

This is the final peer-reviewed accepted manuscript of:

Parisi, F., Pi, D., & Guerra, A. (2022). Access to Evidence in Private International Law. *Theoretical Inquiries in Law*, 23.

The final published version is available online at:

<http://dx.doi.org/10.2139/ssrn.3964387>

Rights / License:

The terms and conditions for the reuse of this version of the manuscript are specified in the publishing policy. For all terms of use and more information see the publisher's website.

This item was downloaded from IRIS Università di Bologna (<https://cris.unibo.it/>)

When citing, please refer to the published version.

ACCESS TO EVIDENCE IN PRIVATE INTERNATIONAL LAW

Francesco Parisi,* Daniel Pi** and Alice Guerra***

This Article analyzes the interaction between the burden of proof and evidentiary discovery rules. Both sets of rules can affect incentives for prospective injurers to invest in evidence technology (i.e., ex ante investments that increase the quantity and quality of evidence in case an accident occurs). This interaction becomes acutely important in the private international law setting, where jurisdictions are split on the question whether the burden of proof should be treated as a substantive or procedural matter. When a tort occurs in Europe, but the case is litigated in American courts, treating the burden of proof as a procedural matter preserves the complementarity of incentives created by the burden of proof and evidentiary rules. Conversely, treating the burden of proof as a substantive matter creates a mismatch in incentives created by the burden of proof and evidentiary rules.

INTRODUCTION

One of the principal purposes of law is to create efficient incentives.¹ Two powerful instruments affecting incentives are the allocation of the burden of proof and the scope of evidentiary discovery. When the incentives generated by burden of proof and evidentiary rules are aligned (i.e., when they cooperate), their effects are mutually enhancing. But when they are misaligned (i.e., when they are at cross-purposes), their effects cancel each other out, thwarting the policy objective.

For example, consider the interaction of contract law and criminal law. If there were no limitation on the enforceability of promises to commit criminal acts, then the incentives created by contract and criminal law would be opposed. While the criminal law sought to deter the criminal act (and conspiracy to commit it), the contract law would be encouraging the formation of such agreements. This misalignment of incentives reduces the effectiveness of both criminal law and contract law while ratcheting up litigation costs and transaction costs. Thus, the exception in contract

* School of Law, University of Minnesota; Department of Economics, University of Bologna. E-mail: parisi@umn.edu.

** School of Law, University of Maine. E-mail: daniel.pi@maine.edu.

*** Department of Economics, University of Bologna. E-mail: alice.guerra3@unibo.it. Cite as: Francesco Parisi, Daniel Pi & Alice Guerra, *Access to Evidence in Private International Law*, 23 THEORETICAL INQUIRIES L. 77 (2022).

1 Paul H. Rubin, *Law and Economics*, LIBR. ECON. & LIBERTY, <https://www.econlib.org/library/Enc/LawandEconomics.html> (last visited Aug. 4, 2021). By formulating legal rules to induce efficient incentives, the law can induce desirable behavior, allocate resources efficiently, and promote social welfare. See Francesco Parisi, *Positive, Normative and Functional Schools in Law and Economics*, 18 EUR. J.L. & ECON. 259 (2004).

doctrine that promises to commit criminal conduct are unenforceable harmonizes (or “aligns” the incentives created by) criminal law and contract law.

In this Article, we describe how a misalignment of the burden of proof and evidentiary rules can frustrate the production of evidence and undermine care incentives in inter-jurisdictional tort cases. We observe that a misalignment of policy objectives can occur when the assignment of the burden of proof from one jurisdiction is applied in a case adjudicated using the evidentiary rules of another jurisdiction. More specifically, we observe that the interaction of liability rules and evidentiary rules can affect whether parties invest efficiently in *ex ante* evidence collection. As the quantity and quality of evidence decrease, the probability of error increases.² And as the probability of error increases, the incentive to invest in precautionary care decreases.³ And as investments in precautionary care decrease, the social cost of accidents increase.

This Article is structured in three Parts. Parts I and II set up the concepts which we use to build to our main result in Part III. In Part I, we illustrate a theoretical insight about the interaction of presumptions and discovery rules using a simple numerical example. We highlight the dissonance (or harmonization) which can arise when the burden of proof and evidentiary rules are misaligned (or aligned). Part II is a brief exposition of American and European law, contrasting two divergent approaches to the burden of proof and evidentiary discovery. In Part III, we discuss how dissonant incentives can arise when tort cases are adjudicated in American courts using European legal rules. We find that American jurisdictions are split on the question whether the burden of proof should be regarded as substantive or procedural. We contend that the burden of proof should be construed as procedural in order to harmonize with the evidentiary rules of the *lex loci*. Counterintuitively, we find that better outcomes can be achieved in cases of private international law than when the *lex loci* and *lex fori* are identical.

I. THE (MIS)ALIGNMENT OF THE BURDEN OF PROOF AND EVIDENTIARY RULES—A NUMERICAL EXAMPLE

The paradigmatic circumstance we contemplate in this Article involves accidents where parties have an opportunity to make *ex ante* investments in evidence collection. For example, dashboard-mounted cameras (“dashcams”) recording continuously can capture crucial evidence in case an automobile accident occurs. Installing the dashcam requires an upfront investment. And the evidence it produces could be used to inculcate or exonerate the driver in case of a legal dispute.

2 By “error,” we mean false positives and false negatives. Specifically, nonnegligent defendants being found liable, and negligent defendants escaping liability. See FRANCESCO PARISI, *THE LANGUAGE OF LAW AND ECONOMICS* 304-5 (2013).

3 See I.P.L. Png, *Optimal Subsidies and Damages in the Presence of Judicial Error*, 6 INT’L REV. L. & ECON. 101 (1986).

It is easy to recognize why increasing investments in evidence technology will tend to reduce the social cost of accidents as the marginal cost of the technology decreases. Higher quality evidence decreases the rate of adjudication errors and litigation costs.⁴ Decreasing the rate of adjudication errors will tend to increase care incentives and thereby decrease total accident costs.

When a new evidence technology becomes sufficiently inexpensive, the efficient level of adoption will be total. Consider, for example, the use of bodycams by law enforcement. In the initial period, when data storage was still quite costly, few police departments were required to equip their officers with them. This is intuitive: if the marginal cost of undetected police misconduct plus the marginal cost of false accusations of misconduct is x , and the marginal cost of storing the video data (and equipping every officer with a bodycam) is y , then legislatures and law enforcement officials will not mandate bodycam technology so long as $y > x$. We can expect the marginal benefit of bodycam evidence to be stable over time, whereas the cost of data storage tends to decrease.⁵ Thus, as the cost of data storage decreases, it will become efficient for an increasing number of jurisdictions to mandate the use of bodycam technology. And this is in fact occurring presently.⁶ In the extremum case, as the marginal cost approaches zero while the benefit remains stable, the efficient level of adoption will be total.

