for the mental states that cause action.¹²⁷ Studies of patients with brain lesions¹²⁸ and motor disorders¹²⁹ have exposed the tight connections between impaired mental states and impaired physical actions.

For example, lesions to the parietal cortex from stroke cause people to experience difficulty with perception,¹³⁰ which impairs

123. Etienne Combrisson et al., *From Intentions to Actions: Neural Oscillations Encode Motor Processes Through Phase, Amplitude and Phase-Amplitude Coupling*, 147 NEUROIMAGE 473, 473 (2017).

124. See *Williamson v. McKenna*, 354 P.2d 56, 59 (Or. 1960), *superseded by statute*, Or. Rev. Stat. § 161.015, *as recognized in State v. Hill*, 692 P.2d 100 (Or. 1984) (noting that conduct ranges between purposeful, inadvertent (negligent), and “reckless, willful, or wanton conduct . . . in which the actor intentionally does an act with knowledge”); *Patton v. City of Grafton*, 180 S.E. 267, 269 (W. Va. 1935) (recognizing that “theorists are divided on whether negligence is a state of mind or is conduct”).

125. Mental states and actions do have some distinct properties. However, just because we can isolate these concepts linguistically or mechanistically does not mean that the human mind can isolate the actus reus from the mens rea in practice when acting or evaluating actors.

126. This project assumes a materialist view of the brain, which the existing neuroscientific data support. Kevin D’Ostilio & Gaëtan Garraux, *Brain Mechanisms Underlying Automatic and Unconscious Control of Motor Action*, FRONTIERS HUM. NEUROSCIENCE, Sept. 26, 2012, at 1.

127. Fei Hu et al., *Prefrontal Corticotectal Neurons Enhance Visual Processing Through the Superior Colliculus and Pulvinar Thalamus*, 104 NEURON 1141, 1141 (2019); Daniel M. Wolpert & Michael S. Landy, *Motor Control Is Decision-Making*, 22 CURRENT OP. NEUROBIOLOGY 996 (2012).

128. Fabrizio Doricchi et al., *White Matter (Dis)connections and Gray Matter (Dys)functions in Visual Neglect: Gaining Insights into the Brain Networks of Spatial Awareness*, 44 CORTEX 983, 983 (2008).

129. D’Ostilio & Garraux, *supra* note 126.

130. Doricchi et al., *supra* note 128.

their movement.¹³¹ Parkinson's disease stems from neurodegeneration of a part of the brain called the substantia nigra, which directly impacts the motivation and ability to move smoothly.¹³² This is caused by deficits in the neurotransmitter dopamine.¹³³ These studies show that physiological impairments lead to mental state impairments, which then lead to motor impairments.¹³⁴

Cutting-edge treatments also rely on the causal physiological connection between brains, mental states, and motor function. Transcranial magnetic stimulation (TMS) disrupts the electrical current of the motor cortex by stimulating coils on the surface of someone's scalp. This can directly and predictably alter movements.¹³⁵ But it is implantable devices, called "brain computer interfaces" (BCIs), that drive a final nail in the coffin of substance dualism. These devices stimulate brain areas such as the cerebellum or basal ganglia to dramatically improve movement.¹³⁶ Remarkably, by mapping brain structure to functions, BCIs have even empowered people to control prosthetic limbs *using only their minds*.¹³⁷ These extraordinary devices would not be possible if not for the tight, causal feedback loop between brain structures, mental states, and physical conduct. The efficacy of BCIs for movement disorders offers compelling proof that the physical brain enables mental states, which in turn enable movement.

While BCIs establish the ability to control our actions with thoughts, much of our mental activity never pierces our

131. Simon Kessner et al., *Somatosensory Deficits After Ischemic Stroke*, 50 *STROKE* 1116, 1116 (2019).

132. See Suman Sen et al., *Dynamic Changes in Cerebello-Thalamo-Cortical Motor Circuitry During Progression of Parkinson's Disease*, 166 *NEUROSCIENCE* 712, 712 (2010).

133. See generally Pietro Mazzoni et al., *Why Don't We Move Faster? Parkinson's Disease, Movement Vigor, and Implicit Motivation*, 27 *J. NEUROSCIENCE* 7105, 7106 (2007) (proposing that dopamine provides a signal to motivate movement).

134. Cf. *id.* at 7115–16.

135. Amir-Homayoun Javadi et al., *Transcranial Direct Current Stimulation of the Motor Cortex Biases Action Choice in a Perceptual Decision Task*, 27 *J. COGNITIVE NEUROSCIENCE* 2174, 2174 (2015).

136. Zhen Ni et al., *Effects of Deep Brain Stimulation on the Primary Motor Cortex: Insights from Transcranial Magnetic Stimulation Studies*, 130 *CLINICAL NEUROPHYSIOLOGY* 558, 558 (2018).

137. Tyson Aflalo et al., *Decoding Motor Imagery from the Posterior Parietal Cortex of a Tetraplegic Human*, 348 *SCIENCE* 906, 907 (2015); see also Chad E. Bouton et al., *Restoring Cortical Control of Functional Movement in a Human with Quadriplegia*, 533 *NATURE* 247, 247 (2016).

awareness. Indeed, a great deal of behavior is “largely driven by brain processes that unfold outside of our consciousness.”¹³⁸ Using electroencephalography (EEG), Ben Libet demonstrated that preparatory motor action, in the form of detectable brain waves, precedes our awareness of our decision to act. More recent studies using functional magnetic resonance imaging (fMRI) likewise predict how subjects would act seconds before they report consciously making the decision, based on patterns of activity in the precuneus and the fronto-polar cortex.¹³⁹ At a minimum, these studies reveal that we are often only aware of the many hidden mental processes that enable movement after-the-fact.¹⁴⁰ If we can initiate action without awareness, then this potentially undermines the idea that we can foresee the consequences of these decisions.

Embracing this area of neuroscience may require us to develop new theories for agency and responsibility that do not require awareness. However, the current model of negligence assumes a falsehood—that physical actions can be divorced and analyzed separately from the mental processes that enable them. These two myths—that negligence is amoral and that mental states are metaphysical—are demonstrably false. Even so, they permit us to continue to ignore the mindreading required in negligence. The other key enabler is our inability to describe foresight in a way that makes its epistemic components clear. Fortunately, legal foresight maps directly onto the psychological concept of episodic foresight, where researchers have done much of the conceptual work for us.

II. DECONSTRUCTING THE PSYCHOLOGY OF FORESIGHT

Rather than defending its validity as a construct, scholars acknowledge that foreseeability is “murky.”¹⁴¹ Indeed, some have argued it is no better defined than “strawberry shortcake.”¹⁴² Because the concept lacks descriptive validity, it is no surprise that it is viewed as a surrogate for judicial or juror discretion,¹⁴³ which leads “students and scholars to think that

138. D’Ostilio & Garraux, *supra* note 126, at 1.

139. *Id.*

140. Joo-Hyun Song & Ken Nakayama, *Hidden Cognitive States Revealed in Choice Reaching Tasks*, 13 TRENDS COGNITIVE SCI. 360, 360–62 (2009).

141. Zipursky, *supra* note 29, at 1249.

142. VerSteege, *supra* note 13, at 1498.

143. Cardi, *supra* note 11, at 743.

negligence law lacks conceptual integrity.”¹⁴⁴ Judges, too, have questioned the outsized reliance on foreseeability, given that it “is such a ‘malleable standard’ that has been muddled and misconstrued to the extent that it has lost any force as a discernable legal test.”¹⁴⁵ But it does not have to be this way. Once we better understand what foresight is, we can recognize how critical it is for distinguishing types of unintentional harm—the careless from the freak act of nature.

In this next Part, I will explain how legal foresight can gain construct validity by deconstructing its psychological components. Specifically, I will reveal how foresight has epistemic components, such as perception, memory, and evaluation. I will also explain the normal individual variation in these processes that renders a purely objective standard impossible.

A. *The Role of Episodic Foresight in Evolution*

Episodic foresight is a psychological construct that helps us plan for outcomes that are imminent, near, or distant.¹⁴⁶ It operates by relying on “a complex suite” of multiple cognitive systems.¹⁴⁷ Episodic foresight¹⁴⁸ is the “capacity to imagine or simulate events that might occur” and to plan our behavior accordingly.¹⁴⁹ The process works by enabling us to (1) construct a mental representation of a future event, (2) predict the likelihood of it occurring, (3) set an action goal, and (4) organize steps for following through on the plan.¹⁵⁰ When this process is

144. Zipursky, *supra* note 29, at 1249.

145. *Wilson v. Moore Freightservice, Inc.*, No. 4:14-CV-00771, 2015 WL 1345261, at *3 (M.D. Pa. Mar. 25, 2015).

146. See Lia Kvavilashvili & Jan Rummel, *On the Nature of Everyday Propection: A Review and Theoretical Integration of Research on Mind-Wandering, Future Thinking, and Prospective Memory*, 24 REV. GEN. PSYCH. 210, 212 (2020); Scott Cole & Lia Kvavilashvili, *Spontaneous and Deliberate Future Thinking: A Dual Process Account*, 85 PSYCH. RSCH. 464, 464 (2021).

147. Beyon Miloyan et al., *The Future Is Here: A Review of Foresight Systems in Anxiety and Depression*, 28 COGNITION & EMOTION 795, 795–96 (2014).

148. For an analysis of future thinking on topics ranging from upcoming events to impossibilities, see Kvavilashvili & Rummel, *supra* note 146, at 212. See also Cole & Kvavilashvili, *supra* note 146, at 464.

149. Schacter et al., *supra* note 68, at 41.

150. Episodic foresight is the construct that mirrors foreseeability in negligence, while mental time travel and simulation are component parts. See Kvavilashvili & Rummel, *supra* note 146, at 212; Federica Conti & Muireann Irish, *Harnessing Visual Imagery and Oculomotor Behaviour to Understand Propection*,

slow and deliberate, it gives us “an apparent sense of free will.”¹⁵¹ But when it happens quickly, we barely notice that it occurs.¹⁵² In recent years, episodic foresight has “garnered substantial interest from researchers of cognition, neuropsychology, and neuroscience.”¹⁵³ However, its natural connection to legal scholarship has been completely ignored.

To help deconstruct the component parts of foresight, let us imagine a scenario. You are late leaving for the airport and are driving on a curvy highway in the early morning hours. In the fog, you approach a car up ahead that appears to be stopped in the middle of the road. You must decide whether to try to drive around the car, hit the brakes, stop to offer help, or stay the course. How do you make this decision? Quite simply, you use the mental states that give rise to episodic foresight.

Episodic foresight involves multiple mental states: perception, attention, knowledge, memory, awareness, scene simulation, evaluation, and the ability to predict and weigh probabilities of outcomes to execute a plan.¹⁵⁴ If we err in any of these processes, we may hit the stopped car or an oncoming car, which could result in negligence liability for “unreasonable conduct.”¹⁵⁵ But it would be incorrect to think of this accident as being caused by only physical acts. The action of failing to apply the brakes quickly enough contains within it necessary mental states.

In cases where the defendant has little time to react, such as when driving, the voluntary actions that cause harm may be “phenomenally thin.” This means that the actor’s mental states

25 TRENDS COGNITIVE SCI. 272, 272 (2021); Beyon Miloyan & Kimberley McFarlane, *The Measurement of Episodic Foresight: A Systematic Review of Assessment Instruments*, 117 CORTEX 351, 351 (2019).

151. Thomas Suddendorf & Jonathan Redshaw, *The Development of Mental Scenario Building and Episodic Foresight*, 1296 N.Y. ACAD. SCI. 135, 135 (2013).

152. See Kvavilashvili & Rummel, *supra* note 146, at 212; Cole & Kvavilashvili, *supra* note 146, at 479.

153. Cole & Kvavilashvili, *supra* note 146, at 464–79; Brendan Gaesser et al., *Moral Imagination: Facilitating Prosocial Decision-Making Through Scene Imagery and Theory of Mind*, 171 COGNITION 180, 180 (2018).

154. See Schachter et al., *supra* note 68, at 41; Wolpert & Landy, *supra* note 127.

155. *Eckelberry v. ReliaStar Life Ins. Co.*, 402 F.Supp.2d 704, 714 (S.D. W. Va. 2005) (citing Adam F. Scales, *Man, God, and the Serbonian Bog: The Evolution of Accidental Death Insurance*, 86 IOWA L. REV. 173, 175 (2000)) (“[E]very car crash may be traced to some failure of judgment that fully reveals its dangers only when it is too late. That is precisely why they are accidents.”).

might not be that vivid or conscious.¹⁵⁶ The process of foresight might be taken for granted, as the “neural computations that produce this experience are so efficient and so familiar that our sense of agency can seem to be minimal and banal.”¹⁵⁷ Even the actor may be oblivious to their own foresight calculations. But a juror, carefully assessing the scene *ex post*, will not be. This is why we must unpack the vital roles of perception and procedural, semantic, and episodic memory in the development of episodic foresight.

1. Episodic Foresight Requires Perception

When we approach the car in the fog, we must be able to accurately attend to and interpret sensory inputs, such as the distance between our cars, the width of the shoulder and the space between the car and oncoming traffic, the noise of oncoming cars, the grip of the wheel, and any unusual road conditions.¹⁵⁸ This requires rapid perceptual processing.¹⁵⁹ We visually scan our surroundings, listen for cues, feel tactile inputs, have a healthy sense of our bodies in space (which is called proprioception), and send all of this feedback to our brain. There the feedback is processed into preparatory action for us to move.¹⁶⁰ When we make a deliberate choice and move in the way that we planned, we increase midbrain dopamine, which gives us a sense of reward, and, later, a feeling of agency.¹⁶¹ This is why clumsiness is not a purely physical thing. What we think of as clumsiness is fundamentally an issue with coordinating

156. Haggard, *supra* note 122, at 197.

157. *Id.*

158. Rafiq Huda et al., *Distinct Prefrontal Top-Down Circuits Differentially Modulate Sensorimotor Behavior*, 11 NAT. COMMUN 1, 2 (2020) (“Though seemingly simple, goal-oriented sensorimotor behaviors require coordination of multiple processes.”).

159. See generally Nathan J. Wispinski et al., *Models, Movements, and Minds: Bridging the Gap Between Decision Making and Action*, 1464 ANNALS N.Y. ACAD. SCI. 30 (2018).

160. Daniel J. Gale et al., *Human Somatosensory Cortex Is Modulated During Motor Planning*, 41 J. NEUROSCIENCE 5909, 5920 (2021) (explaining that the brain encodes information from our surroundings, then brain activity indicates “the imminent action to be performed” in pre-movement modulation).

161. See Stefania Sarno et al., *Dopamine Reward Prediction Error Signal Codes the Temporal Evaluation of a Perceptual Decision Report*, 114 PROC. NAT'L ACAD. SCI. (2017).

“mismatches between the predicted and actual sensory signals” in the brain.¹⁶²

Human perception is complex and sensitive, but not error proof.¹⁶³ For example, when we have to search large datasets, discriminate between similar colors and shapes, or calculate distances at the same time, this is referred to as “perceptual load.”¹⁶⁴ Perceptual load can make us blind to obvious items in our path. For example, if you’re trying to count the number of times a group of people pass a ball back and forth, you might miss a conspicuous gorilla who dances across the middle of the screen. This is called “inattentive blindness.” The gorilla would be obvious to a jury watching the recording in hindsight, if their perception is not similarly being taxed.

Healthy people perceive the world differently from one another.¹⁶⁵ People perceive colors differently, have different sensitivities to contrast, organize and ensemble inputs differently, and draw very different meanings from what they see. Individual differences in visual perception “range from slight, and perhaps random, fluctuations in performance across individuals, to considerable dissimilarities.”¹⁶⁶ These differences can be reliably traced to broader group differences in intelligence, sex, personality, culture, motivation, and even psychosis.¹⁶⁷ In sum, perception is highly specific to the observer and situation and cannot be collapsed onto an objective standard of reasonableness. There is no such thing as reasonable perception.

162. Gale et al., *supra* note 160, at 5920.

163. Joshua Eayrs & Nilli Lavie, *Establishing Individual Differences in Perceptual Capacity*, 44. J. EXPERIMENTAL PSYCH. HUM. PERCEPTION & PERFORMANCE 1240, 1255 (2018).

164. *Id.* at 1241.

165. See Jason S. Tsukahara et al., *Attention Control: The Missing Link Between Sensory Discrimination and Intelligence*, 82 ATTENTION, PERCEPTION, & PSYCHOPHYSICS 3445 (2020).

166. Tímea R. Partos et al., *You Don’t See What I See: Individual Differences in the Perception of Meaning from Visual Stimuli*, 11 PLOS ONE, Mar. 8, 2016, at 2.

167. *Id.*

2. Episodic Foresight Requires Procedural, Episodic, and Semantic Memory

What if memories were not for the past, but for the future? Indeed, they likely are.¹⁶⁸ Deciding how to respond to the stopped car in the fog requires us to imagine or remember how our car has behaved on this road in the past (episodic memory), how we compress the brakes and turn the wheel (implicit, procedural memory), how curves in the road appear, and perhaps what the speed limit is (semantic memory). As I will explain below, research in psychology has shown that different aspects of memory are perhaps the most important ingredient to foresight.