The simplest means of achieving universal adoption of evidence technology is by direct mandate. This may ultimately be the direction that the law develops. However, there are several drawbacks to direct regulation of evidence collection. First, there exists a limitless variety of possible evidence-gathering technologies.⁷ It is not an obvious choice *which* technologies ought to be mandated. It could be that different technologies better suit different use cases. There may be a benefit to incentivizing *ex ante* evidence-gathering investments *generally*, and leaving it to parties to determine privately which specific evidence-gathering technologies best suit their particular situation. Second, it may not be feasible to mandate universal compliance with a prescribed evidence technology. For example, whereas it may

4 See Louis Kaplow, *The Value of Accuracy in Adjudication: An Economic Analysis*, 23 J. LEGAL STUD. 307, 348-54 (1994).

5 Robert E. Fontana, Jr. & Gary M. Decad, *Moore's Law Realities for Recording Systems and Memory Storage Components: HDD, Tape, NAND, and Optical*, 8 AIP ADVANCES 056506 (2018).

6 See Arthur Wagner, *Legislatures Require Policy Body Camera Use Statewide*, NAT'L CONF. STATE LEGISLATURES (Apr. 30, 2021), <https://www.ncsl.org/research/civil-and-criminal-justice/legislatures-require-police-body-camera-use-statewide-magazine2021.aspx>; Memorandum from Lisa Monaco, Deputy Att'y Gen., U.S. Dep't of Justice to Acting Director of ATF et al., *Body-Worn Camera Policy* (June 27, 2021), <https://www.justice.gov/dag/page/file/1402061> (mandating adoption of bodycams for all federal law enforcement agencies).

7 Our focus is on private technology investments that are specifically made to collect information about present events and that can increase the accuracy of evidence in the event of future litigation. Such technology includes instruments tailored to a specific set of applications that can be mandated by regulation or adopted by private parties on a voluntary basis, such as dashcams on cars, body or helmet action cameras used by cyclists; black-box recording technology, Google Timeline, Progressive Snapshot, and various other applications of telematic and GPS location technology; digital timestamp of recordings and cellular transmissions; cloud data storage and archival systems; fingerprint, face and eye recognition systems, etc.

be relatively inexpensive for car manufacturers to equip highly computerized new automobiles with data recorders which store all the inputs received by the vehicle, it may be exceedingly burdensome to retrofit that technology into older cars. Third, even when a technology becomes so inexpensive and ubiquitous that direct mandate becomes practicable, innovation continues, and there will always be newer technological developments outside the ambit of the mandate. This is true even if the mandate were to be worded generally, as a whole class of technologies, required by the mandate, may soon be outdated as the state of the art advances. In other words, as soon as the mandate is enacted, a new, superior class of technologies may emerge, thwarting the purposes of the mandate. Thus, in the period before the newer technology has ripened to the point where a newer direct mandate is feasible, incentives for voluntary adoption will still matter.

Regulatory solutions are unlikely to keep pace with the constant flux and rapid development of new evidence technology, rendering it important to create incentives for the voluntary adoption of private evidence technology. An individual's decision whether to adopt a new evidence technology will be a function of two legal rules: (i) the assignment of the burden of proof and (ii) the scope of evidentiary discovery.

There are two possible assignments of the burden of proof. If the law presumes the defendant is negligent, then the defendant has the burden of proving his non-negligence. Inversely, if the law presumes the defendant is non-negligent, then the plaintiff has the burden of proving the defendant was negligent.⁸

Similarly, there are two contrasting approaches to evidentiary discovery. If the law deems adverse evidence discoverable, then parties possessing adverse evidence are compelled to yield that evidence.⁹ Alternatively, if the law deems adverse evidence non-discoverable, then parties possessing adverse evidence are entitled to withhold it from counter-parties and the court.

The assignment of the burden of proof and scope of evidentiary discovery are independent policy decisions. There are four possible ways that the law can combine presumptions and discoverability rules: (1) presumption of non-negligence + discoverability, (2) presumption of non-negligence + non-discoverability, (3) presumption of negligence + discoverability, (4) presumption of negligence + non-

8 As discussed in Guerra & Parisi, the policy question of who should bear the burden of proof when new technology changes the parties' ability to acquire evidence has been increasingly discussed in Europe, where legal reforms have led to departures from traditional evidence principles, introducing rebuttable presumptions of negligence in favor of plaintiffs, see Alice Guerra & Francesco Parisi, Investing in Private Evidence (May 8, 2020) (unpublished manuscript), <https://ssrn.com/abstract=3596029>. The effect of alternative presumptions on discovery costs and litigation rates discussed in Guerra, Luppi & Parisi may have provided an additional reason for the adoption of presumptions of negligence in European tort systems, see Alice Guerra, Barbara Luppi & Francesco Parisi, *Standards of Proof and Civil Litigation: A Game-Theoretic Analysis*, 19 B.E. J. THEORETICAL ECON. 1 (2019).

9 Discoverable evidence is evidence that a party can force the adverse party to disclose so that they can use it to build their case or defense. In the United States, discoverable evidence includes any nonprivileged matter that may be relevant to a party's claim or defense and is proportional to the needs of the case. Relevance is defined broadly, and evidence need not be admissible at trial to be discoverable. FED. R. CIV. P. 26(b).

discoverability. As shown in Table 1 and explained in detail below, the combination of these rules can create aligned incentive effects or mixed incentive effects.¹⁰

Table 1: Implications of policy decisions

Presumption	Evidence Rule	Policy Alignment	Incentive to Invest in Evidence Technology
Negligence	Discoverable	Aligned (U.S.)	Disincentivized
	Non-Discoverable	Misaligned	Ambivalent
Non-Negligence	Discoverable	Misaligned	Ambivalent
	Non-Discoverable	Aligned (Europe)	Incentivized

The resulting incentive effects of the four possible pairings, as shown on the right side of Table 1, depend only upon four plausible general assumptions. The first two assumptions are self-evident. Evidence technology tends to increase the accuracy of adjudication. Thus, if the defendant was negligent, then there is a higher probability that he will be found liable. Second, if the defendant was nonnegligent, then there is a lower probability that he will be found negligent.

Our third assumption is that the expected benefit (for the defendant) of investing in evidence technology is greater in a regime presuming negligence than in a regime presuming non-negligence. The expected benefit of evidence technology is the marginal reduction in the probability of being found negligent in court when the defendant was diligent in fact. If the legal presumption is non-negligence and the defendant was not negligent in fact, then it is plausible that the defendant is already unlikely to be held liable. Ergo, the marginal effect of additional evidence proving diligence will be diminishing. Whereas if the legal presumption is negligence, the defendant is presumed liable in the absence of additional evidence. If the defendant were diligent in fact, then the new evidence could be critical in exculpating him. It is therefore plausible that the marginal benefit of evidence technology will be greater in a regime presuming negligence than in a regime presuming non-negligence.