Procedural memory is how our bodies subconsciously and implicitly learn to perform tasks. Examples include tying our shoelaces or playing piano. These routine actions lead to habituation—where we learn how to move without realizing we are engaging memory processes. Impairments in procedural memory, which can happen with Alzheimer’s disease, result in deficits in foresight related to the learning and initiation of basic motor functions.¹⁶⁹

Episodic memory is also crucial to episodic foresight.¹⁷⁰ This type of memory comes from personal experiences or past events.¹⁷¹ It provides the source material for future planning as we flexibly cut and paste past events together to recombine them and simulate possible future outcomes.¹⁷² This flexibility means that we do not have to experience an event to guess how it may occur.¹⁷³ Because the future “regularly dishes up situations that are entirely novel, representing novel future events requires more than just a system that projects the past into the

168. See Daniel T. Gilbert & Timothy D. Wilson, *Prospection: Experiencing the Future*, 317 *SCIENCE*, Sept. 7, 2007, at 1351.

169. Thomas Suddendorf & Michael C. Corballis, *Episodic Memory and Mental Time Travel*, in 18 *HANDBOOK OF EPISODIC MEMORY* 31, 32 (Ekrem. Dere et al. eds., 2008).

170. Schacter et al., *supra* note 68, at 41; Preston P. Thakral et al., *A Role for the Left Angular Gyrus in Episodic Simulation and Memory*, 37 *J. NEUROSCIENCE* 8142, 8142 (2017).

171. Schacter et al., *supra* note 68, at 41.

172. *Id.*; Gaesser et al., *supra* note 153, at 180; see Wolpert & Landy, *supra* note 127, at 996.

173. See Alexis C. Carpenter & Daniel L. Schacter, *Flexible Retrieval: When True Inferences Produce False Memories*, 43 *J. EXPERIMENTAL PSYCH.* 335, 335–36 (2017).

future.”¹⁷⁴ However, the more diverse experiences we have, the better our ability to foresee the future.¹⁷⁵

If we cannot remember, we cannot foresee. This is why amnesiacs have trouble with foresight. In fact, we might have evolved strong memory systems, not so much to keep accurate records of the past, but to travel back to past events to mentally travel into the future.¹⁷⁶ Memory allows us to mentally “replay” past events to “pre-play” future events.¹⁷⁷

Just like with perception, there are individual differences in how we remember events. Some of us mentally reconstruct scenes with vivid detail, and some of us take the perspective of a third-party observer—placing ourselves at the sidelines. Whether we do these things can turn on whether the scene is emotional, whether we are optimistic or narcissistic, and whether we have Alzheimer’s disease, depression, or autism.¹⁷⁸ Individuals tend to have “traits” for the way they reconstruct past events, which appear to be stable over time.¹⁷⁹

Foresight also requires semantic memory. Semantic memory consists of background knowledge about the way the world works and general memories that might not be connected to our having personally experienced an event. Examples of semantic memory include knowing what a yacht is, what emeralds looks like, and how you might grill hamburgers. Researchers believe that semantic knowledge provides the mental schema or scaffolding for foresight, given that patients with semantic dementia (no semantic memory, but preserved personal, episodic memory) struggle with foresight.¹⁸⁰

Semantic memory helps us put things into the context of what we know about the world and what generally makes sense. These representations include mental categories, schemas, and narratives which provide a script for how the upcoming events

174. Suddendorf & Redshaw, *supra* note 151, at 136.

175. Gilbert & Wilson, *supra* note 168, at 1352.

176. See Schacter et al., *supra* note 68, at 42; Wenwen Yang & Yaozhong Liu, *Improving Maladaptive Behavior: The Effect of Episodic Foresight on Delay Discounting and Its Mechanism*, 10 PSYCHOLOGY 19, 20 (2019) (discussing using mental time travel via future foresight).

177. Gaesser, *supra* note 19, at 3.

178. Jeffrey J. Berg et al., *The Stability of Visual Perspective and Vividness During Mental Time Travel*, CONSCIOUSNESS & COGNITION, July 2021, at 1–2.

179. *Id.*

180. Schacter et al., *supra* note 68, at 42. See generally Wolpert & Landy, *supra* note 127.

may unfold.¹⁸¹ If I were trying to calculate the likelihood or potential impact of a hurricane in my area, it would be impossible if I had no semantic knowledge of what hurricanes are and how they tend to behave.

Semantic memory helps us pre-experience events that we've never actually experienced.¹⁸² For example, semantic knowledge tells us that "chocolate pudding would taste better with cinnamon than dill" or that it "would be painful to go an hour without blinking."¹⁸³ The conclusions we draw from our schemas are not always correct, but they provide useful bases for prediction. Without semantic memory, our predictions would be poor. There can be no prediction without relevant semantic knowledge.

In the scenario where we are approaching the car that is stopped in the fog, we must rely on semantic knowledge to decide what is foreseeable and how we should act. We quickly recall how cars generally behave, how roads are laid out, how we control the steering wheel, and how traffic tends to move. These schemas may be triggered even though we may have never encountered a vehicle stopped ahead of us on the road.¹⁸⁴ Foresight is possible because we are capable of learning from our own past events and extrapolating the general, essential features to simulate outcomes in the future.¹⁸⁵

If the jury hears about the defendant's relevant semantic knowledge (such as knowledge that the center of gravity on his car would not allow for quick correction in steering), the driver might escape liability. In contrast, a defendant would more likely be liable if their truck tires blew when trying to stop, and they knew that their tires could be bald based on a previous warning from an auto mechanic.¹⁸⁶ Implicitly, judges appreciate that the defendant's knowledge is key to informing foresight.¹⁸⁷

181. Donna Rose Addis, *Mental Time Travel? A Neurocognitive Model of Event Simulation*, 11 REV. PHIL. & PSYCH. 233, 235 (2020).

182. Gilbert & Wilson, *supra* note 168, at 1352.

183. *Id.*

184. See generally Thomas Suddendorf, *Foresight and Evolution of the Human Mind*, 312 SCIENCE 1006, 1006 (2006).

185. Gilbert & Wilson, *supra* note 168, at 1352.

186. See *Acoba v. Gen. Tire, Inc.*, 986 P.2d 288, 305 (Haw. 1999) (explaining how a corporate defendant could be liable for negligence because of its past subjective knowledge of a faulty tire inspection process).

187. See *Simmers v. Bentley Constr. Co.*, 597 N.E.2d 504, 507 (Ohio 1992); *Osborn v. City of Waterbury*, 220 A.3d 1, 6–7 (Conn. 2019) (“[T]he test [for foreseeability] is, would the ordinary [person] in the defendant’s position, knowing

This operates for individuals as well as for corporations, as legal people, through their employees and agents.¹⁸⁸

Judges describe why an injury was foreseeable by calling upon the actual, semantic knowledge of the defendant.¹⁸⁹ For example, consider a case where a gas station owner was found liable for negligence when a patron battered another patron on his property. The court argued the owner should have foreseen a battery on his premises because he knew that a group of boys were “pretty high” on drugs, that they “were gathered just outside the store where he could not see them,” and that one had a knife.¹⁹⁰ This subjective knowledge created a reasonably foreseeable risk and a duty to do more than sit back and watch the violent events unfold. The owner’s duty was based, in part, on an expectation that he should have activated a schema for how loitering boys with weapons who use drugs tend to behave, even though the owner apparently had no episodic memory of this exact scenario.¹⁹¹

This case helps explain how, even if a defendant subjectively lacked a critical mental state to foresee a bad outcome, they might still be found liable if they should have developed a plan to gain that knowledge. In this case, the breach might include failing to attend to previous red flags or failing to put in place better surveillance of the gas station.

3. Can Procedural, Semantic, or Episodic Memory Be Objectively Imputed to a Defendant?

Now that we appreciate the critical role of memory in assessing foreseeability, we must explore whether it can be imputed when it is not actually there. Put differently, we must ask whether it is appropriate in negligence to find a defendant liable, not for information they subjectively knew, but for information they *should have known*. This involves the procedural epistemic obligations discussed above, where

what he knew or should have known, anticipate that harm.”); *Houston v. Frog’s Rest, L.L.C.*, 513 F.Supp.3d 235, 242 (D.P.R. 2021) (“[T]he main way to demonstrate foreseeability is to point to similar incidents in the past that the defendant knew or should have known about.”).

188. *Acoba*, 986 P.2d at 305.

189. See *Chaikin v. Fid. & Guar. Life Ins. Co.*, No. 02 C 6596, 2003 WL 21003715, at *3 (N.D. Ill. May 1, 2003).

190. *Flood v. Southland Corp.*, 616 N.E.2d 1068, 1075–76 (Mass. 1993).

191. *Osborn*, 220 A.3d at 6–7.

someone can be deemed negligent for failing to acquire information they should have acquired based on subjective information we think they possessed. This observation may relieve the reader who is concerned that requiring mindreading in negligence may render it a subjective free-for-all. That is, one can be imputed with the common knowledge that they may not have but should have acquired. This does not remove the necessity of assessing an actor's subjective mental states but moves this inquiry earlier in time to when the procedural epistemic states would have been triggered.

For example, if someone drives 100 miles per hour through a crowded school zone, this is objectively, unreasonably risky.¹⁹² If the risk materializes, the actus reus provides circumstantial evidence of the mens rea of at least negligence. This is because the driver has presumably ridden in cars near schools before, and likely also has driven near them, so it is reasonable to assume they have semantic knowledge that schools are full of kids with inferior perception and reaction times. Furthermore, to be licensed, drivers must pass exams where they acknowledge the existence of, and reasons for, speed limits near schools.

In these cases, we may not stop to realize that we are drawing inferences about the defendant's subjective mental states, but we are. Because the risk of driving 100 miles per hour is so well-known, it is unreasonable for *anyone* to drive this fast in a school zone. Even in the rare situation where the defendant failed to subjectively realize these risks, the risks may attach as conditions on the social contract of, and licensing for, driving.¹⁹³ Constructive knowledge can be imputed to actors based on what they should have known (and here, the driver knew they were driving, which is generally and widely known to be a potentially dangerous activity). This makes the task of mindreading less abstract and mystical because it can be based on documents and testimony about what the defendant likely did and knew.

To explain why this matters, let us consider an example. A car insurance company, GEICO, was sued for negligence. The plaintiff argued it was careless for GEICO to have insured a risky driver. GEICO knew the insured had been cited for driving

192. *Klop v. Vanden Bos*, 248 N.W. 538, 538 (Mich. 1933); *Arnold v. Metro. Life Ins. Co.*, 970 F.2d 360, 361 (7th Cir. 1992); *State v. Easley*, No. 07AP-578, 2008 WL 324406 (Ohio App. 2008).

193. See Gregory C. Keating, *Reasonableness and Rationality in Negligence Theory*, 48 STAN. L. REV. 311, 312–13 (1996).

without a license.¹⁹⁴ However, the judge decided that GEICO was negligent because it *could have gathered information*, which would have revealed that the insured was not “stable” and was sleeping on a mattress on someone else’s floor. One wonders how GEICO was meant to discover this and, moreover, how that information would inform how careful a driver they were. But in any event, the court imputed knowledge to GEICO that it did not have.

GEICO was found to be negligent because it should have foreseen that the driver was too risky to insure, based on knowledge it did not actually possess. Without being explicit about this, this analysis converted the case into an affirmative duty to investigate, which GEICO may have reasonably had. Reframing the breach from one of misfeasance to nonfeasance is not uncommon. However, this should be made more explicit because this alters the alignment with causation and injury. When focused on the affirmative duty to investigate, a finding of breach is quite unlikely. That is, it is unreasonable to expect GEICO to inquire into where its insureds sleep. Moreover, being precise about the duty and the breach reveals a problem with but-for causation, the prong of causation that asks whether the defendant’s breach was necessary for the outcome to occur. Drivers who are really *that* risky would probably drive without insurance, and thus the breach was unlikely to be a but-for cause of the injury. The finding of breach in this case was made possible by failing to recognize foresight as mental, and thus failing to recognize the procedural epistemic obligations that might be triggered by a company’s subjective knowledge.

4. Foresight Requires Weighing Uncertain Risks and Outcomes

Foreseeability requires making decisions and predictions under uncertainty.¹⁹⁵ However, we rarely have probability estimates of whether a particular action will cause harm, so we must guess. After the fact, though, jurors have access to what actually occurred. This knowledge clouds their prior probability

194. GEICO Indem. Co. v. Whiteside, 857 S.E.2d 654, 664 (Ga. 2021).

195. Klaus Wunderlich et al., *Neural Computations Underlying Action-Based Decision Making in the Human Brain*, 106 PROC. NAT’L ACAD. SCI. 17199, 17199–171204 (2009); Amber Dunning et al., *The Tuning of Human Motor Response to Risk in a Dynamic Environment Task*, PLOS ONE, Apr. 22, 2015, at 1.

analysis and permits them to impose what they know now on what the defendant should have known then.

To make this tangible, let us return to the driver in the fog. When we need to decide immediately how to act, we first simulate possible actions. We then assign values to each, which are encoded in the supplementary motor cortex.¹⁹⁶ Values are based on external factors such as the probability of an outcome occurring but also on what matters to us—emotionally and personally.¹⁹⁷ This weighing of outcomes is often based on “fast and frugal heuristics”¹⁹⁸ that are error-prone. For example, if an outcome quickly comes to mind, we may confuse this with its being objectively more likely to occur.¹⁹⁹

When weighing potential actions and outcomes, our brains are biased toward *personal* utility.²⁰⁰ For example, we might drive more carelessly if there are fellow teenagers in the car because of peer pressure.²⁰¹ Or, we might be much more cautious to protect a young child or a fancy new car we adore. We might also put a great deal of value on not missing our flight if we are trying to make our grandma’s funeral.²⁰²

Ultimately, our choices are driven by predicted rewards and punishments and, to a great extent, by the imagined feeling that the choice will give us.²⁰³ This process is mediated by the ventromedial prefrontal cortex (vmPFC), which is the “arbiter of emotional value to future-oriented scenarios.”²⁰⁴ Again, personality differences play a role. Some of us are extremely guilt or fear avoidant and will choose not to pursue certain goals if it means we might experience even a tiny dose of these emotions.²⁰⁵ Others of us will choose immediate smaller rewards

196. Wunderlich et al., *supra* note 195, at 17202.

197. Giovanni Pezzulo & Francesco Rigoli, *The Value of Foresight: How Propection Affects Decision-Making*, 5 FRONTIERS NEUROSCIENCE, Jun. 2011, at 1.

198. Adam Bulley et al., *Propection and the Present Moment: The Role of Episodic Foresight in Intertemporal Choices Between Immediate and Delayed Rewards*, 20 REV. GEN. PSYCH. 29, 37 (2016).

199. *Id.*

200. Thus, the process does not apply Bayesian reasoning. Joshua Martin et al., *Useful Misrepresentation: Perception as Embodied Proactive Inference*, 44 TREND NEUROSCIENCES 619 (2021).

201. Maria Jose Rodrigo et al., *Adolescents’ Risky Decision-Making Activates Neural Networks Related to Social Cognition and Cognitive Control Processes*, 8 FRONTIERS HUM. NEUROSCIENCE, Feb. 2014, at 1.

202. Wolpert & Landy, *supra* note 127, at 996.

203. Pezzulo & Rigoli, *supra* note 197, at 79.

204. Beyon Miloyan et al., *supra* note 147, at 800.

205. Pezzulo & Rigoli, *supra* note 197.

over larger but more delayed ones.²⁰⁶ Depending on someone's circumstances, immediate gains may be more rational than delaying gratification.²⁰⁷ It is not possible to say that these values are unreasonable. This highly idiosyncratic process complicates the idea of an "objectively reasonable" evaluation of future probabilities.

After factoring in the multiple evaluative inputs, we must then reduce the options to one action plan.²⁰⁸ Let us assume in our driving scenario that we decide to hit the brakes hard and veer slightly to the right²⁰⁹ because this seems to avoid the worst outcomes. Our body implements this strategy by engaging our motor cortex, which tells specific fibers and muscles to physically press the brake pedal and turn the wheel.²¹⁰ Far from being slow and deliberate, the entire decision-making process can occur in under 0.2 seconds.²¹¹ But the process can also go awry at any point.

Just as with the sensory feedback system, the outcome of the selected option can be tracked for prediction errors. This allows us to monitor whether we made the right choice and to learn from this experience.²¹² Maybe the car skids more than we expected and hits a rock. Maybe in the fog we could not see the cyclist on the shoulder that we have now hit with our car by swerving. While we had to consider multiple unknown possibilities and weigh them for likelihood and personal value, this process is obscured by focusing the jury's attention on a defendant's observable conduct—that is, conduct that jurors assess with the benefit of hindsight.

Given how complicated this action-planning process is, it provides further support for the "tender years" doctrine described above. Toddlers cannot construct scenes in their heads, visualize themselves in the future, or weigh the costs and benefits of future actions.²¹³ Each of these is necessary for

206. Bulley et al., *supra* note 198, at 39.

207. *Id.* at 33.

208. Wispinski et al., *supra* note 159.

209. See Tomohisa Asai, *Know Thy Agency in Predictive Coding: Meta-Monitoring over Forward Modeling*, 51 CONSCIOUSNESS & COGNITION 82, 83 (2017).