Our fourth assumption, analogously, is that the expected cost (for the defendant) of investing in evidence technology is greater in a regime presuming non-negligence than in a regime presuming negligence. The expected cost of evidence technology is the cost of installation plus the marginal increase in the probability of being found

¹⁰ Aligned incentives in this case means legal rules that would induce independently similar behaviors, enhancing each other when both are in effect. In contrast, mixed incentives would induce conflicting behaviors if in effect independently. With mixed incentives, either one may dominate the other, depending on their respective strengths.

negligent in court when the defendant was negligent in fact. If the legal presumption is negligence and the defendant was negligent in fact, then it is plausible that the defendant is already likely to be held liable. Ergo, the marginal effect of additional evidence proving negligence will be diminishing. Whereas if the legal presumption is non-negligence, the defendant is presumed non-negligent in the absence of additional evidence. If the defendant were negligent in fact, then the new evidence could be critical in inculcating him. It is therefore plausible that the marginal cost of evidence technology will be greater in a regime presuming non-negligence than in a regime presuming negligence.

We shall investigate the effects of the four possible pairings of presumptions and evidentiary rules upon parties' incentives to adopt new evidence technology. Consider the following simple numerical example.¹¹ Assume it costs \$1,000 to install a dashcam and store the data collected by it. And assume that if an accident occurs, then there will be a 50% chance the injurer was negligent, and a 50% chance the injurer was diligent. Normalize the loss in case of an accident to \$10,000.¹² Now suppose the following hypothetical probabilities:

1. The owner does *not* install a dashcam, and the law presumes *non-negligence*. In this case, let us assume that the probability that the owner would be found legally liable if he were *negligent in fact* would be 40%, and the probability that he would be found legally liable if he were *diligent in fact* would be 20%.
2. The owner does *not* install a dashcam, and the law presumes *negligence*. In this case, let us assume that the probability that the owner would be found legally liable if he were *negligent in fact* would be 70%, and the probability that he would be found legally liable if he were *diligent in fact* would be 50%.
3. The owner *does* install a dashcam, the dashcam data is discoverable, and the law presumes *non-negligence*. In this case, let us assume that the probability that the owner would be found legally liable if he were *negligent in fact* would be 80%, and the probability that he would be found legally liable if he were *diligent in fact* would be 10%.
4. The owner *does* install a dashcam, the dashcam data is discoverable, and the law presumes *negligence*. In this case, let us assume that the probability that the owner would be found legally liable if he were negligent in fact would be 90%, and the probability that he would be found legally liable if he were diligent in fact would be 20%.

Note that discoverability is irrelevant when the owner is diligent because he can always avail himself of his own evidence if it helps him. And the probability of being found liable when the owner is negligent is unaffected by the existence of dashcam data when that evidence is not discoverable by the plaintiff. The possible incentive effects of the presumptions and discoverability rules are summarized in Table 2.

11 Our numerical example here builds upon the formal model explicated in Guerra & Parisi, *supra* note 8.

12 The numerical values posited here are merely illustrative and chosen for explanatory convenience. Nothing substantial hinges upon the particular values given in this example.

Table 2: Probability that the injurer is held liable

Presumption	Evidence Rule	Tech	Negligent	Diligent
Non-Negligence	Discoverable	Dashcam	80%	10%
		No Dashcam	40%	20%
	Non-Discoverable	Dashcam	40%	10%
		No Dashcam	40%	20%
Negligence	Discoverable	Dashcam	90%	20%
		No Dashcam	70%	50%
	Non-Discoverable	Dashcam	70%	20%
		No Dashcam	70%	50%

We can now evaluate a car owner's incentives to install a dashcam. In the first case—when there exists a presumption of *non-negligence* and the dashcam data is *discoverable*—the expected benefit of installing a dashcam is $(0.2 - 0.1) \times 10000 = \1000 (the marginal reduction in the probability of being found liable multiplied by compensatory damages). And the expected cost is $(0.8 - 0.4) \times 10000 + 1000 = \5000 (the marginal increase in the probability of being found liable multiplied by compensatory damages plus the cost of installing the dashcam). $\$1000 < \5000 . Therefore, the rational car owner will choose not to install a dashcam.

Next consider what happens when there is a presumption of *non-negligence* and dashcam data is *non-discoverable*. The expected benefit (\$1000) does not change. However, the expected cost is now simply the price of the dashcam (\$1000). If evidence is not discoverable, then in case the car owner caused an accident, he would not be compelled to share the inculpatory dashcam data with his adversary. Therefore, the presence of the dashcam would not increase the probability of his being found negligent. Since the expected cost (\$1000) is equal to the expected benefit (\$1000), the rational car owner will be indifferent whether to install a dashcam.

Next consider what happens when there is a presumption of *negligence* and dashcam data is *discoverable*. The expected benefit of installing a dashcam is $(0.5 - 0.2) \times 10000 = \3000 . And the expected cost is $(0.9 - 0.7) \times 10000 + 1000 = \3000 . Since the expected cost (\$3000) is equal to the expected benefit (\$3000), the rational car owner will be indifferent whether to install a dashcam.

Finally, consider what happens when there is a presumption of *negligence* and dashcam data is *non-discoverable*. The expected benefit (\$3000) does not change. However, the expected cost is now simply the price of the dashcam (\$1000). $\$3000 > \1000 . Therefore, the rational car owner will install a dashcam.

To summarize: the rational car owner will choose not to install dashcam technology in a regime where there is a presumption of non-negligence and the evidence is discoverable. He will choose to install dashcam technology in a regime where there is a presumption of negligence and the evidence is non-discoverable. In the

other two regimes, the owner faces mixed incentives which cancel out, leaving him indifferent. See Table 3 below.¹³

Table 3: Decision to adopt evidence technology

	Discoverable	Non-Discoverable
Non-Negligence	Don't Install	Indifferent
Negligence	Indifferent	Install

We can infer from this that non-discoverability rules promote the adoption of evidence technology, whereas discoverability rules deter the adoption of evidence technology. Likewise, the presumption of negligence promotes the adoption of evidence technology, and the presumption of non-negligence deters the adoption of evidence technology. When a presumption of non-negligence is combined with non-discoverability, or a presumption of negligence is combined with discoverability, the liability rule and evidentiary rules work against each other, diluting their respective incentive effects.

The dilution of incentives is undesirable if we care about evidence-gathering incentives. If it is efficient for parties to invest in evidence technology, then we should want to harmonize the presumption and discovery rules to optimize the effectiveness of those rules. Alternatively, if the cost of evidence technology exceeds its benefits,¹⁴ then we should want to harmonize the presumption and discovery rules to minimize those costs.

13 To construct a general model, we need merely generalize Table 2:

Presumption	Evidence Rule	Tech	Negligent	Diligent
Non-Negligence	Discoverable	Dashcam	A	B
		No Dashcam	C	D
	Non-Discoverable	Dashcam	C	B
		No Dashcam	C	D
Negligence	Discoverable	Dashcam	E	F
		No Dashcam	G	H
	Non-Discoverable	Dashcam	G	F
		No Dashcam	G	H

Let us denote the payoff of adopting evidence technology in a non-negligence + discoverability regime as $U_{NN}^D = B + C - D - A$; denote the payoff of adopting evidence technology in a non-negligence + non-discoverability regime as $U_{NN}^{ND} = B - D$; denote the payoff of adopting evidence technology in a negligence + discoverability regime as $U_N^D = F + G - H - E$; and denote the payoff of adopting evidence technology in a negligence + non-discoverability regime as $U_N^{ND} = F - H$. If we assume $F - H > B - D$ and $G - E > C - A$ (see *supra* note 8), then it follows that $U_{NN}^D < U_{NN}^{ND} \approx U_N^D < U_N^{ND}$. Compare with Table 3. It is indeterminate whether $U_{NN}^{ND} > U_N^{ND}$ or $U_{NN}^{ND} < U_N^{ND}$.