210. Hyosub E. Kim et al., *The Psychology of Reaching: Action Selection, Movement Implementation, and Sensorimotor Learning*, 72 ANN. REV. PSYCH. 61 (2021).

211. *Id.*; Jason P. Gallivan et al., *Decision-Making in Sensorimotor Control*, 19 NAT. REV. NEUROSCIENCE 519, 519 (2018).

212. Wunderlich et al., *supra* note 195, at 17199.

213. Suddendorf & Redshaw, *supra* note 151, at 137.

foresight. By about age four, children can usually distinguish between near future events (like dinner) and distant future events (like driving a car);²¹⁴ however, their sense of time is still not well-calibrated. For example, children may think their birthday is right around the corner, even though they just celebrated it.²¹⁵ Only by about age five can children project themselves and others into specific three-dimensional future contexts and evaluate predicted actions accordingly.²¹⁶ If we think that negligence liability should rest on the capacity for foresight, then most children under age five or six should not be liable for this reason.

B. There Are Significant Individual Differences in the Components of Episodic Foresight

In this Section, I will explain why it is impossible to perform a completely objective assessment of foreseeability. This is because reasonably prudent people will vary in their ability to foresee outcomes.²¹⁷ Capacity for foresight is so unstable and situation-specific that it can even be experimentally manipulated.²¹⁸ Given the considerable individual differences in the components of foresight—perception, memory, and evaluation—there can be no community norm or standard of reasonableness imposed upon them. That is, there is no way of saying that one person's perception or memory is objectively unreasonable because this analysis must be keyed *only to them*. This is a problem because negligence doctrine assumes that the entirety of breach, and foresight, can be collapsed onto an objective standard. In this Section, I highlight some of these individual differences in foresight ascriptions.

For example, people with better memories and higher scores on executive function tasks have fewer false negatives for predicting future events, but also more false positives, meaning they predict outcomes that do not occur.²¹⁹ Conversely, people with cognitive inflexibility have difficulties imagining the future

214. *Id.* at 138.

215. *Id.*

216. See Laura Hanson & Cristina Atance, *Brief Report: Episodic Foresight in Autism Spectrum Disorder*, 44 J. AUTISM DEV. DISORDER 674, 674 (2014).

217. D'Argembeau, *supra* note 91, at 810.

218. Schachter et al., *supra* note 68, at 41; Wolpert & Landy, *supra* note 127, at 996.

219. D'Argembeau, *supra* note 91, at 810.

and thus with foresight.²²⁰ This is associated with advanced age and various forms of dementia, but can exist in younger and healthy adults.²²¹ People dependent on opioids show deficits in foresight,²²² as do people who have experienced trauma. Difficulty seeing images in one's "mind's eye" also predicts impairments in foresight.²²³ Children and adults with autism spectrum disorder perform worse on some episodic foresight tasks.²²⁴

People with social anxiety²²⁵ and depression reveal interesting individual differences in foresight. Researchers hypothesize that anxiety and depression may actually be principally *caused* by differences in episodic foresight; people with these disorders are more likely to retrieve negative information and foresee the future as skewed toward worse outcomes.²²⁶ They may do this in part by attending more to "threat-related and negative information" when thinking about foreseeable events.²²⁷ However, we cannot say that individuals with anxiety or depression are unreasonable or even wrong in their predictions, as healthy adults exhibit an optimism bias that will be described below.

In addition to great variation among healthy individuals, a huge subsection of our population that is older, experiencing memory loss, anxious, depressed, autistic, opiate-dependent, exposed to trauma, or cognitively inflexible struggles with foresight. This represents a substantial chunk of the adult population. Additionally, on average, even neurotypical adults are poor at foreseeing future harms.

220. *Id.*

221. R.P. Roberts et al., *An fMRI Investigation of the Relationship Between Future Imagination and Cognitive Flexibility*, 95 *NEUROPSYCHOLOGIA* 156, 156 (2017).

222. Ahmed A. Moustafa et al., *Not All Drugs Are Created Equal: Impaired Future Thinking in Opiate, But Not Alcohol, Users*, 236 *EXPERIMENTAL BRAIN RSCH.* 2971, 2978–79 (2018).

223. Conti & Irish, *supra* note 150, at 272.

224. Hanson & Atance, *supra* note 216, at 674–77.

225. See generally Alexandra M. Opris et al., *Back to the Future: Relating the Development of Episodic Future Thinking to Cognitive and Affective Individual Differences and to Motivational Relevance in Preschoolers*, 29 *MEMORY* 362 (2021).

226. See Miloyan et al., *supra* note 147, at 799.

227. *Id.*

C. *Healthy Adults Make Errors in Foresight Predictions*

Foresight predictions are “often wrong in innumerable ways.”²²⁸ As a species, we are pretty lousy at foresight. The future is inherently uncertain, and we do our best to predict what may unfold. But we live in complex societies where we are cognitively overloaded. We also frequently lack awareness as to the full potential scope of our actions.²²⁹ This is not because we are unreasonable, but because we are human.

Even if we could provide jurors with what an “average” person in the defendant’s shoes would have actually foreseen—something that is currently impossible—this average person would still be pretty poor at foreseeing the future. In general, humans foresee “more positive future events than one can extrapolate rationally from past events.”²³⁰ This optimism bias is linked to specific neural correlates and may have “profound selective advantages over more negative but realistic expectations”²³¹—if we realistically assessed how likely bad outcomes were, we may take insufficient risks. But evolutionarily, humans need to experiment to evolve and grow. Optimism bias likely leads to universal prospective discounting of negative outcomes. Because jurors are fallible and are not attuned to the necessary components of foresight, they likely fail to calibrate “reasonable foreseeability” to someone who is pretty bad at foreseeing the future. In any event, we lack reliable error rates for the “normal” population. Outside of the lab, we have no way of knowing just how bad the entire population is at foreseeing risks of harm.

As I hope to have established in the previous Section, episodic foresight depends on perception, memories, knowledge, evaluations, and predictions that are *unique to the actor*.²³² Because foresight is guided by our idiosyncratic values and priorities, it cannot be standardized and assessed through an objective, population-level norm of “reasonable foreseeability.”²³³ Only after the subjective capacity for foresight is assessed (by interrogating perception, memory, and

228. Bulley et al., *supra* note 198, at 38.

229. See Laurent et al., *supra* note 18, at 28.

230. Thomas Suddendorf, *Episodic Memory Versus Episodic Foresight: Similarities and Differences*, 1 WIREs COGNITIVE SCI. 99, 102 (2010).

231. *Id.*

232. Suddendorf & Redshaw, *supra* note 151, at 136.

233. See Addis, *supra* note 181, at 235.

evaluation) can we turn to asking whether it was unreasonable for this particular defendant to have ignored the risk. When jurors are allowed to focus only on the question of whether the injury *should* have been foreseen, they will skip right over the critical inquiry of whether foresight *was even possible*. While folks may feel justified imposing blame even when an actor could not have possibly acted otherwise, the distinction between negligence and strict liability requires that the “ought imply the can.”²³⁴

III. THE OBJECTIVE STANDARD FOR FORESEEABILITY INVITES BIASES THAT INFLATE RATINGS OF BLAME

A. *Jurors Employ Agency Bias*

Now that we have an understanding of the (1) myth that negligence does not require mindreading and (2) the psychology of episodic foresight that debunks this myth, we can turn to the many practical problems this causes. The failure to recognize foresight as an epistemic state leads to many flawed and unfair outcomes. Specifically, when jurors determine foreseeability by asking whether it was reasonable before asking whether it was possible, they will engage in agency and hindsight bias. Together, these biases will operate to inflate the jury’s ratings of the defendant’s legal and moral blame. This happens in court and in our everyday lives.

When my son was about eighteen months old, he picked up my new Apple watch, threw it in the toilet, and in so doing, flushed roughly \$500 down the drain. He giggled, thinking we should be impressed. My husband, on the other hand, was incensed. With an understanding that our son could not be held accountable, he quickly figured out a way to blame me. Why had I “let him” do this? How could I leave this watch on our bathroom counter, within reach? Why did I not purchase the expensive Apple Care plan? Surely, there must be something I could have done to prevent this, and conceivably there was.

But at this point, our son was not tall enough to reach the counter on his own. He must have used a chair or some unidentified toddler tool to slide the watch off. It was not reasonably foreseeable that he would flush something down the

234. See Chituc et al., *supra* note 83, at 21.

toilet, as he had never done anything like that before. Possible, sure. Probable? No. This, to me, was just one of life's many freak accidents. But my husband's readiness to infer my negligence turns out to not be at all unusual.