14 The costs of evidence technology are principally the loss of access to passively acquired evidence under a non-discoverability regime and transaction costs of various kinds—most saliently litigation costs. For example, in an automobile tort, a rule of non-discoverability would limit the plaintiff’s access to evidence, such as the defendant’s vehicle, insurance claims, and automotive repair receipts. Loss of access to this passively acquired evidence is costly to the plaintiff, who may require that evidence to support elements of their case. It is also costly to society, because increasing the rate of uncompensated

Of course, it is possible that in some circumstances other concerns trump evidence-gathering.¹⁵ In such cases, it may be worth “disharmonizing” evidentiary incentives in order to harmonize *other* incentives. However, in the present context, we assume away other factors for the sake of analytical clarity.

II. A COMPARATIVE ANALYSIS OF LEGAL PRESUMPTIONS AND THE DISCOVERABILITY OF EVIDENCE

In this Part, we investigate how real-world legal systems deal with the burden of proof (Section II.A) and evidentiary discovery (Section II.B). Specifically, we look at how these issues have been treated in American and European law. We will find that both approaches harmonize presumptions and discoverability rules. The European approach encourages the adoption of evidence technology at the cost of encouraging potentially frivolous litigation and reducing the availability of passively acquired evidence (i.e., evidence not collected using evidence technology). The American approach opts for the inverse tradeoff.

Both systems set clear and coherent (albeit different) policy objectives. In Table 3, the American approach is represented by the upper-left quadrant (a presumption of non-negligence and discoverability), and the European approach is represented by the lower-right quadrant (a presumption of negligence and non-discoverability).

We do not believe that one approach is *necessarily* more efficient than the other. Rather, the choice depends upon contingent facts, such as, *inter alia*, the cost of evidence technology, the probability of accidents, the magnitude of harm in case an accident occurs, a society’s wealth, its cultural traits and norms, and the cost of exercising care. These factors will tend to vary from community to community, and we cannot determine from first principles alone whether the American or European approach is superior. We can say only that rule-harmonization is generally superior to dissonance, but there is of course more than one way to harmonize. It is plausible that the American approach is efficient for Americans, and the European approach is efficient for Europeans.

A. The Burden of Proof

The United States and European countries diverge in how they assign the burden of establishing tort liability. In the United States, the burden of proof ordinarily falls upon the plaintiff. In Europe, the burden tends to fall upon the defendant.

American courts presume the defendant is non-negligent. It is a common law principle observed in all fifty states and the federal courts that the plaintiff bears

negligent torts will dilute precautionary care incentives. We discuss the tradeoffs in greater detail *infra* Part II.

15 For example, presumptions and discoverability rules could affect the efficient standard of proof, the content of legal precedents (by affecting which cases are settled and which are litigated), or class, racial, and gender disparities (if plaintiffs and defendants systematically differ in a given tort context).

the burden of proving the defendant's negligence.¹⁶ One exception to the general rule is the doctrine of *res ipsa loquitur*, which applies in circumstances where something in the nature of the harmful event inherently implies negligence.¹⁷ In such cases, the court will presume negligence. However, *res ipsa loquitur* applies only in anomalous situations. The default assignment of the burden of proof is to presume non-negligence of the defendant.

Synthesizing the common law elements of negligence, the Restatement of Torts (Second) states that:¹⁸

In an action for negligence *the plaintiff has the burden of proving*

- (a) facts which give rise to a legal duty on the part of the defendant to conform to the standard of conduct established by law for the protection of the plaintiff,
- (b) failure of the defendant to conform to the standard of conduct,
- (c) that such failure is a legal cause of the harm suffered by the plaintiff, and
- (d) that the plaintiff has in fact suffered harm of a kind legally compensable by damages.

By contrast, European tort law has been gradually evolving toward a general presumption of negligence.¹⁹ For example, in the realm of traffic accidents, Germany,²⁰ Denmark,²¹ and the Netherlands²² now place the burden of *disproving* negligence (or equivalently, proving non-negligence) upon defendants.

However, the assignment of the burden of proof upon defendants is not total. The assignment of the burden of proof is nuanced. European courts typically assign the burden of persuasion on the defendant *only if* the plaintiff can meet the burden of production (i.e., establish the existence of harm and causation).²³ An alternative may be found in Italian law, which introduces a hybrid approach, presuming negligence against both the injurer and the victim. This dually places a burden on the injurer to

16 See, e.g., *Pantano v. American Blue Ribbon Holdings, LLC*, 927 N.W.2d 357 (Neb. 2019) (“Negligence is not presumed and must be proved by evidence, direct or circumstantial.”); *Ackerman v. U-Park, Inc.*, 951 F.3d 929 (8th Cir. 2020) (citing *Pantano* with approval); *Gunlock v. New Frontier Hotel Corp.*, 370 P.2d 682, 684 (Nev. 1962) (“Negligence is never presumed but must be established by substantial evidence.”); *Martine v. Ingalls*, 264 P. 484, 485 (Cal. 1928) (“Negligence must be proved and cannot be presumed.”).

17 RESTATEMENT (SECOND) OF TORTS § 328D(1) (AM. L. INST. 1975).

18 RESTATEMENT (SECOND) OF TORTS § 328A (AM. L. INST. 1975) (emphasis added).

19 See generally Alice Guerra, Barbara Luppi & Francesco Parisi, *Evidence Presumptions and the Robustness of Liability Incentives* (2019) (unpublished manuscript) (on file with the authors). Some of the arguments in favor of the adoption of such rules include the availability and rapid development of new evidentiary technology (e.g., body cameras, or dashcams), the idea that shifting the burden to the injurer is more fair as it shields more vulnerable victims from having to prove a defendant's negligence, and that it would reduce the costs of fact-finding and overall litigation costs. *Id.*

20 Straßenverkehrsgesetz [German Road Traffic Act] May 3, 1909, Reichsgesetzblatt [RGBl] at 442, § 18 (Ger.).

21 Vejloven [Road Traffic Act] 1988, § 101 (Den.).

22 Wegenverkeerswet, Sbt. 1994, 475, art. 185 (Neth.).

23 See Vibe Ulbeck & Marie-Louise Holle, *Tort Law and Burden of Proof: Comparative Aspects. A Special Case for Enterprise Liability?*, in *EUROPEAN TORT LAW 26* (Helmut Koziol & Barbara C. Steininger eds., 2008).

disprove negligence, and a burden on the victim to disprove contributory negligence. Damages are proportionate to each party's negligence level.²⁴

Both the American and European approaches have desirable effects. The American approach reduces the risk of false positives and disincentivizes the pursuit of meritless litigation. Plaintiffs unable to defeat the presumption of non-negligence will be deterred from filing suit.