Often, a terrible turn of events unfolds where no one is to blame. Common sense tells us that lots of injuries involve true accidents—where neither party was technically unreasonable. And yet, cases or news reports saying as much are rare.²³⁵ The fact that we do not see more reported cases of true, fluke accidents that are resolved by a finding of “no breach” suggests that when the outcome is bad enough, we might be doing exactly what my husband did. Indeed, a mountain of research suggests that this is exactly what many of us do. Outrage over the plaintiff's horrible injury leads some jurors to be too quick to place blame at the feet of defendants who could not have foreseen or prevented this kind of harm.²³⁶

Why do we do this? Researchers have found that people are “intuitive prosecutors” and do not wait to hear all of the facts before deciding someone needs to be blamed.²³⁷ Occasionally, we go through deliberate steps to examine the causal chain of events and the mental states of the actor.²³⁸ However, we also blame people quickly and subconsciously based on anger, shock, personal offense, or the actor's perceived character traits or position.²³⁹ Of course, we may revise our initial assessments with a bit of reflection. But in many cases, we stick with our gut and ultimately blame very badly.²⁴⁰ We hear what we want to hear to keep certain people in our crosshairs. We blame people we do not like or who appear different from us.

We may decide to blame somebody based on perceived bad character traits or the fact that they violated a social norm. Or

235. Insureds often ask for a “pure accident” instruction, which is most common when physical elements like snow or rain make an accident impossible to avoid despite the use of due care. However, judges are reluctant to give the instruction. See *Lakin v. Daniel Marr & Son Co.*, 732 F.2d 233, 237–38 (1st Cir. 1984).

236. Buon et al., *supra* note 24, at 153.

237. See Liane Young et al., *Neural Evidence for “Intuitive Prosecution”: The Use of Mental State Information for Negative Moral Verdicts*, 6 SOC. NEUROSCIENCE 302, 310 (2011).

238. See Bertram Malle et al., *A Theory of Blame*, 25 PSYCH. INQUIRY 147, 151 (2014).

239. See Mark Alicke, *Evaluating Blame Hypotheses*, 25 PSYCH. INQUIRY 187, 187 (2014).

240. See Mark Alicke, *Blaming Badly*, 8 J. COGNITION & CULTURE 179 (2008).

we might have a strong emotional reaction to a terrible injury and then seek out evidence of intention by focusing only on incriminating evidence.²⁴¹ Put simply, we might decide to blame quickly, and then go into a data-gathering mode to validate that intuition—a common route despite in many cases being expressly prohibited by legal doctrine.²⁴²

When outcomes are bad, we may quickly enter “blame validation mode,” where perceived culpability is not just an output of the blaming process, but is also an input.²⁴³ Information that mitigates blame is discounted while we cling to information that inflates it.²⁴⁴ This is accomplished by either exaggerating our perceptions of what the defendant should have foreseen, or simply reducing the threshold for how much evidence is required for blame.²⁴⁵ Doubling down on the initial target of our blame is facilitated by several cognitive biases, which developed deep in our ancestral past when there was no such thing as a formal jury trial. These biases not only focus our attention on surprisingly bad events, but they also skew our attributions of blame. The carryover of these crude evolutionary strategies into formal legal processes has not been without its hiccups.

Human psychology has developed to avoid explaining bad outcomes in terms of freak accidents caused by bad luck.²⁴⁶ Despite the crude bumper sticker that says, “Sh** happens,” we generally are reluctant to take this view.²⁴⁷ Instead, we find reasons for accidents that comfort us and attribute the bad outcome to a person’s exercise of free will or agency.²⁴⁸ By pointing the finger at someone’s carelessness, we can tell ourselves that this bad outcome will not happen to us because we will be more careful. When bad outcomes are attributed to a human, rather than some random environmental event, they

241. See Alicke, *supra* note 239, at 188.

242. Brown, *supra* note 21, at 30–36.

243. Alicke, *supra* note 23, at 558.

244. See Philip J. Mazzocco et al., *On the Robustness of Outcome Bias: No Constraint by Prior Culpability*, 26 BASIC & APPLIED SOC. PSYCH. 131, 145 (2004).

245. Andrew E. Monroe & Bertram F. Malle, *People Systematically Update Moral Judgments of Blame*, 116 J. PERSONALITY & SOC. PSYCH. 215, 217 (2019); Mark Alicke et al., *supra* note 114, at 675.

246. See Bandura, *supra* note 122, at 170.

247. See Haggard, *supra* note 122, at 197.

248. Oliver Genschow et al., *The Hand of God or the Hand of Maradona? Believing in Free Will Increases Perceived Intentionality of Others’ Behavior*, 70 CONSCIOUSNESS & COGNITION 80, 86 (2019).

also seem easier to deter through punishment.²⁴⁹ This tendency, which is called “agency bias,” leads us to inflate carelessness of both victims and transgressors. Depending on the circumstances, this can elicit victim-blaming as well as finding breach when it is not present.²⁵⁰

Jurors likely engage in agency bias when assessing negligence. They do so by focusing on evidence that “supports an explanation of a harmful event in terms of human agency . . . at the expense of purely physical explanations that mitigate blame.”²⁵¹ In the wrongful death case against Arches National Park, agency bias could work to ignore the unpredictable role of the wind and to focus exclusively on what park employees could have done differently. This phenomenon helps to explain how few negligence cases are resolved with a finding of no breach. We can almost always find a human to blame.

Attributions of agency are “readily biased” both in our assessments of our own conduct and in the conduct of others.²⁵² Despite evidence that our “actions are triggered by environmental influences and premotor processes that operate largely outside of consciousness,” the brain tricks us into generating a sense of human agency.²⁵³ Even when we consider our own actions, we often incorrectly assume after-the-fact that we intended consequences that we did not.²⁵⁴

Because foreseeability is invisible and tricky to prove through circumstantial evidence, it provides a terrific opportunity for agency and hindsight bias and for blaming people in the absence of hard facts. This is particularly likely when we have a bad outcome plus a strong reason—perhaps based in racist, sexist, ageist, ableist, or classist stereotypes of the defendant—to do so. These biases are likely only exaggerated when jurors are instructed on an objective test for foreseeability, which is immediately and exclusively normative.²⁵⁵

249. See Margoni & Surian, *supra* note 24, at 2; Lagnado & Channon, *supra* note 6, at 757.

250. See Kees van den Bos & Marjolein Maas, *On the Psychology of the Belief in a Just World: Exploring Experiential and Rationalistic Paths to Victim Blaming*, 35 PERSONALITY & SOC. PSYCH. BULL. 1567, 1575 (2009).

251. Lagnado & Channon, *supra* note 6, at 757.

252. See Haggard, *supra* note 122, at 202.

253. *Id.*

254. See *id.* at 206.

255. Alan Leslie et al., *Acting Intentionally and the Side-Effect Effect: Theory of Mind and Moral Judgment*, 17 PSYCH. SCI. 421 (2006); Kevin Uttich & Tania

B. Jurors Employ the Curse of Knowledge Hindsight Bias

In addition to agency bias, another vehicle for inflating foresight is hindsight bias. While many are likely familiar with hindsight biases, a particular type called the “curse of knowledge” is likely exacerbated by jury instructions on foresight. This may lead to unfair outcomes for both plaintiffs and defendants, as I will explain.

Imagine a young woman was running through an urban neighborhood on a crisp fall morning. She paid close attention to the people around her and enjoyed the beautiful foliage. She didn’t notice a small, uneven portion of the sidewalk up ahead. She tripped and knocked over an older woman walking in front of her. The older woman sued for negligence, arguing that the younger woman should have noticed the older woman and the uneven sidewalk.

Even though the jury is instructed to evaluate whether the harm was reasonably foreseeable *ex ante*, it is very hard for the jury not to rely on their knowledge of what occurred. This is made more likely as the jury hears details about how the plaintiff’s injuries were caused and can view photographs of the sidewalk and scene. These reconstructions freeze the clock and allow juries ample time to evaluate the landscape—superimposing their near-perfect, *ex post* perception on to what they assume the defendant could have and should have foreseen.²⁵⁶ In the moment, the runner had no such benefit. She could only see parts of the scene before her and not from the many multidimensional observer perspectives.²⁵⁷

The ability to retrospectively generate counterfactuals based on a full construction of the scene tells us little about what the actor reasonably could have perceived or attended to in the moment. And yet, counterfactuals, informed with perfect

Lombrozo, *Norms Inform Mental State Ascriptions: A Rational Explanation for the Side-Effect Effect*, 116 *COGNITION*, 87 (2010).

256. Even when someone participates in an event themselves, their memory of it can change after viewing a photograph from the third-party observer perspective. For example, their memory for distances can be reduced. See Petra Marcotti & Peggy L. St. Jacques, *Third-Person Perspectives in Photographs Influence Visual and Spatial Perspectives During Subsequent Memory Retrieval*, 34 *J. COGNITIVE PSYCH.* 45 (2022).

257. See Isaac Kinley et al., *Visual Perspective as a Two-Dimensional Construct in Episodic Future Thought*, 93 *CONSCIOUSNESS & COGNITION* 1031, 1033 (2021) (“[T]hird-person perspective is . . . a category of perspectives within which meaningful variation exists.”).

hindsight, are frequently relied upon to say the defendant breached a duty of care.²⁵⁸ This type of hindsight bias, where we assume other people should share the knowledge that we possess, is called the “curse of knowledge.”²⁵⁹ The curse of knowledge limits our ability to accurately read minds because we assume others knew then what we now know.

The curse of knowledge is linked with over attributing one’s capacity for foresight by swapping their knowledge, perception, or awareness with ours. This bias may also increase the perceived probability or foreseeability of outcomes in hindsight, leading to inflated findings of duty, breach, or proximate cause. Whichever element or mechanism it operates through, the curse of knowledge biases judgments by making defendants appear more blameworthy and negligent.²⁶⁰

With sophisticated enough tasks, the curse of knowledge can be found in anyone.²⁶¹ However, it only works one way—that is, we only “overestimate how likely other people are to share [our] knowledge and do not overestimate how likely other people are to share [our] ignorance.”²⁶² This effect is stronger when adults have a rationale, even an implicit one, for imputing knowledge or foreseeability. In a negligence case, this rationale might be simply a desire to make someone pay for the sympathetic plaintiff’s injuries. The curse is exaggerated in people who have a harder time inferring people’s thoughts or mindreading.²⁶³ The bias follows a u-shaped pattern across one’s lifespan; preschool children and older adults exhibit more of a curse than older children and younger adults.²⁶⁴

Interestingly, we do not need to be certain about what occurred for the curse of knowledge to be triggered. The bias can exist when we are conjecturing about the likely causes of terrible

258. Maggie Wittlin, *Hindsight Evidence*, 116 COLUM. L. REV. 1323, 1368–70 (2016).

259. See Baruch Fischhoff, *Hindsight ≠ Foresight: The Effect of Outcome Knowledge on Judgment Under Uncertainty*, 1 J. EXPERIMENTAL PSYCH.: HUM. PERCEPTION & PERFORMANCE 288 (1975); Siba E. Ghrear et al., *Outcome Knowledge and False Belief*, FRONTIERS PSYCH., Feb. 12, 2016, at 1.

260. Jeffrey J. Rachlinski, *A Positive Psychological Theory of Judging in Hindsight*, 65 U. CHI. L. REV. 571, 572 (1998); see also Kim A. Kamin & Jeffrey J. Rachlinski, *Ex Post ≠ Ex Ante: Determining Liability in Hindsight*, 19 LAW & HUM. BEHAV. 89, 99 (1995).

261. See Ghrear et al., *supra* note 259, at 4.

262. *Id.* at 3.

263. Susan A.J. Birch & Paul Bloom, *The Curse of Knowledge in Reasoning About False Beliefs*, 18 PSYCH. SCI. 382, 385 (2007).

264. Ghrear et al., *supra* note 259, at 3.

events, such as after hearing conflicting witness testimony in a negligence trial (e.g., how Esther Nakajjigo was decapitated while sitting in her car).²⁶⁵ Many of us, after hearing that an accident occurred, will mistakenly believe that we had “predicted it all along,” and thus the defendant should have too.²⁶⁶

This bias has two apparent causes. First, we fail to acknowledge that other people do not possess our subjective knowledge. Second, because we can easily recall the injury that befell the plaintiff when the runner tripped, this makes us assume it would be obvious to anyone *ex ante*.²⁶⁷ This is called “fluency misattribution.” It has direct impacts on negligence trials, as jurors may confuse their subjective fluency with objective foreseeability.²⁶⁸ This will artificially inflate ratings of breach.²⁶⁹

Studies of mock jurors and judges have demonstrated the curse of knowledge in negligence cases.²⁷⁰ Often the studies work this way: mock jurors are divided into two groups, and the breach is described identically in both groups. But in one group, the defendant is described as causing either no harm or a minor harm, and in the other group, they are described as causing a much more severe harm. When the outcome is severe and negative, mock jurors rate the defendant’s conduct as significantly more careless and the harm as *significantly more probable* *ex ante*.²⁷¹ This effect has also been found in judges. In

265. See Ina von der Beck et al., *Is There Hindsight Bias Without Real Hindsight? Conjectures Are Sufficient to Elicit Hindsight Bias.*, 25 J. EXPERIMENTAL PSYCH.: APPLIED 88 (2019).

266. See *id.*

267. Susan Birch et al., *A ‘Curse of Knowledge’ in the Absence of Knowledge? People Misattribute Fluency When Judging How Common Knowledge Is Among Their Peers*, 166 COGNITION 447, 449 (2017).

268. *Id.* at 447; see Susan Birch & Paul Bloom, *The Curse of Knowledge in Reasoning About False Beliefs*, 18 PSYCH. SCI. 382, 385 (2007).

269. See Birch et al., *supra* note 267, at 447; Birch & Bloom, *supra* note 268, at 385.

270. See Kamin & Rachlinski, *supra* note 260, at 99; Aileen Oeberst & Ingke Goeckenjan, *When Being Wise After the Event Results in Injustice: Evidence for Hindsight Bias in Judges’ Negligence Assessments*, 22 PSYCH., PUB. POL’Y, & L. 271, 273 (2016). See generally Markus Kneer, *Reasonableness on the Clapham Omnibus: Exploring the Outcome-Sensitive Folk Concept of Reasonable*, in JUDICIAL DECISION-MAKING: INTEGRATING EMPIRICAL AND THEORETICAL PERSPECTIVES (Piotr Bystranowski et al. eds., forthcoming Oct. 2022).

271. See Markus Kneer & Edouard Machery, *No Luck for Moral Luck*, 182 COGNITION 331, 332 (2019) (“In retrospect, the probability of an accident is perceived as higher in the unlucky case, the unlucky agent is judged as more

one study, the team found “twice as many judges in the hindsight condition who affirmed negligence (30 percent) compared with those in the foresight condition (14 percent).”²⁷² Because the only factor that varies is the outcome, and the breach in each case is the same, this presents a problem of moral and legal luck.²⁷³ The fact that outcomes impact breach assessments means that our jury instructions are not working, and the doctrinal aspirations are not being realized. The severity of the outcomes should not affect whether the risk was foreseeable *ex ante*. One team found that objective foreseeability was a “close-to-complete mediator” between the severity of the outcome and assessments of negligence.²⁷⁴ Participants were much more likely to say the defendant “should have believed” that the outcome was “probably” going to occur when the outcome was bad.²⁷⁵ Again, this is not how foreseeability calculations are supposed to work.

1. The Curse of Knowledge Inflates Foresight for Actions Described as Unforeseeable

Ironically, the curse of knowledge is strongest when events are *unforeseeable* and surprising.²⁷⁶ This is counterintuitive and has enormous significance for negligence liability. So, I will say this again—we are *more* likely to rate an outcome as foreseeable when it was truly surprising, like a woman being decapitated by a gate at a park or someone being randomly hit with a beer bottle

negligent than the lucky one, and the unlucky agent—who is perceived as more negligent—is judged more harshly.”); Markus Kneer & Izabela Skoczen *Outcome Effects, Moral Luck and the Hindsight Bias*, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3810220 [https://perma.cc/ES7W-U4EH].

272. Oeberst & Goeckenjan, *supra* note 270, at 273.

273. This bias seems to disappear when the participants are provided with both possibilities—the case of severe harm and the case of minor harm—and are allowed to compare the actions and outcomes of each, side-by-side. However, negligence cases are not presented in this way. Negligence cases are inherently “between subjects” in design. See Kneer & Machery, *supra* note 271, at 335. I am currently studying the outcome effect phenomenon in “duty to warn” cases with Markus Kneer and Jan Garcia-Olier at the University of Zurich.

274. Kneer & Machery, *supra* note 271, at 337.

275. Shielding factfinders from the magnitude of harm would likely reduce hindsight bias, but they would need to hear something very general about the type of harm caused (such as physical injury or property damage) to know whether this type could be foreseeable *ex ante*.