The European approach additionally reduces the risk of false negatives and assigns the burden of persuasion to the best cost-bearer (i.e., the party better positioned to obtain the evidence). Defendants unable to prove their non-negligence will be liable for the injuries they cause, ensuring that injured plaintiffs are compensated. In general, common sense tells us that defendants will tend to be better situated than plaintiffs to produce evidence of their precautionary efforts (ordinarily people will have better access to evidence of their own past conduct than strangers).

Yet both the American and the European approaches entail tradeoffs. The American approach increases the risk of false negatives and tasks the party typically less able to access evidence with the burden of proof. The European approach increases the risk of false positives and invites frivolous litigation.

B. Evidentiary Discovery

The United States and European countries also diverge in their approach to evidentiary discovery.²⁵ American law is generally adversarial in structure, and its approach to discovery is quite liberal.²⁶ European law is inquisitorial, and in cases where adversarial discovery is requested, access is tightly controlled.²⁷

American discovery is governed by Rule 26 of the Federal Rules of Civil Procedure:²⁸

Parties may obtain discovery regarding any nonprivileged matter that is relevant to any party's claim or defense and proportional to the needs of the case, considering the importance of the issues at stake in the action, the amount in controversy, the parties' relative access to relevant information, the parties' resources, the importance of the discovery in resolving the issues, and whether the burden or expense of the proposed discovery outweighs its likely benefit. Information within this scope of discovery need not be admissible in evidence to be discoverable.

In principle, parties are obliged to produce any nonprivileged material relevant to a case. Counterparties have no general right to refuse access to relevant evidence. With

24 C.c. 16 marzo 1942, n.2054 (It.).

25 For extensive references, see Timothy P. Harkness et al., *Discovery in International Civil Litigation: A Guide for Judges*, 14 *TRANSNAT'L DISP. MGMT.* (2017).

26 Amalia R. Miller & Catherine E. Tucker, *Electronic Discovery and the Adoption of Information Technology*, 30 *J.L. ECON. & ORG.* 217 (2014); ROGER S. HAYDOCK & DAVID F. HERR, *DISCOVERY PRACTICE* (8th ed. 2020).

27 Martin H. Redish, *Electronic Discovery and the Litigation Matrix*, 51 *DUKE L.J.* 561 (2001); GAVIN FOGGO ET AL., *COMPARING E-DISCOVERY IN THE UNITED STATES, CANADA, THE UNITED KINGDOM, AND MEXICO* (2007), http://mcmillan.ca/wp-content/uploads/2020/07/BHarrison_ComparingE-Discoveryintheunitedstates.pdf.

28 *FED. R. CIV. P.* 26(b)(1).

the exception of privileged material, the only constraint on discovery is pragmatic. Evidentiary requests are denied only if the cost of producing the requested evidence outweighs the probative value of that evidence.

By contrast, European evidentiary rules tend to be highly protective of parties' privacy interests. In France, for example, access to evidence is not allowed for exploratory purposes. Parties can only compel production in circumstances where they know already the content of the material in the counterparty's possession and are unable to prove their claim without it.²⁹ In Germany, parties have no general obligation to disclose information advantageous to the opposing party.³⁰ Even in the extraordinary circumstances when courts do order discovery,³¹ the only sanction for a party's refusal to cooperate is the adverse inference a court may surmise from the uncooperative party's behavior.³² Italian law likewise forbids the use of exploratory discovery.³³ Italian courts will compel discovery only for the purpose of preserving evidence for the purpose of later corroboration, and the content of that evidence must be fully known to the party requesting it.³⁴

Here again we see that the American and European approaches both have desirable effects. The American approach improves access to passively acquired evidence, forcing the disclosure of privately held information. Better evidence will tend to reduce the rate of false positives and false negatives. False positives and false negatives tend to dilute precautionary care incentives, because a rational prospective injurer will reason that if he can be held liable despite being diligent (i.e., a false positive) or not liable despite being negligent (i.e., a false negative), then it will matter less whether he exercises due care in actual fact. The greater the rate of error, the less it matters whether the defendant exercised due care. The American approach can thus reduce the rate of accidents under some conditions.

The European approach incentivizes investments in evidence technology. European evidence law encourages parties to install evidence technology by reducing the expected cost of adverse evidence. Because parties cannot be compelled to produce evidence in discovery, adverse evidence collected by the defendant cannot be used against him. Non-discovery rules thus make investment in evidence technology a no-lose proposition for the defendant. For this reason, we observe that almost all automobile insurance companies in Europe encourage policyholders to install video evidence technology, offering discounts to drivers who install dashcams.³⁵

29 Code de procédure civile [C.P.C.] [Civil Procedure Code] art. 10, 138-139 (Fr.). See also Jalal El Ahdab & Amal Bouchenaki, *Discovery in International Arbitration: A Foreign Creature for Civil Lawyers?*, in *ARBITRATION ADVOCACY IN CHANGING TIMES* 65 (Albert J. van den Berg ed., 2011).

30 Bundesgerichtshof [BGH] [Federal Court of Justice] June 4, 1992, *Neue Juristische Wochenschrift* [NJW] 3096 (Ger.).

31 Zivilprozessordnung [ZPO] [Code of Civil Procedure], §§ 421-23, https://www.gesetze-im-internet.de/zpo/_421.html (Ger.).

32 Zivilprozessordnung [ZPO] [Code of Civil Procedure], § 427, https://www.gesetze-im-internet.de/zpo/_427.html (Ger.).

33 Trib. Spoleto, 1 Luglio 2019, n. 461 (It.).

34 Codice di procedura civile [C.p.c.] [Civil Procedure Code] art. 670-671 (It.).

35 Alice Champion, *Can I get a discount on car insurance with a dash cam?*, *CONFUSED.COM* (May 7, 2021), <https://www.confused.com/on-the-road/gadgets-tech/dashcams-and-insurance-discounts>.

Conversely, no automobile insurance company in the United States encourages the installation of dashcams or other video evidence technology.³⁶ Again, better evidence will tend to reduce the rate of false positives and false negatives. If the installation of new technology produces better evidence, then the rate of false positives and false negatives will decrease. Again, decreasing the rate of error will tend to improve precautionary care incentives. Additionally, limiting discovery will tend to decrease litigation costs.

Yet both the American and the European approaches entail tradeoffs. The American approach disincentivizes investment in evidence technology, potentially increasing error rates. Moreover, American trials are susceptible to runaway litigation costs due principally to liberal discovery rules. The European approach limits access to passively acquired evidence, potentially increasing error rates where conventional forms of evidence predominate.

III. JURISDICTIONAL DISSONANCE

Both the American and the European approaches are internally self-consistent. Both seek to improve access to evidence and to limit the cost of litigation. The American approach forces disclosure of passively acquired evidence and discourages meritless litigation. The European approach incentivizes investments in evidence technology and limits evidentiary fishing expeditions. However, both approaches entail concessions. The tradeoffs of each are the forgone benefits of the other. The American approach disincentivizes investments in evidence technology and enables evidentiary fishing expeditions. The European approach limits access to evidence and encourages litigation.

In this Part, we consider whether it is possible to achieve the best of both worlds: to encourage investments in evidence technology, to force disclosure of adverse evidence, and to constrain the cost of litigation. We argue that in cases where plaintiffs have the choice of forum whether to sue in the United States or in Europe, it is possible to achieve all the benefits of both approaches without any of the drawbacks.³⁷ Moreover, we use this insight to resolve an open question in American

36 See Mark Vallett, *Does a dashcam lower insurance?*, INSURANCE.COM (June 23, 2021), <https://www.insurance.com/auto-insurance/claims/7-reasons-to-use-a-dash-cam.html> (“Currently, no car insurance companies offer a specific dashboard camera discount.”). It appears that there used to be one American insurance company that gave discounts for drivers who installed dashcams, however they have since ceased offering that incentive. Champion, *supra* note 35. Curiously, several American insurers offer discounts for non-video monitoring: John M. Vincent & Cherise Threewitt, *How Do Those Car Insurance Tracking Devices Work?*, U.S. NEWS (Feb 26, 2018) <https://cars.usnews.com/cars-trucks/car-insurance/how-do-those-car-insurance-tracking-devices-work>; *How Do Car Monitoring Devices & Apps Work?*, AMERICAN FAMILY INSURANCE <https://www.amfam.com/resources/articles/understanding-insurance/car-insurance-tracking-device> (last visited July 5, 2021).

37 The choice of forum problem arises when a dispute satisfies the standing requirements in more than one jurisdiction. For example, if an American is accused of committing a tort in Germany, then the victim could in principle sue either in the United States or in Germany. The procedural rules used by the court are determined by the forum, therefore the plaintiff can choose whether to pursue his claim under American or German procedural rules. Choice of forum issues also arise internally for

law: whether the burden of proving negligence should be regarded as a procedural or substantive question.

When the plaintiff has a choice of forum, the defendant must prospectively anticipate the lesser of the two evils: to invest in evidence technology and have that evidence used against him, or not to invest in evidence technology and have the burden of proving his non-negligence without it. By harmonizing the presumption and discovery rules, it is possible to put a thumb on the scale. Clearly, the efficient outcome is to induce prospective defendants to invest in evidence technology, but also allow adverse discovery of that evidence (as well as passively acquired evidence).

Before presenting our argument, we first summarize some basic principles of private international law. When a case is tried in a different jurisdiction than where the facts giving rise to the dispute occurred, the question arises: which jurisdiction's rules should the court apply? The default answer is that *substantive* rules are determined by the *lex loci* (i.e., the law where the tort occurred) and *procedural* rules are determined by the *lex fori* (i.e., the law of the jurisdiction where the action is brought).

Both American and European courts classify evidentiary rules as procedural. On the American side, the Restatement of Conflict of Laws (Second) § 138 states, "The local law of the forum determines the admissibility of evidence, except as stated in §§ 139-141."³⁸ The principle that evidence rules should be determined by the *lex fori*, which exists in most national codifications, has been restated in several recent European regulations.³⁹

Next, on the question whether the burden of proof (e.g., a presumption of negligence or non-negligence) is substantive or procedural, European legal systems uniformly treat it as substantive.⁴⁰ American case law, on the other hand, is ambiguous in its treatment of the burden of proof. The Restatement of Conflict of Laws (Second) § 133 states:

federalist systems such as the United States, when for example a New Yorker causes an accident in Ohio. International torts are becoming more common with increasing globalization. *See generally* Symeon C. Symeonides, *Choice of Law in Cross-Border Torts: Why Plaintiffs Win and Should*, 61 HASTINGS L.J. 337 (2009). *See also* Peter Stone, *The Rome II Regulation on Choice of Law in Tort*, 4 ANKARA L. REV. 95 (2007).

38 RESTATEMENT (SECOND) OF CONFLICT OF LAWS § 139-141 (AM. L. INST. 1971) concern privileged communications, the statute of frauds, and the admissibility of parol evidence, respectively. These exceptions are not relevant in the tort context.

39 For the proposition that matters of evidence and procedure should be left to the *lex fori*, see Regulation (EC) No 864/2007, of the European Parliament and of the Council of 11 July 2007 on the Law Applicable to Non-Contractual Obligations (Rome II), Art. 1(3), 2007 O.J. (L 199) 40 [hereinafter Regulation (EC) No 864/2007]; Regulation (EC) No 593/2008, of the European Parliament and of the Council of 17 June 2008 on the Law Applicable to Contractual Obligations (Rome I), art. 1(3), 2008 O.J. (L 177) 6 [hereinafter Regulation (EC) No 593/2008].

40 The principle according to which issues related to legal presumptions and burdens of proof are "substantive," and should therefore be governed by the *lex causae* (which in the tort example would correspond to the *lex loci*), is clearly expressed in Regulation (EC) No 864/2007, *supra* note 39, at art. 22; Regulation (EC) No 593/2008, *supra* note 39, at art. 18. For a discussion of the treatment of burdens of proof in private international law, see also Clay H. Kaminsky, *The Rome II Regulation: A Comparative Perspective on Federalizing Choice of Law*, 85 TUL. L. REV. 55, 94-95 (2010); Dale A. Nance, *Choice of Law for Burdens of Proof*, 46 N.C. J. INT'L L. 235, 307-08 (2021).

The forum will apply its own local law in determining which party has the burden of persuading the trier of fact on a particular issue unless the primary purpose of the relevant rule of the state of the otherwise applicable law is to affect decision of the issue rather than to regulate the conduct of the trial. In that event, the rule of the state of the otherwise applicable law will be applied.

There is no consensus whether the “primary purpose” of the burden of proving tort negligence is to “affect the decision” or to “regulate the conduct of the trial.” In some American jurisdictions, the burden of proving negligence has been held to be a procedural issue governed by the *lex fori*. The issue often arises in connection with the use of *res ipsa loquitur*. For example, *Lobel v. American Airlines* held that the burden of proof is a procedural rule, and therefore it is to be determined by the law of the forum.⁴¹ In *Mudd v. Goldblatt Bros., Inc.*, the question arose whether Illinois courts applying Indiana law should adopt Indiana’s assignment of the burden of proof on the question of contributory negligence. The reviewing court held that the burden of proof was a procedural question, despite acknowledging the “substantive effect” of the burden of proof.⁴² In these states, the presumptions and discoverability rules are harmonized by the *lex fori*.

However, other jurisdictions have held that the burden of proving negligence is a substantive question governed by the *lex loci*. For example, in *Robinson v. Gaines*, the Missouri Supreme Court held that the burden of proof should fall upon the plaintiff, even though Missouri law made contributory negligence an affirmative defense.⁴³ In *Alcaro v. Jordeau*, the court applying New Jersey law held that the burden of proof as to contributory negligence was substantive and not a “mere matter of procedure.”⁴⁴ In this second group of states, the presumptions and discoverability rules create dissonant incentives. In Table 3, these states are represented by the lower left cell, operating under a discoverability rule and presumption of negligence, leading to indifferent incentives on parties to adopt evidence technology.