276. Oeberst & Goeckenjan, *supra* note 270, at 272.

at a concert. Psychologically, we focus on outlier events because we want to prevent them from occurring again. We are thus even more desperate to find someone to blame.²⁷⁷ If an outcome is “truly expected in foresight, there is no need to search for an explanation post hoc.”²⁷⁸ Ironically, then, in cases where the outcome is *least* objectively foreseeable ex ante, we are *more* likely to employ the curse of knowledge to explain why it should have been anticipated all along.²⁷⁹ This is quite concerning, and a fact about which more judges and jurors should be aware. But these cognitive biases can never come to light when we assume that there is no cognitive process involved and when the jury’s decision-making is based exclusively on conduct.

2. The Curse of Knowledge Inflates Foresight for Actors Described as Careful

There is yet another way that foresight ascriptions are counterintuitive. Specifically, when actors are described as intentionally doing action A, but at the same time they accidentally cause consequence B, they were judged *more* harshly if they are described as *careful* than if they were described as *careless*.²⁸⁰ Again, this is peculiar. The researchers hypothesized that participants may overgeneralize carefulness on a specific task with greater foresight on an independent task.

These findings, if replicated, have immediate implications for medical malpractice cases. For example, when a surgeon wields his tools carefully and precisely and intentionally excises a tumor, while also accidentally striking a blood vessel or causing some other injury, this may be considered *more blameworthy* than had he acted with less obvious care. Additional research needs to be done in this area to see how far the implications may go. But this presents yet another potential error when lay people assess foresight without recognizing its component psychological parts.

277. *Id.*

278. *Id.*

279. See Lagnado & Channon, *supra* note 6, at 766.

280. Margoni & Surian, *supra* note 24.

C. Mindreading is Likely More Complex and Biased in Real Life

While these studies lack strong ecological validity (e.g., they are not replicating real trials), there is reason to believe the effects will be even stronger in actual cases. In the mock jury studies described above, researchers provide objective facts as “true” that would make mental state inferences either correct or incorrect. That is, participants are told explicitly that the defendant either had subjective knowledge of risk or did not. In cases where researchers do not supply mental state information to the participants, they are typically using between-subjects designs (where participants are sorted into conditions based on their receipt of different information). This design allows the degree of inflated foreseeability to be measured and attributed to isolated differences between the conditions.

But in our ordinary lives, this is not how we read minds. We infer mental states based on facts that can be ambiguous or even conflicting. Whether someone intended or foresaw an outcome is often open to multiple reasonable interpretations. This makes it harder to detect bias and easier to have plausible deniability in our inflated foresight assessments. If we see inflated foresight when participants are explicitly told the actor is being careful, then we can only imagine how strong the effects will be when jurors are presented with ambiguous facts about the defendant’s mental state and a real-life, sympathetic plaintiff. Thus, even with their limitations, these studies give us perhaps the best possible window into the biases that exist when jurors assess foresight.

D. My Proposed Reform to Negligence Doctrine

The following formulation recognizes that foresight provides an intuitive and critical basis for blaming people for the accidents they cause. However, given the foregoing analysis, it also recognizes that foresight is an epistemic state that cannot be assessed based simply on an objective review of the defendant’s conduct. Also, it recognizes that jurors are better able to assess credibility and find facts, while the judge is better situated to decide policy issues, which are presently decided under duty, breach, and proximate cause.

Here is how the analysis would break down. My proposal tracks the existing elements and continues to hold defendants to a standard of reasonable care. However, I reduce the present four elements into just two. The jury makes a threshold determination of whether the particular defendant, knowing what he knew and what he could have perceived, *could* have foreseen the risk and prevented the injury. This fact-specific inquiry folds together the factual causation test with the capacity for foresight. Only *after* the jury decides that foresight was possible does the judge move on to asking whether it was reasonable for the defendant not to have undertaken greater care.

If the jury finds that the defendant was probably capable of foreseeing the risk, then the judge makes the objective, normative assessment of whether defendants like this defendant should be liable for causing these kinds of harms to these kinds of plaintiffs. This reformulation blends together the elements of duty, reasonableness, and proximate cause. It capitalizes on the unique skills of the judge, which is to assess the policy costs and benefits of imposing this burden. It also capitalizes on the unique skills of the jury, which are to find facts and assess credibility. My proposal separates the role of judge and jury and focuses the jury's attention on a *descriptive* test of foresight, with the judge making the *normative* call.

Some may question the prudence of this—that is, removing the normative assessment from the jury. Of course, this is not quite the case, as the jury still decides the amount of damages, which involves significant moral evaluation. Even so, reasonable people may prefer that jurors evaluate the reasonableness of conduct given the jury's ability to provide insight into shifting social norms.²⁸¹ This, however, is a judgment call. For me, the balancing of factors tips the scale the other way. Specifically, given that reasonableness assessments are prone to the curse of knowledge and agency bias and that breach involves a careful balancing of social costs and benefits (as opposed to one-off vehicles for validating intuitions to blame), having the judge decide the normative questions seems much more fair. Of course, judges are humans and engage in hindsight bias too, though likely to a lesser extent. But this division of labor will help the judge and jury separate out the *could* from the *should* so that

281. See Gergen, *supra* note 62, at 427.

the two are not confusingly blurred together in the analysis of duty, breach, and causation.

Under current doctrine, it is not clear how much jurors are allowed to consider policy factors under proximate cause and breach, and how much judges are allowed to consider the facts of the case when analyzing duty. My proposal clarifies how jurors are to subjectivize the standard for breach and foresight when they assess the defendant's *capacity* to have prevented plaintiff's injury. Judges may also engage with the facts of a particular case, but only with reference to whether this group of defendants should be liable for failing to prevent these kinds of risks. In addition to focusing the jury on capacity to foresee and prevent harm, my proposal also removes the significant overlap between the roles of judge and jury.

CONCLUSION

We cannot correct known cognitive biases if the processes that trigger them are presumed not to occur. This is why our tort doctrines must be explicit about the role of mental state inferences in negligence. Only when we bring foresight to the surface as a mental state that relies on perception, memory, knowledge, and prediction can we hope to tie liability to breach. But because we fail to appreciate how foresight is a subjective mental state, we fail to appreciate that it *cannot be assessed objectively based only on behavior*. No matter what the doctrine says to the contrary, jurors cannot assess foreseeability without some evidence of the particular defendant's perception or knowledge just before the accident occurred. If jurors are not given this information, they will make it up by filling in the gaps based on agency and hindsight bias.

While there is considerable variation between individuals on how well they can foresee the future, on average, we are all pretty lousy at it (though we think we are much better than we are). With prospection, we have a bias toward predicting positive outcomes, and in retrospect, when outcomes are negative, we seek someone to blame. This puts defendants in a terrible spot. While actors fail to perceive many negative events *ex ante*, jurors are quick to say they should have been foreseen *ex post*. When you put this together with the fact that third-party assessments of foresight are, *on average*, readily biased, the very

idea of “objective reasonable foreseeability” makes no sense and will lead to exaggerated liability.

When we assume that the test for reasonable foreseeability can be assessed completely through conduct, this encourages factfinders to replace what *could* have been foreseen with what they think *should* have been. Separating these two inquiries will not remove all hindsight and agency bias. However, it will better guide juries on which questions to ask and ground the analysis in whether the defendant probably could have foreseen and prevented the bad outcome with greater care. The use of “probably” is important, as the burden of proof is not beyond a reasonable doubt. Jurors need not (and cannot) perfectly read minds; they just need to decide whether the evidence makes it more likely than not that the defendant had the subjective perception or knowledge to be capable of foresight. Even under this low preponderance standard, proving the defendant’s mental states may be difficult. But just because something is difficult does not mean that it can be ignored. The jury will need to assess the credibility of witnesses and decide whether, on balance, this defendant could have foreseen the risk, knowing what he knew and perceiving what he perceived.

When we ignore the role of mindreading, it does not simply go away. It will continue to occur in the shadows of the law, without any judicial regulation or guidance. At present, jurors are told that breach can be assessed by looking at conduct alone, while simultaneously being given a test for duty, breach, and causation that *requires* them to read the defendant’s mind.²⁸² The result is a confusing doublespeak. The doublespeak invites jurors to engage in rudderless blame validation through the use of well-documented cognitive biases that inflate ratings of foresight *ex post*. As a result, defendants are likely being found liable for harms that they could not have prevented and did nothing careless to cause.

If the formal doctrine of negligence excludes mental states, factfinders will find a way to bring them in—sloppily and through the backdoor, if necessary. This is precisely what has been done through the adoption of the “reasonable foreseeability” test for duty, breach, and proximate causation. However, even this test cloaks mental states in a false veneer of objective conduct rather than acknowledging how it requires

282. See Gaesser, *supra* note 19.

interrogating the defendant's subjective perception and knowledge.²⁸³ Ironically, therefore, mindreading does not officially exist anywhere in the elements of negligence, but unofficially exists everywhere.

283. See *Blyth v. Birmingham Waterworks Co.* (1856) 156 Eng. Rep. 1047.