As discussed in Part I, dissonance between presumptions and discoverability frustrates the policy objective. This frustration can be especially acute when it arises in the private international law context, because it can in theory give rise to circumstances where prospective injurers do not invest in evidence technology *and*

41 *Lobel v. American Airlines*, 192 F.2d 217, 219 (2d Cir. 1953) (“[I]n cases involving burden of proof, that local law governs even though the accident occurred out-of-state.”) (citing *Wright v. Palmison*, 237 A.D. 22 (N.Y. App. Div. 1932) and *Clark v. Harnischfeger Sales Corp.*, 238 A.D. 493 (N.Y. App. Div. 1933)).

42 *Mudd v. Goldblatt Bros.*, 454 N.E.2d 754 (Ill. App. Ct. 1983); *see also Boersma v. Amoco Oil Co.*, 658 N.E.2d 1173, 1181 (Ill. App. Ct. 1995) (“We find that Indiana’s *res ipsa loquitur* doctrine is a rule of evidence, has no substantive effect and merely regulates the conduct of the trial, and therefore the Illinois doctrine should be applied to this case.”).

43 *Robinson v. Gaines*, 331 S.W.2d 653, 655 (Mo. 1960) (“[I]n suits filed here on causes of action arising in a sister state, we hold a requirement of the sister state that a plaintiff allege and prove his exercise of proper care for his own safety to be a substantive, not a procedural, matter and controlling here, and that plaintiff has the burden of proving the absence of contributory negligence.”).

44 *Alcaro v. Jean Jordeau*, 138 F.2d 767, 770 (3d Cir. 1943) (“[T]he right enjoyed by a party because of the burden of proof legally imposed upon his adversary is one of substantive law, and not a mere matter of procedure.”).

plaintiffs cannot access passively acquired evidence. Additionally, when presumptions and discoverability rules harmonize in private international law, they can effect results superior to domestic adjudication when the *lex loci* and *lex fori* are identical.

Consider the following illustrative example. An American courier service is delivering packages in France. They foresee the risk that their delivery trucks may be involved in accidents, causing injury. They must anticipate two possibilities: (1) an accident occurs, and they are sued in France; (2) an accident occurs, and they are sued in the United States. In case of the latter alternative, there are two subordinate modalities to consider: (a) they are sued in the United States, and the burden of proof is held to be substantive; (b) they are sued in the United States, and the burden of proof is held to be procedural.

Let us contrast the consequences of (2)(a) and (2)(b). First suppose that presumptions are held to be substantive in the United States. If the presumption is substantive, then it is determined by the *lex loci*, and so the burden will be on the defendant to prove non-negligence. Regardless of whether the plaintiff sues in the United States or France, the presumption will be against the defendant as Europe employs a presumption of negligence. Therefore, the only consideration in choosing whether to invest in evidence technology is the probability that the prospective defendant will be non-negligent in case of an accident. If it is more likely he would be non-negligent, then it is better for him to invest to prove his non-negligence.

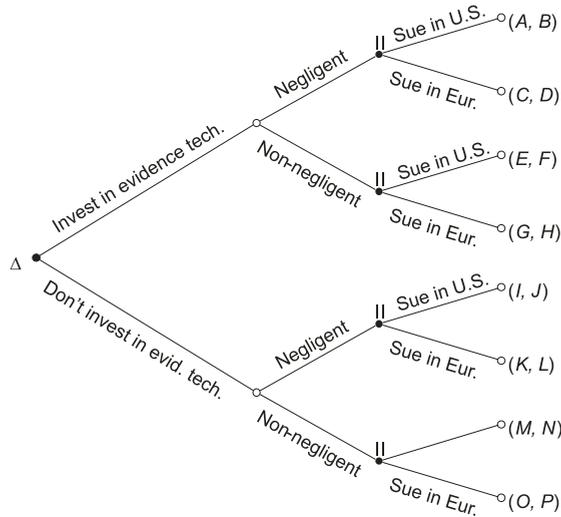
Next suppose that presumptions are deemed to be procedural in the United States. If the presumption is procedural, then it is determined by the *lex fori*, and so the burden will be on the plaintiff to prove negligence. As in the previous case, if it is more likely he would be non-negligent, then it is better for him to invest in evidence technology to prove his non-negligence. And if it is more likely that he would be negligent, then it is better for him not to invest in evidence technology to hide his negligence. However, there is an additional factor to consider. It is relatively more advantageous for the prospective defendant to be sued in the United States because the presumption being procedural means the burden of proof is on the plaintiff.

Generalizing, consider the sequential game represented in Figure 1. The prospective injurer has the first move. He must decide whether to invest in evidence technology. Next, an accident occurs in Europe.⁴⁵ There is some probability the injurer was negligent. We assume that the defendant does not know, at the time he is deciding whether to invest in evidence technology, what his later investments in precautionary care will be. Assuming that the prospective defendant will exercise due care (or that he plans to), will not materially change the outcome. Finally, the victim chooses whether to sue in the United States or Europe.⁴⁶

45 To be rigorous, we should include a move by nature, where there is some probability $0 < p < 1$ of an accident occurring. We omit the move by nature with no loss of generality.

46 We should assume that the victim does not know whether the injurer was negligent when choosing where to sue.

Figure 1: Choice of forum and effect on access to evidence



We can ignore cases where an accident occurs in the United States for two reasons. First, even if one of the parties is European, European courts will hold that the dispute should be litigated where it occurred and refuse to hear the case.⁴⁷ Therefore, there will ordinarily be no choice of law question. Second, even in circumstances where the case could be tried in a European court, no plaintiff would choose to do so anyway. As we have mentioned, European courts treat presumptions as substantive and evidence as procedural; therefore, a European forum applying American law would adopt a presumption of non-negligence and non-discoverability rules. Since both rules favor the defendant, no plaintiff with a choice of law will elect to try their case in Europe.

Assume then that the cause of action arises in Europe. If the American court adopts a presumption of negligence (i.e., treats presumptions as substantive), then the only difference between the American court and a European court is the more permissive discovery in the United States, and therefore the plaintiff will prefer to sue in the United States. Therefore, we can assume that $B > D$, $F > H$, $J > L$, and $N > P$,⁴⁸ if the American court adopts a presumption of negligence. If the American court

47 1968 Brussels Convention on Jurisdiction and the Enforcement of Judgements in Civil and Commercial Matters, art. 5(3) 1972 O.J. (L 299) 32. (“[A] person domiciled in a Contracting State may, in another contracting State, be sued . . . in matters relating to tort, delict or quasi-delict, in the courts for the place where the harmful event occurred.”). See also Case 21/76, *Handelskwekerij G. J. Bier BV v. Mines de potasse d’Alsace S.A.*, 1976 E.C.R. 1735; *Dumez France SA & Tacoba SARL v. Hessische Landesbank*, 1990 E.C.R. I-49.

48 If the American court adopts a presumption of negligence, then the plaintiff will prefer to sue in the United States no matter what. All other things being equal, it is better for the plaintiff to have access to the defendant’s privately held evidence. In case the defendant is non-negligent, then it may make little difference, however it cannot *hurt* the plaintiff to have the permissive discovery rules. Therefore, we

adopts a presumption of non-negligence (i.e., treats presumptions as procedural), then we can assume $B \approx D$,⁴⁹ $F \approx H$,⁵⁰ $L > J$,⁵¹ and $P > N$.⁵²

Next, we can assume that if the American court adopts a presumption of negligence (i.e., treats presumptions as substantive), then $I > A$,⁵³ and $E > M$.⁵⁴ And if the American court adopts a presumption of non-negligence (i.e., treats presumptions as procedural), then $A \approx C \approx K$,⁵⁵ and $E \approx G > O$.⁵⁶

Consider that social welfare is maximized when the defendant invests in evidence technology and the plaintiff sues in the United States. It is efficient, because it maximizes the court's access to evidence, thereby minimizing error. The ideal outcome therefore is for the defendant to invest in evidence technology and for the plaintiff to sue in the United States.

We can infer from backwards induction that it is more efficient for American courts to adopt a presumption of non-negligence (i.e., treat presumptions as procedural) than to adopt a presumption of negligence (i.e., treat presumptions as substantive). If American courts adopt a presumption of negligence, then prospective defendants experience contradictory incentives. They would want to invest in evidence technology

can assume that in all cases, the plaintiff will prefer to sue in the United States if the burden of proof is the same as between the United States and Europe.

- 49 We can assume that $B \approx D$, because if the defendant invested in evidence technology and was negligent in fact, then the plaintiff should be ambivalent as between the court presuming non-negligence but granting access to the evidence versus the court presuming negligence but denying access to the evidence. In either case, the plaintiff should prevail.
- 50 We can assume that $F \approx H$, because if the defendant invested in evidence technology and was non-negligent in fact, then the plaintiff should be ambivalent as between the court presuming non-negligence but granting access to the evidence versus the court presuming negligence but denying access to the evidence. In either case, the defendant should prevail.
- 51 We can assume $L > J$, because in the absence of an investment in evidence technology, the plaintiff is likely to prevail if the defendant was negligent in fact and he is presumed negligent, whereas the defendant is likely to prevail if the defendant was negligent in fact and he is presumed non-negligent.
- 52 We can assume $P > N$, because in the absence of an investment in evidence technology, the plaintiff is likely to prevail if the defendant was non-negligent in fact but he is presumed negligent, whereas the defendant is likely to prevail if the defendant was non-negligent in fact and he is presumed non-negligent.
- 53 If a negligent defendant expects to be sued in the United States, then he would prefer not to have invested in evidence technology, because American evidentiary rules would allow evidence of his negligence to be discovered by the plaintiff.
- 54 If a non-negligent defendant expects to be sued in the United States, then he would prefer to have invested in evidence technology, because the evidence would be useful in proving his non-negligence.
- 55 In case the defendant is negligent, invested in evidence technology, and the American court adopts a presumption of non-negligence, the defendant will face mixed incentives. If he is sued in the United States, then he has the benefit of the presumption, but his privately held evidence can be discovered. If he is sued in Europe, then the presumption is against him, but he does not have to share his privately held evidence. Similarly, if he had not invested in evidence technology, then he would also face mixed incentives if he were sued in Europe, because the presumption would be against him, but he would not have to share his privately held evidence.
- 56 In case the defendant is non-negligent, invested in evidence technology, and the American court adopts a presumption of non-negligence, the defendant will face equivalent payoffs regardless whether he is sued in the United States or Europe. In either case, he will be able to prove his non-negligence using the evidence acquired through his investment in technology. Either option represents a better payoff than if he had not invested in evidence technology and the plaintiff sued in Europe, in which case the presumption of negligence would be difficult to overcome without evidence technology.

in case they are non-negligent, but not in case they are negligent. Since they do not necessarily know *ex ante* whether they will be negligent, they experience mixed incentives. On the other hand, if American courts adopt a presumption of non-negligence, then prospective defendants experience consistent incentives. They would be indifferent to investing in evidence technology in case they are negligent, but would want to invest in evidence technology in case they are non-negligent. Thus, prospective defendants experience stronger incentives to invest in evidence technology in cases when presumptions are treated as procedural. While there may be other reasons for American courts to treat presumptions as substantive, for purposes of creating effective incentives, the courts should treat these presumptions as procedural.

Harmonizing presumptions and discoverability makes it possible to achieve the best of both worlds. Defendants will choose to invest in evidence technology, and plaintiffs will be able to obtain the fruits of that investment through discovery. This outcome is not possible for American cases tried under American rules, nor for European cases tried under European rules. It is a happy peculiarity arising from the plaintiff's ability to choose the forum.

Intuitively, the alternative result is plausible. It is better for the defendant to invest in evidence technology and have it used against him if he behaves negligently, than to not invest in evidence technology and not be able to prove his non-negligence if he behaves diligently. Thus, the curious circumstance would arise where defendants are incentivized to invest in collecting evidence that can be used against them. To foster the creation of these incentives, American jurisdictions should treat tort presumptions as procedural rather than substantive rules.

CONCLUSION

In order to promote one of the law's principal purposes—creating efficient incentives—the allocation of the burden of proof and the scope of evidentiary discovery should be aligned. While the U.S. and Europe have adopted diverging approaches to the burden of proof and scope of discovery, their respective approaches to the choice of the burden of proof and scope of evidentiary discovery are internally aligned, creating desirable incentives for prospective injurers operating intra-jurisdictionally. However, in the context of private international law, when presumptions and discoverability rules are misaligned, a misalignment in the incentive effects of presumptions and evidentiary rules can arise, frustrating the production of evidence and undermining care incentives.

In this Article, we have emphasized the important relationship between the burden of proof and evidentiary rules. Whereas the economic analysis of law typically focuses on the efficiency of individual rules or closely related clusters of rules, in the adjudication of real cases, a many disparate subject areas will invariably be implicated. Our analysis describes how the interaction of legal rules can enhance or frustrate the ultimate policy goals.

Specifically, on prospective tort injurers' incentives to invest in active evidence gathering, we have shown that non-discoverability rules complement the presumption of non-negligence, and that discoverability rules complement the presumption of negligence. Our analysis will be especially significant in the context of private international law (and the conflict of laws generally), where there arises the question whether to import the foreign jurisdiction's burden of proof. This is an open question, because American courts have been ambivalent on the question whether the burden of proof is a substantive or procedural rule.

We argue that in order to preserve the harmony of presumptions and evidentiary rules inherent in intra-jurisdictional disputes, the burden of proof should be treated as procedural, avoiding the mismatch of noncomplementary incentives in inter-jurisdictional cases.

The question is an active area of controversy. There is currently a split among American jurisdictions on whether the burden of proof should be treated as a substantive or procedural matter. This Article contributes to the resolution of that controversy and—we hope—breaks some new ground in the analysis of the *interaction* of laws more broadly.